

THE X-RAY RACKET - A MENACE TO HEALTH

JANUARY

Physical Culture

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THE PERSONAL PROBLEM MAGAZINE

Bernarr Macfadden
PUBLISHER

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A MACFADDEN
PUBLICATION



PAINLESS CHILDBIRTH FOR EVERY MOTHER
MY VICTORY OVER INFANTILE PARALYSIS

Here's A

Trouble Shooter

For Your Aches and Pains

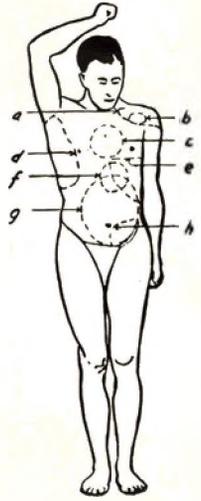
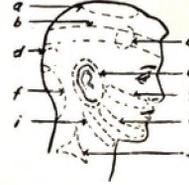
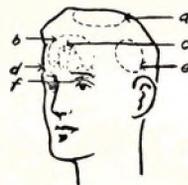
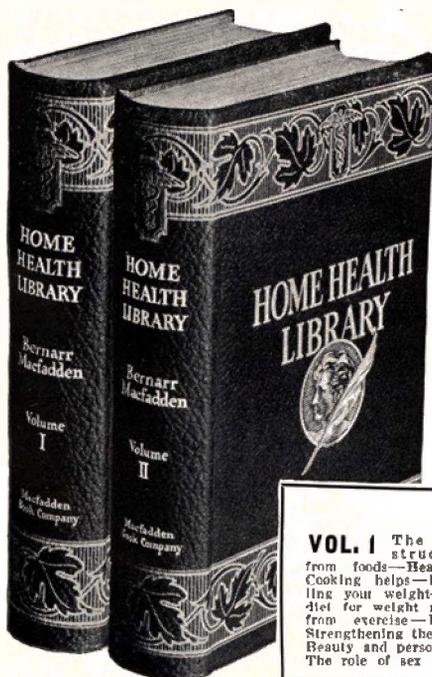
A DULL ache; a sharp, stabbing pain . . . trouble somewhere in your system! That's Nature's danger signal, and if you let it go unheeded the result may be serious. But can you interpret such warnings? Can you tell what's wrong? Can you correct this disorder when pain says "Watch out!"? You can with Bernarr Macfadden's *Home Health Library!*

Starting with these charts, the *Home Health Library* points out the most frequent pain areas, localizes your complaint, diagnoses the ailment and tells you what to do . . . all in plain, simple language that anybody can understand. And this is only one of the many important chapters in these invaluable books!

Covering the whole subject of health and vitality, the *Home Health Library* not only gives you completely detailed information on the diagnosis and treatment of hundreds of diseases, but it also shows you how to prevent illness; how to enjoy the buoyant zest for life you had in childhood.

You Can Recapture And Keep Glowing, Vibrant Health

First of all, the *Home Health Library* tells you how to keep physically fit . . . goes right to the fundamentals of eating, exercise, sleep and general living habits that make for vigorous, robust health and your enjoyment of life. Naturally this is highly important, for once you have built up your body, you not only feel "like a million dollars" but you acquire a resistance to disease that's mighty hard to break down.

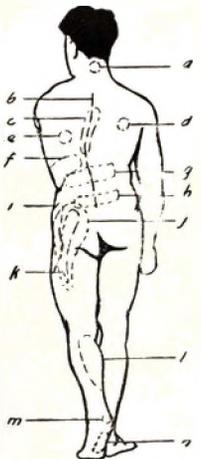


Do You Know What Pains Mean in These Areas? The Home Health Library Explains Fully

If you are overweight, the *Home Health Library* will guide your reducing and without taking the joy out of life; if you are underweight, it will make the building up process a genuine pleasure. If you want to know what to do in emergencies—when sudden illness or accidents occur—here are complete details. The *Home Health Library* explains fully the laws of sex and birth control; it analyzes foods and diets; in fact, it covers the health needs of every age.

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This beautiful, new Edition of the *Home Health Library*, has been printed from the same plates used in the five-volume First Edition for which thousands gladly paid \$12.50. Having eliminated all of the heavy preliminary expense of editing, typesetting and plate-making, and with the added saving of publishing in two volumes instead of five, we can now offer you the same, identical information for only \$6.95 . . . an actual cash reduction of \$5.55!



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Let us send you the *Home Health Library* for 5 days' free examination in your own home. If you decide you do not want the books, return them to us in good condition within 5 days and you won't owe us one penny. That's fair—isn't it?

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Simply sign and mail the coupon printed below. Although the beautiful new 2-Volume Edition of the *Home Health Library*

sells for only \$6.95, it need not be paid in one lump sum. You simply pay \$2 down at the end of the 5-day Free Examination period and the balance of \$4.95 in two consecutive monthly payments of \$2 and \$2.95, respectively. Take advantage of this free examination offer now—mail coupon TODAY.

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VOL. 2 Sex ailments of women—Sex disorders of men—Birth Control, newest principles—The art of love—The man's part—The woman's part—Modern curative methods—Water, sunlight, electric treatments—Milk diet—Children's diseases—Symptoms and treatments for hundreds of diseases

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On this page you will see an actual photo of how I look today. This picture has not been changed in any way. No muscles have been "painted on." This photograph is the camera's honest proof of what I have done for MY body. I myself am ready to prove what my secret of Dynamic Tension can do for YOURS!

To look at me now you wouldn't recognize me as the same person I was years ago. Then I was a physical wreck, a 97-pound weakling—flat chested, spindly legs, arms and legs like pipestems.

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This Sterling Silver Cup Being Given Away

This valuable cup, made of solid sterling silver, stands about 14 inches high on a black mahogany base. I will award it to my pupil who makes the most improvement on his development within the next three months. Therefore, no matter what your measurements may be now, you have an equal chance to win this cup for permanent possession—and with YOUR name engraved on it! Get my free book by mailing coupon.

PHYSICAL CULTURE



Bernarr Macfadden

PUBLISHER

JANUARY, 1939

VOL. LXXXI. NO. 1

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NEXT MONTH

THE AMAZING POSSIBILITIES IN FACIAL CULTURE

With almost half a century of study and experience to draw upon, Bernarr Macfadden discusses the remarkable transformations that can be achieved in the beauty of women who have reached an age when they no longer believe they can possess charm. In a short, cogent editorial, Mr. Macfadden tells of the various methods of body conditioning and facial treatment which will restore the youthful vitality which every woman should possess.

PRUDERY—A BARRIER TO SEXUAL HEALTH

Born of a wilful ignorance and a twisted sense of modesty, there still exists, even in this day of intellectual fearlessness, a viciously reactionary stigma on normal and healthy sexual expression. In a candid and plain-spoken discussion of the subject, Lawrence Gouid, prominent consulting psychologist, reveals not only the startling inconsistency of this medieval prudery with our present-day social code, but also the lasting injuries it may wreak on us, psychologically and physically.

THROW OFF THE BURDEN OF EXCESS WEIGHT

Because the problem of obesity is one which confronts millions of people, there is constantly in vogue a limitless number of reducing fads—too many of which are violent, drastic methods which all too often prove seriously injurious. By means of a time-tested and carefully detailed program of diet and exercise, Dr. Rasmus Alsaker, noted authority on reducing, outlines a method by which weight reductions, even to a loss of one hundred pounds, can be accomplished without the slightest fear of harmful consequences.

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*Important
Announcement to
Prospective Mothers*



L. G. Hallway

WE HAVE come to look upon ourselves as a modern and progressive people. We believe that our obstetricians are intelligently guided. But how many of us ever stop and wonder how it is that savages in the remote corners of the world are able to give birth to their children without the attention of physicians or even midwives, and still suffer none of the difficulties which we associate with childbirth in our civilized world?

Now, it is my opinion that civilized women can bear their children with the same ease and safety as the savage woman in some far off, African jungle, provided the physical requirements are understood and prepared for in an effective manner.

In other words, the tissues and muscles affected should be made supple and vital so they can perform their functions easily and satisfactorily. To a certain extent, childbirth is an athletic procedure, and should be trained for accordingly—the same way a fighter, preparing for a ring battle, trains and builds up the muscles and tissues he will have to rely on to absorb his opponent's blows.

NOW, for the purpose of making a demonstration that we hope will be publicized everywhere for the benefit of American mothers, the Bernarr Macfadden Foundation has decided to accept from fifteen to twenty-five prospective mothers at the Physical Culture Hotel, Dansville, New York.

These prospective mothers must come to Dansville on or before March first, 1939, and must be there at least three months before the birth of the child. All births

should be due before June first, 1939.

There will be no charge for the accommodations, nor the service or the attention which may be required. It is understood, however, that every mother will allow pictures of herself to be used and a detailed description of the diet, exercise, etc., that are taken. This stipulation is made because the object of the demonstration is to publicize the details in such a manner that mothers everywhere will be able to follow them at home, preferably under the instructions of physicians familiar with and in sympathy with this natural procedure of building bodily vigor to avoid unnecessary pain.

AT THE conclusion of this demonstration, True Story and Physical Culture desire to join with philanthropists, obstetricians, physicians, midwives and others in various communities throughout the United States with a view to organizing a "True Story and Physical Culture Clinic" in which the methods advocated can be carried out to accommodate mothers who are unable to leave their homes, the idea being to eliminate charges altogether in needy cases.

Mothers who desire to become a part of this demonstration should write at once, and a few preliminary suggestions will be made that can be used before arriving at Dansville. Letters should be addressed to the Bernarr Macfadden Foundation, 122 East 42nd Street, New York, N. Y.

Bernarr Macfadden



The Man with the "Grasshopper Mind"



You Know This Man As Well as You Know Yourself

His mind nibbles at EVERYTHING and masters NOTHING. He always takes up the EASIEST thing first, puts it down when it gets HARD, and starts something else. JUMPS from ONE THING TO ANOTHER all the time!

There are thousands of these PEOPLE WITH GRASSHOPPER MINDS in the world and they do the world's MOST TIRESOME TASKS—get but a PITTANCE for their work.

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Address.....
City..... State.....

DEAR SIR:

I wish to do some snow-shoeing during the winter sports season at Lake Placid in the Adirondacks. Could you give me some advice about what kind of snow-shoes to buy and whether it is necessary to get skis a certain length according to your own height. I am five feet, eleven inches tall.

O. L. C.,
Poughkeepsie, N. Y.

ANSWER—The character of the country in which they are to be used determines the kind of snow-shoes you should have. For narrow trails through underbrush you should have the long type snow-shoe with tail—that is, the stick extending out behind. But for mountain work or hill climbing get the "bear-paw" snow-shoe. This has no "tail" and enables you to make quick turns to keep from falling on steep mountainsides.

Close webbing in a snow-shoe is better than the open webbing. It prevents you from sinking so deeply in the snow and lessens the labor as well as permitting you to make better time. Get snow-shoes that are turned up in front, as these enable you to make better time than on the straight snow-shoes which always pick up snow in front.

In buying or selecting skis stand them on end in front of you and stand erect with your fingertips as high in the air as you can reach. If the skis are the right length for you, the top end of the skis should be on a line with your fingertips. If the snow is wet, wax the bottom of your skis with a combination of harpicks, tar, a little rubber and paraffin.

DEAR SIR:

On an automobile trip to the Gulf Coast in February I wish to visit the wild fowl refuges in Louisiana. Can you give me the names of these refuges, their extent, where they are located and how to reach them by automobile.

J. H. R., Sandusky, Ohio.

ANSWER—The wild fowl sanctuaries in Louisiana are the Rockefeller Foundation Wild Life Refuge, the Paul J. Rainey Refuge, and the Marsh Island Sanctuary. The Rockefeller Foundation Refuge contains 86,000 acres of marsh land and water along the Gulf Coast in Cameron and Vermilion Parishes in the southwestern part of the state.

To reach this by automobile leave U. S. 90 at Lake Charles and drive south over 211 to Creole, where you turn left on 42 through Grand and Tiger Island. The refuge is between Grand Lake and White Lake.

The Rainey Refuge contains about 26,000 acres in Vermilion Parish and is reached by leaving U. S. 90 at New Iberia, driving over Route 25 to Abbeville, then south on Route 43 into the Refuge, which is, with the Louisiana State Refuge, along the western shore of Vermilion Bay. The Marsh Island



Ericing Gulloneay

PHYSICAL CULTURE OUTDOORS

Refuge is on Marsh Island, just across the entrance to Vermilion Bay from the Rainey and Louisiana State Refuges, from which it can be reached by boat.

DEAR SIR:

Where is the new National Park in Florida located, what are its attractions, and how can it be reached by automobile?

F. K. W., Erie, Pa.

ANSWER—The New National Park in Florida is at the very southernmost tip of the Florida peninsula. It is mostly water and wooded marsh land and its attractions are those of The Everglades—mostly birds and reptile life. Great flocks of white and blue herons roost in the trees, beautiful aigrettes stalk along the edges of the bayous, and alligators of great size sun themselves along the banks.

Entrance is only gained by boat. To reach it you drive south from Miami over Route 4A to Florida City, from where you follow Route 205 past Royal Palm State Park and along a canal to Cape Sable. From there you have to go by boat up into the park. A Seminole Indian Reservation, the largest in Florida, is along the western edge of the park. This is a trip well worth taking while you are in Florida.

DEAR SIR:

Are there any water routes by which one could take a trip through the lake country of central Florida in a boat equipped with an outboard motor?

O. L. C., Savannah, Ga.

ANSWER—There is a wonderful water route, which can be traversed in a small boat with an outboard motor or by canoe. Starting from Jacksonville, go up the St. Johns River to where the Oklawaha River joins the St. Johns at Welaka, on the edge of the Ocala National Forest, about 80 miles up the river from Jacksonville.

Here you have your choice of three different routes. You can continue south on the St. Johns and through Lake George, Dexter Lake and on up the headwaters of the St. Johns River into Monroe Lake at Sanford, completing a trip of about 150 miles through the lake country of Central Florida. Or from Welaka you can go up the beautiful Oklawaha River to Lake Griffin and then into Lake Harris at Leesburg, completing a trip of about 200 miles from Jacksonville. Or you can leave the Oklawaha at Orange Springs and follow up a branch stream into Orange Lake and from Orange Lake into Lake Lochloosa, which would complete a trip of about 120 miles from Jacksonville.

The Oklawaha is the most beautiful river in Florida, but all along any of these routes you will be traversing a sub-tropical region in which you will see plenty of bird life and alligators and tropical vegetation, with Spanish moss hanging down from the trees. In some places the crooked streams are a veritable tunnel through the tropical undergrowth.

DEAR SIR:

What colleges in the East go in most for winter sports, making these outdoor activities a regular part of college life?

J. C. F., Trenton, N. J.

ANSWER—Some thirty-one schools and colleges are now affiliated with the Intercollegiate Outing Club Association, which makes winter sports a regular part of their outdoor activities. The largest of these outdoor clubs is at Dartmouth, where the Intercollegiate Outing Club Association originated, and which now has twenty cabins and six Adirondack-type shelters linked by eighty miles of trail. It is the Dartmouth Outing Club that holds a Winter Sports Carnival which attracts college skiers and hundreds of winter sports enthusiasts and spectators around the first week in February each year.

DEAR SIR:

Please give me some information concerning Cook Forest Park in Pennsylvania.

Miss E. S., Altoona, Pa.

ANSWER—Cook Forest Park is located along the Clarion River in Clarion and Jefferson Counties, northeast of the City of Clarion. It comprises 6,055 acres of the largest remaining tract of virgin timber in the state.

Fine new cabins and camp sites have been constructed throughout the park, as well as many conveniences for picnickers and others. There are seventeen miles of trails leading through the more remote sections. A good automobile road runs through the park at the town of Cooksburg.

DEAR SIR:

Please give me some characteristics of balsa wood. Does it keep well?
T. P. L., Trenton, N. J.

ANSWER—Balsa wood is usually almost white in color, but sometimes will be tinted slightly red. It has a silky texture and is rather coarse but straight-grained. It is the lightest of all woods, even lighter than true cork. Balsa often absorbs as high as 500 per cent moisture. It will not last very long unless treated with a preservative.

DEAR SIR:

Can you give me some idea as to what it might cost two people to live modestly in Tahiti? What would transportation cost from Los Angeles or San Francisco? When is the rainy season? Would it be possible to live off the land or earn a living there?
N. D. W., Salt Lake City, Utah

ANSWER—A good living, perhaps minus a few modern conveniences, could be assured in Tahiti on fifty dollars monthly for two. Rentals and foods are very cheap and clothing is no problem. Good steamer accommodations are \$120 per person from either Los Angeles or San Francisco, one way. Cheaper passage, of course, can be secured on freight ships.

Generally speaking, the rainy season extends through the months of December, January and February. It would hardly be possible to live off the land or find a job that would support you while there. The average white man could never compete with the cheap native labor. There would be very few, if any opportunities for the skilled or professional American in these French-owned islands. A certain amount of money or a regular income is a prerequisite to life in Tahiti. Furthermore, it will be necessary to either show a return ticket to the United States upon your arrival or deposit \$90 with the authorities when you land, this latter to be returned when you leave. This is done to prevent the islands becoming overrun with penniless, homeless beachcombers.

DEAR SIR:

Will you please tell me the picking seasons for some of the California fruits?
H. R., Mitchell, South Dakota.

ANSWER—The picking seasons in California are as follows: for cantaloupes, April to September; for pears, June to September; for peaches, May to October; for prunes and plums, May to October; for grapes, June to January; for oranges, the entire year. Picking starts sooner in the hot valleys of the interior.

DEAR SIR:

What is the largest lake in Canada?
F. G. McC., London, Ontario.

ANSWER—The largest lake wholly within Canada is Great Bear Lake in the Mackenzie district of Northwest Territories. Its area is about 12,000 square miles.

DEAR SIR:

Please tell me the exact location of San Juan Capistrano in California.
Mrs. C. F. G., St. Louis, Mo.

ANSWER—San Juan Capistrano, home of one of California's most famous missions, is on U. S. Highway 101, the direct route from San Diego to Los Angeles. It is 71 miles north of San Diego and 60 miles south of Los Angeles.

DEAR SIR:

What is a good way to cover a crack or slight leak in a canvas canoe?
J. L. S., Orlando, Florida

ANSWER—In the case of a small crack that might spread, it is always wise to fill it in with a paste mixture of whitening and varnish, first sandpapering away the old paint directly around it. Whitening is a dry chalk-like stuff sold by paint stores that will give body to the varnish. Work this mixture into the crack and allow plenty of time for it to dry. You may also use a ready-made canoe cement for this purpose.

In the case of a definite leak, it is advisable to put a silk patch over the cement or varnish mixture used for filling. A silk patch is less noticeable than one of canvas and, when well varnished, will hold even better. Thoroughly varnish one side of this patch and then paste it over the crack, pressing it down evenly all over so as to remove all air bubbles. After this has dried, varnish the outer side of the patch. An excellent substitute for varnish in this patching process is a liquid canoe cement known as ambroid. This is valuable to have around for all-purpose repair work on canvas canoes.

A larger hole may need to be reinforced on the inside with an additional patch, of either canvas or silk.

DEAR SIR:

Please map out a route from New Orleans eastward through Mobile, Alabama, Pensacola, Florida, and then down along the Gulf coast through Tampa and St. Petersburg and over to Miami.
C. G. K., New Orleans, La.

ANSWER—Take U. S. 90 (The Old Spanish Trail) eastward through Mobile to Pensacola. Then, as you prefer to stay along the coast, follow U. S. 98 and U. S. 319 into Tallahassee. It would be shorter, however, to take U. S. 90 from Pensacola to Tallahassee. From here U. S. 19 will take you into St. Petersburg by way of Tarpon Springs and Clearwater. Take the Gandy Bridge over to Tampa and then U. S. 541 to Palmetto, where you will pick up U. S. 41. Follow this route through Bradenton, Sarasota and Ft. Myers, and then on to Miami over the Tamiami Trail.

DEAR SIR:

Is it true that the oldest house in the United States is in St. Augustine, Florida? Is this on the direct route to Miami? How far is St. Augustine from Jacksonville?
J. P., New York City, N. Y.

ANSWER—A house in St. Augustine is reputed to be the oldest in the United States. This city is on U. S. 1, the main route to Miami, 38 miles south of Jacksonville.

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Male and Female Sex Organs and Reproductive System
Hormones

The Honeymoon

The Wedding Night
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THE MAN WHO SUCCEEDED IN FAILING



WILL
HAMMELL

Exploring Your Troubles with Our Psychologist

This department does not pretend to solve your problems. We only help you to analyze them, so that you may more successfully grapple with them. In writing you need not sign your name, but you should state your case frankly and honestly. We do not undertake to answer letters. We cannot give free psychological advice by mail. This is, rather, a magazine feature in which, especially when a number of persons ask for help in solving a certain type of difficulty, we will have it discussed by an authoritative psychologist.

DEAR PSYCHOLOGIST: I have read several published letters asking your advice and have thought for some time that maybe I could get some help that way also, so I will give you an outline of my life, hoping I can get adjusted some way.

I am a man fifty years of age, have never been married and have "batched" a good many years on a farm. When I was six my mother died and soon after father married again.

My stepmother was a fine woman but I felt a lack after mother died that was never filled. I lived a lonely life right in my own home, and was shy and without confidence on the outside. I made few friends and was so easily hurt that I couldn't keep some of them. Father wasn't much interested in me except to give me a good whipping if I did anything wrong.

I was never talked to or instructed how to avoid the pitfalls I was sure to meet in the course of life so I learned from the wrong source and made a lot of mistakes, particularly in regard to the sex problem. In fact, it seems impossible for me to get rid of the idea that sex and love are things never to be mentioned among decent people. When I was a child, a demonstration of love in any way, even between myself and my own father or my stepmother, just seemed out of place.

The idea seemed to be that love was all right for a babe in arms, or a little girl, but "when you become a man (seven or eight or nine years of age), you put away childish things." I was put in a bed by myself because I bothered father by wanting to sleep with my arm around his neck. I couldn't understand why he didn't want to be bothered but I had to make the best of it.

I grew physically but I know that I never have "grown up" as I should have in other ways to meet the problems of life. I have met but one girl, when I was in the eighth grade, that I thought was just the one I wanted and would take unconditionally for a life companion.

Father died soon after that and I had to take his place, as I was five years older than my stepbrother. By the time I was relieved of that responsibility the girl was gone and I didn't even know where. As I was broke and in debt besides, I gave up ever trying to find her. I was years getting my debts paid and never found any one I cared enough for after that. And besides, I didn't have confidence in being able to support or live with anyone without trouble, since I couldn't seem to get adjusted to life at all.

Since it was literally torture for me to go around asking for work like so many did I just worked at odd jobs on farms and kept that up (Continued on page 53)

WHY DOES COLD WEATHER AGGRAVATE RHEUMATISM?

QUESTION: I suffer a great deal from rheumatism, but more so in winter and when the weather changes. I have been advised to move to a warmer climate and would like to know if this is necessary. I would greatly appreciate any suggestions you may have to offer regarding the treatment of this painful condition.

HENRY S.

ANSWER: Persons suffering from chronic rheumatism have been successfully treated by natural methods, notwithstanding the fact that other less effective methods may have failed to insure permanent benefit. The reason this disease sometimes appears so difficult to overcome, is because the actual, underlying cause is not recognized and properly corrected. Although changes in temperature and pressure, also atmospheric moisture, aggravate rheumatic conditions they are not responsible for the development of the trouble. Persons suffer from this condition in New York and also in California, demonstrating that climate and geographical location are not chiefly responsible for the occurrence of rheumatism. A heavy toxic condition of the blood stream is the chief cause of this annoying and painful affliction, although abscessed teeth, diseased tonsils or some other focus of infection may be contributing causes.

During warmer weather everyone perspires more freely than during colder weather and that is why the victim may enjoy comparative comfort during the warm summer months. When the weather is cold and damp, then the increase in atmospheric pressure prevents the skin from throwing off waste as freely as during dry warm weather. Consequently the rheumatic patient, who is always toxic, suffers considerably, due to a greater retention of toxins in the blood stream.

Corrective treatment must be directed toward purifying the blood stream and therefore the organs of depuration such as the bowels, skin and kidneys must be stimulated to greater activity. Both the fast and milk diet have been employed to great advantage in this condition. Colonic irrigations in the beginning of treatment are especially beneficial. Regularity of the bowels is absolutely important and later on should be insured by laxative foods, exercise, sitz baths and abdominal massage.

Sometimes when on the milk diet there will be an increase in the inflammation for about five to ten days, and this should not be looked upon unfavorably if the inflammation subsides completely after that time. However, if the inflammation persists, a strict vegetable diet is followed for two or three weeks or a fast is resumed for several days and then the individual may again revert to the milk diet. The return to solid foods is gradual, and only natural, unrefined foods should be employed in the diet. Overeating should be positively avoided.

AND OTHER QUESTIONS
FROM HEALTH SEEKERS
ANSWERED BY
A PERSONAL AND
CONFIDENTIAL ASSOCIATE
OF

**BERNARR
MACFADDEN**



OTHER QUESTIONS

HIVES

CHAPPED HANDS

INCREASING HEIGHT

FASTING TO GAIN WEIGHT

STRENGTHENING THE GRIP

EXERCISE

DURING MENSTRUATION

Cabinet baths, prolonged neutral baths and sun-baths will be found useful in this condition and in severe cases wet sheet packs will prove to be of inestimable value. Infra-red rays, radiant light, fomentations and hot air may be used locally for bringing about relief. The practise of drinking liberally of water is highly recommended in chronic rheumatism.

Hives

QUESTION: What is the cause of hives and how may this condition be prevented?

B. J. W.

ANSWER: Hives is a term usually applied to a papular eruption which is accompanied by intense itching and although this term is somewhat loosely used, it applies chiefly to urticaria.

An irritation of the stomach or in-

testines, arising from foods or drugs, is responsible for the affection. Sometimes a certain article of food may cause the eruption such as crabs, lobsters, mussels, shrimps, clams, oysters, caviar, salted fish, cheese, buttermilk, sausage, pork, veal, strawberries, raspberries, cucumbers, mushrooms, grape skins and tomatoes. None of these foods will produce hives unless the individual eating them has a specific idiosyncrasy toward the food.

Although the eruption may appear after eating a certain kind of food it is doubtful whether this idiosyncrasy would exist if the individual were not already toxic from overeating, the wrong food combinations and intestinal stasis.

The drugs most likely to produce hives are quinine, copaiba, cubebis and salicylic acid.

If hives persists it is advisable to have a urinalysis test and a blood test to determine if there is an excess of sugar present in the urine or blood stream.

An ordinary case of hives will usually clear up after a thorough cleansing of the alimentary tract. One or two days on nothing but plenty of hot water and daily hot rectal irrigations will usually be sufficient for this purpose. After this cleansing of the alimentary tract, overeating and the wrong combinations of food should be avoided.

If several attacks of hives occur then a more drastic purification of the blood stream as well as a thorough cleansing of the stomach and intestines would be necessary.

Chapped Hands

QUESTION: Every winter I have considerable trouble with chapped hands and would be grateful for any suggestions that would help me overcome this condition.

ELIZABETH

ANSWER: The practise of using very strong soaps, which remove a great deal of the natural oil of the skin, is a prominent cause of this trouble. Washing the hands in very hot water while using such soap and failure to properly rinse and dry the hands may be considered as the chief causes of this trouble, although it may appear that exposure and cold air are the causes. When proper care is taken of the hands then the air and wind will not produce any of the unpleasant symptoms.

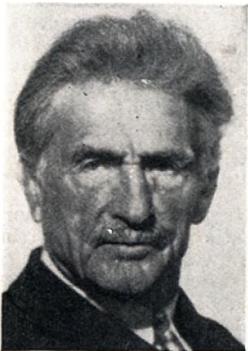
The remedy for chapped hands is simple and will in nearly all cases clear up the trouble in a very short period. At night before retiring the hands are washed with warm water and some good vegetable-oil soap, and then rinsed well with warm water and thoroughly but gently dried. After this mutton tallow, olive oil or lanolin is applied. The following day apply one of these preparations two or three times. During the day be careful in regard to

(Continued on page 59)

FEMININE

DEPENDS ON GLANDULAR ACTIVITY

BY BERNARR MACFADDEN



GREAT interest is being manifested by health culturists in the various theories that have been recently presented on the control of bodily functions by the various glands of the body.

Certain glands control bodily growth. Those who have grown to a giant stature are supposed to be suffering from an abnormal glandular activity.

Throughout our entire body the functions that have to do

with maintaining vitality and health are guided by this controlling force.

Life is manifested first and foremost by the circulation of the blood. This vital fluid carries away the dead cells, toxins and all poisons that may accumulate in the tissues, and brings new live cells to replace those that are worn out. When the circulation is stagnant in any part of the body, there is naturally less activity—less life. This is true not only of the glands that control sex instincts, but of all the glands.

Feminine attractiveness is greatly enhanced or impaired by the condition of the glands that control the feminine instincts. Beauty salons are patronized liberally everywhere. Hundreds of millions of dollars are spent to beautify the face—put sparkle in the eye—give vitality and fascination to smiling features. But practically no attention is given to what is far more important, and that is to maintain in perfect health the ovaries, which are the glands that differentiate femininity from masculinity.

These glands are located in the lower part of the abdominal region, and to be kept thoroughly alive and healthy they require a liberal amount of that vital fluid which maintains the strength and vigor of all the tissues of the body.

Stagnant blood in any part of the body indicates a lack of life—a lack of the live elements needed to main-

tain a proper degree of health. Therefore, to keep the ovaries thoroughly alive—to give femininity that particular attraction which is associated with the sex, it is necessary not only to eat vital foods which insure a superior quality of blood, but it is especially necessary to take the exercises which are required to strengthen the tissues of the central portions of the body.

Probably the most attractive women in the feminine sense are professional dancers. They usually have beautiful limbs, their hips and waist are symmetrically formed, and their feminine charms generally are far superior to those possessed by the average woman. This is a very definite proof of the value of regularly exercising those portions of the body in which the ovaries are located.

In fact, all forms of energetic dancing strengthen the muscles of the legs, hips and waist, and give that particular activity needed to insure free circulation of the blood throughout the abdominal region.

The ovaries are then sure to be unusually healthy and feminine instincts can hardly be otherwise than normal in every way. In this connection it might be well to repeat a statement made to me by a physician who has many beautiful women as patients. He maintains that if you keep your ovaries in perfect health your facial beauty will, to a large extent, take care of itself.

That does not mean, of course, that the feminine desire for cosmetics need be denied altogether or that appropriate cleanliness and the rules of hygiene generally must not be followed. But it very emphatically indicates the unquestionable importance of keeping the glands that control feminine instinct in a vital, healthy condition.

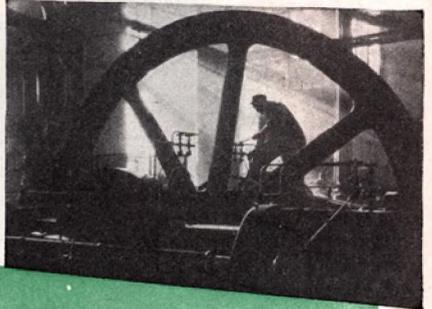
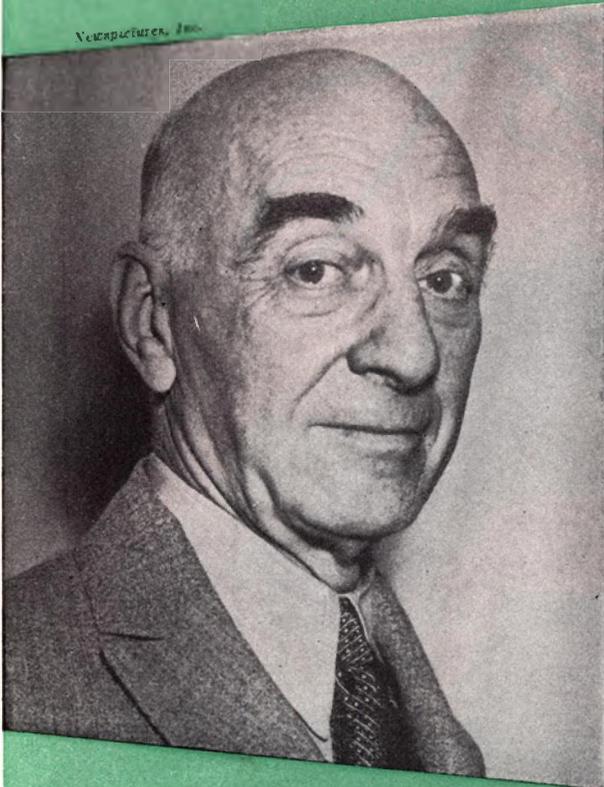
Naturally, as stated before, appropriate, vitality-building foods are essential, but if you are not able to secure the advantages of the more energetic type of dancing, ballroom dancing at least will be of some help. And if this is not readily available, the many forms of exercise that more actively use the central portions of the body can be especially recommended.

Beauty



Globe Photos

Victor G. Heiser, M.D., author of "An American Doctor's Odyssey," recently appointed Chief Consultant to the Association of National Manufacturers' Committee on Healthful Working Conditions



AN INTERVIEW WITH DR. VICTOR G. HEISER BY WAINRIGHT EVANS

HEALTH

DR. VICTOR G. HEISER, the sixty-five-year-old author of "An American Doctor's Odyssey," fighter of plague, pestilence, and famine in far corners of the earth, and one of the world's greatest authorities on public health, has his hat in the ring again. His "retirement" of five years ago didn't take. At sixty-five he is back, busy fifteen hours a day with what now promises to become the biggest job in a career that has been composed of jobs spectacularly big.

What happened was that the National Association of Manufacturers, in search of the best possible man, with the biggest possible reputation, to act as Chief Consultant to its Committee on Healthful Working Conditions (in industry), tapped Dr. Heiser on the shoulder and said, "You're it!"

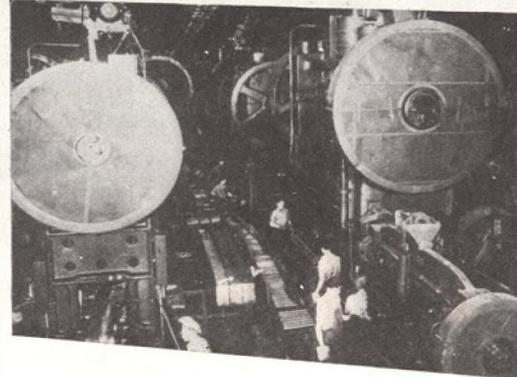
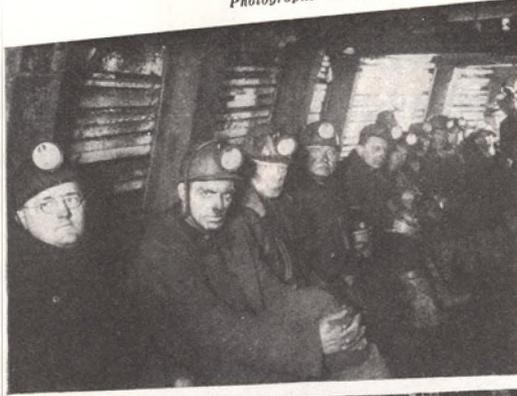
It was an inevitable choice. Dr. Heiser's thrilling autobiography had put his name in the news and made it a household word throughout the United States. He had long been famous among the initiate; now he was famous to the man on the street, as a stamper-out of bubonic plague, cholera, smallpox, typhus, typhoid, malaria, influenza, leprosy, beri-beri, and other disease dragons in ever part of the world.

His spectacular ten-year record in cleaning up the

Philippines as Director of Health in those islands, had come to light through his enthralling narrative of what happened there. So did his world-wide travels during his twenty years of association with the International Health Division of Rockefeller Foundation.

And there were other items. For instance that vivid description of the Johnstown flood, which tells how a young boy named Victor Heiser lost his parents there, and then floated to safety on the whirling waters, later to carve for himself a career whose record reads like a romance. So much for some of the reasons why the National Association of Manufacturers shanghaied Dr. Heiser, sat him down at a desk in its suite in Rockefeller Center, and said to him, "What do you mean Retired!"

That title of "Chief Consultant" only faintly suggests the epic size of the nation-wide industrial health problem which Dr. Heiser is taking on. It is nothing less than the job of helping the National Association of Manufacturers to educate both employers and workers in American industry to an understanding of the economic value of health; of healthful working conditions; and of how to achieve these things in offices, factories, and industrial plants everywhere.



FOR 30,000,000 WORKERS

Among the factors in the problem are wages, hours, factory conditions as to light, heat, ventilation and the like, medical service, physical examinations, health education, health insurance, proper food, and secure and suitable employment for aging workers and for partly disabled individuals whose condition used to count them out.

Such questions as these, all of them the deep concern of the National Association of Manufacturers, combine to place on Dr. Heiser's broad shoulders a task whose sheer magnitude equals and perhaps eclipses anything he ever tackled when he was much younger in years, not nearly so rich in experience as he is now, and certainly not a whit more vigorous physically and mentally.

When I arranged to see Dr. Heiser in his offices at Rockefeller Center it was not only to meet the author of "An American Doctor's Odyssey." It was also to see for myself what manner of man the National Association of Manufacturers had picked to stand at the helm of one of the biggest and most promising of its undertakings.

One good look at Dr. Heiser constitutes a fairly complete answer to the question. Here was the personality

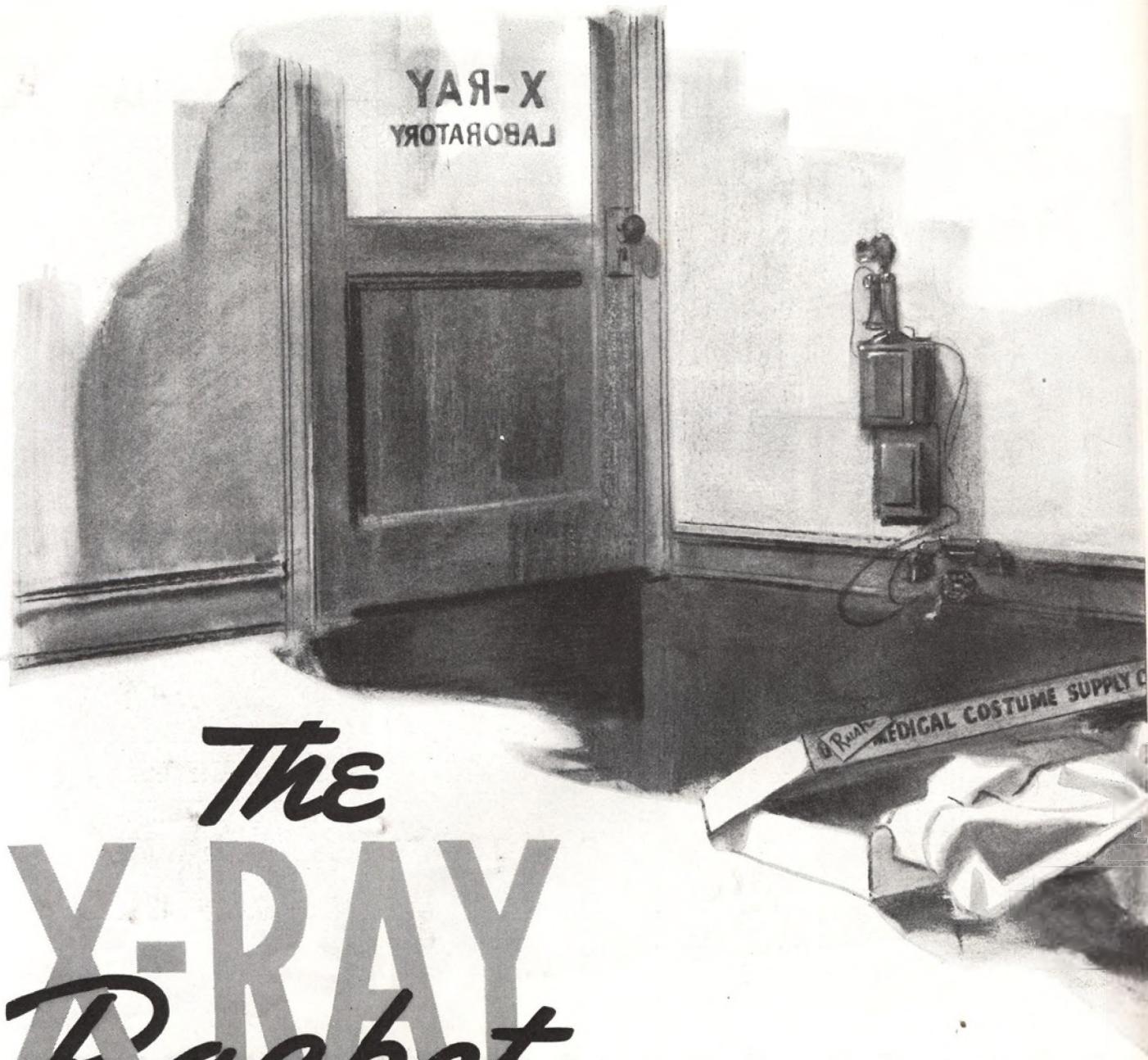
that stands out in such sharp relief in the pages of his remarkable book. At sixty-five Old Age doesn't seem to have laid a finger on him. One thing that tells the story is the spring in his step as he walks, militarily erect and at least six feet one or two, across the floor. I don't know what his tailor measures as his waistline, but I'd bet my hat it is nearer thirty-two than thirty-four inches.

"I thought you said in your book that you had retired, Dr. Heiser," I ventured by way of an opening shot.

"I was mistaken," smiled Dr. Heiser. "When this job was offered me, I found I just couldn't resist. I had been having a fine time, of course, doing whatever I felt like doing—writing magazine articles, lecturing now and then, and shuttling around the country here and there.

"But in this project of the National Association of Manufacturers there was something forward looking and big, that seemed to tie up with the world of tomorrow—something shaped by a vision, and yet so concrete and substantial and full of things fairly crying to get done, that a man could really put his teeth into it. At sixty-five mine are still in fine condition. So I accepted."

(Continued on page 44)



The X-RAY *Racket*

BY WILBUR GEORGE

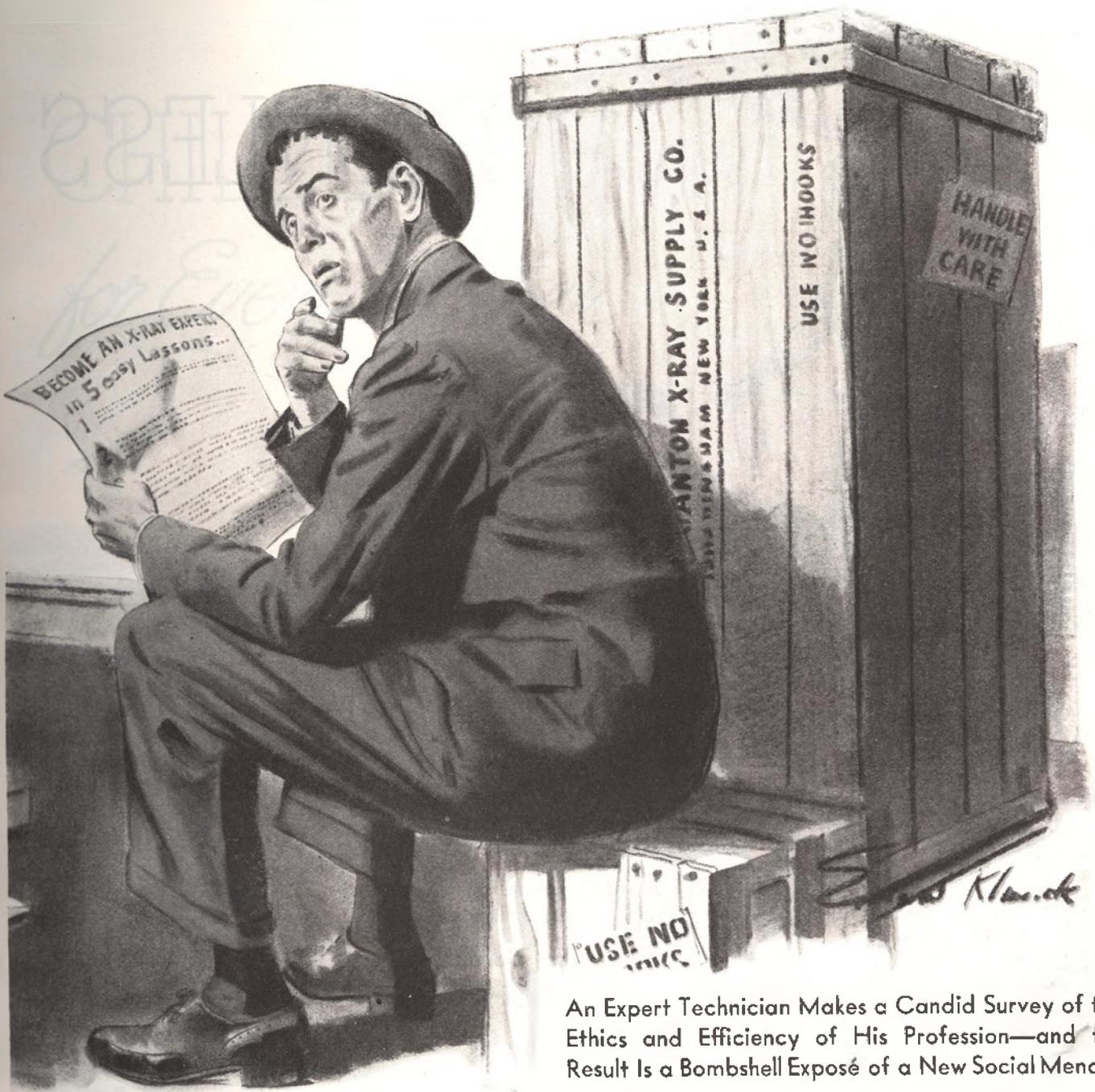
IT IS time for Government, and State, to enact a law protecting the general public against misuse of X-ray. It is a condition for each state to have investigated by unbiased investigators. Most states have no law controlling X-ray, and because of this laxity many persons who are supposed to know X-ray are able to hide their inability behind a medical degree, osteopathic, or chiropractic degree.

Because a person is a "doctor" does not mean that he is capable of making X-ray negatives or making diagnoses from them. X-ray is a definite science which dovetails into most branches of medical treatment as well as being used in most large industrial organizations to detect flaws. It is only by long study and close observation that one becomes capable of interpreting a condition from an X-ray negative. Most states do not have laws compelling persons to master this knowledge before they are allowed to interpret X-ray negatives.

Because of this laxity of law, X-ray has become a racket in the hands of some, and it is time that the public in general should know the various facts about X-ray which will take away the mystery of it, and which will place the public in a position to demand quality in X-ray negatives just as they demand quality in all the other necessities of life.

It is true, of course, that certain universities have a short course for doctors and dentists in X-ray interpretation—and a still shorter course in machine operation. On the surface, it is taken for granted that doctors and dentists are expert in taking and diagnosing X-ray negatives merely because they have one of these machines in their office.

To put on a pilot's outfit and sit in an airplane does not necessarily mean that that person is a pilot. Yet if you were a passenger and saw a person seated at the controls dressed that way, you would take it for granted that that person had passed proper rigid examinations which qualified him to sit there. It would be a sorry awakening to state examiners to learn that not a small percentage of doctors and dentists are wearing pilot's uniforms without knowing some of the most fundamental laws of what is taking place in the X-ray machines they operate, do not know a diagnostic from an undiagnostic X-ray negative and do not know healthy bone, or tissue structure, X-ray speaking, from tissue and bone that is unhealthy. It is sad cold fact that should be faced immediately by every state and country in order to protect the lives of trusting sick persons against unqualified operators of X-ray machines, and unqualified diagnosticians of X-ray negatives.



An Expert Technician Makes a Candid Survey of the Ethics and Efficiency of His Profession—and the Result Is a Bombshell Exposé of a New Social Menace

The sad condition exists because there is no law to stop such practise. To drive an automobile one must have a state driver's license. Before a simple license for an automobile is issued to a driver, he must pass a driving test behind the wheel of the car. Questions pertaining to traffic regulations are asked by the examiner, and the driver is finally given a license only after he has qualified for one.

But no such examination is required of X-ray machine operators or X-ray diagnosticians. The only qualification necessary is the ability to buy an X-ray machine from a manufacturer's agent, who is always willing to sell a machine to anyone who has the money to buy it. The agent, as a rule, gives only the simplest of operating instructions to the buyer, together with an exposure chart that is not more than seventy-five per cent correct under ideal conditions.

The buyer then uses his X-ray machine on persons who are sick. They come to him for help in relieving distress. Sometimes half a dozen different sets of X-ray negatives are made by as many different X-ray machine operators—and interpreted in as many different ways.

Why should this condition exist? Why isn't there a standard in X-ray machine operation and negative interpretation? Why should fractures of bones, after

being X-rayed, be interpreted by some as an existing fracture, while others say it is not? Why are wrong stomach diagnoses made time after time, so that one wonders what it is all about? For instance: a gas bubble on the stomach misinterpreted as a tumor; a cavity in both lungs interpreted as only a "run down" condition; a healthy bone tissue of the jaw interpreted as a cyst as big as a house; abscessed teeth undetected; a person advised to walk on three fractured bones of the foot because that person had no more money to pay for treatment.

Why should large transportation companies be able to manipulate X-ray exposures to cover up fractures acquired on their carriers, which fractures were later revealed in the negatives taken by private laboratories? Why should a "quack" who also has a state license for health, but no license for an X-ray machine, be allowed to select an X-ray negative of a broken leg from a large file of negatives, forge this negative in court as being the negative taken of a patient who was hurt in a truck accident and collect damages for a fractured leg that never existed—the "quack" doctor and the patient splitting fifty-fifty on the amount collected from the trucking firm? Why? Because these quack operators know they can get away with it. (Continued on page 51)



PAINLESS

WOMEN must labor and men must work. You'll find it in Genesis. The pain and peril of human childbirth is supposed to be, if not part of some Primal Curse, at least a part of the natural order of things—which is even worse.

We are so used to this idea that most of us take it for granted. Our girls, growing up with the expectation of sometime bearing children, are resigned to the belief that parturition will, at best, be a tremendous ordeal, and at worst an experience unspeakably torturous.

Childbirth, from this point of view, is a kind of sacred martyrdom. The woman who bears a child is pictured in much of our literature as going "down into the Valley of the Shadow." And there is much in the way of tearful sentimentality in sonnets and songs, and apostrophes to Motherhood with a capital M.

But does it occur to most of us to *do* something about that martyrdom? And, in particular, does it occur to women to do something about it for themselves?

Childbirth is a contortive feat that calls for a strong and limber body and established powers of endurance if it is to be well and safely accomplished. But do women see it that way and prepare themselves accordingly? No indeed. They just go on accepting the Curse of Eve along with such other unavoidable things as Death and Taxes without even wondering if

there might not be something they can do about it.

In the meantime medical science does what it can to overcome this inertia, born of an indifference which is the fruit of ignorance. It prescribes medical examinations and medical guidance. It tells the prospective mother what to eat; it prescribes walking, usually, as the best and safest exercise; and when the baby comes,

it offers certain palliatives and important aids: anesthetics for the last stages of labor; instruments to help in a delivery when it becomes difficult; a Caesarian when a normal delivery is impossible.

All this is enormously important. A strong effort is being made right now, under the movement for a National Health Program, sanctioned and supported by the United States Government, to create conditions that will bring Maternal and Child Health Service within the reach of all. The need for this is obvious: there is a high maternal and infant mortality rate, and a widespread impairment of health among mothers and children—much of it preventable. With such a service maternal deaths could be reduced one-half to two-thirds, and the death rate of infants in the first month of life could be cut in half.

But suppose it *were* possible for all expectant and parturient mothers to have proper medical care? Would that be the complete answer?

It would, of course, be a very good answer. But it *still* would not be an

Is Childbirth Always To Be an Ordeal of Pain and Danger—Or Will Women Eventually Realize They Can Condition Themselves For Safe and Easy Childbearing?



CHILDBIRTH

for Every Mother

answer to the outrageous fact that in our supposedly highly developed civilization childbirth is, for obvious mechanical reasons, an almost grotesquely difficult, painful, and often dangerous business, even for women who have the best of medical attention. Medical care at the time of pregnancy is *part* of the answer, but it is evidently not the *whole* answer. Nor will it be the whole answer till every American woman is trained and prepared for motherhood from the very first year of her life.

There is something obviously cockeyed about the fact that childbirth should be the tremendous ordeal it is for most women. It just doesn't make sense. Why should a natural process be, for human beings, in our civilization at least, so apparently unnatural? Why should nature go picking on the human mother, laying on her a burden that seems all out of proportion to her physical capacity? Animals give birth by means of a mechanism which is obviously adequate. The pelvic structure and all the muscles and ligaments involved in parturition are up to their job. They yield where yielding is required; the muscles have sufficient expulsive power and snap back like a rubber band when the job is done.

Why should this not be equally true of the human mother? Did Old Mother Nature, who has always been so perfect, suddenly make a mistake when she got around to the human race? How about pinning the blame where it belongs—on ourselves? Or more specifically, how about pinning it on those modes of living that make women soft and flabby, and that fit them for the exacting contortive feat of parturition about as successfully as loafing in an easy chair the year round would fit a man for a sudden ten-mile run.



BY JOHN HAYDEN

Common sense says that if a man wants to run ten miles or walk a hundred, he had better train for it so that he may perform, with reasonable ease and safety, a feat that might otherwise kill him. Common sense also says that if he wants to make a sure thing of it, he'd better begin training while he is still a boy. It won't do for him to wait till just a few months before the event.

But does common sense say that every civilized woman who expects to bear a child should train for this tremendous feat even as an athlete might? Does it say that she must do something to counteract the ill effects of physical ease and inactivity fostered by our civilization? Does it tell her to make herself, by *(Continued on page 46)*



Dr. Rasmus Alsaker

FOOD COMBINATION TO A SAFE DIET

Safeguard Your Health by Learning What
Foods to Combine—For You Will Never
Feel All Right if Your Diet Is All Wrong

BY RASMUS ALSAKER, M. D.

THERE has been much discussion on this subject, some of it extreme claims, some of it ridicule and some good sense and good science. The chief bone of contention has been on the point of not combining starches and proteins. This has brought about a greater part of the ridicule, especially by healthy persons and those having no experience with the sick. Another bone of contention has been the combination of starchy foods with acids, something looked upon by a segment of the health seekers as a high crime and misdemeanor.

There is much scientific fact on which we can draw and a great deal of experience, not only with healthy individuals but with the sick.

The first thing to remember is that those who have

splendid health are entirely different from those who are ill and they need different foods. The truly healthy can eat anything they please in a meal and digest it, so long as they use a little sense about the preparation and the quantity. No matter how healthy a person is, however, he can suffer with indigestion by eating a superabundance of greasy, fried foods and other very rich aliments.

Even the healthy should take some precautions to retain their blissful state. Some foods are acidulating and others are alkalizing. If one constantly neglects the alkalizing foods while eating heartily of the acidulating ones, discomfort and disease in the end will ensue, no matter how good the original health may be.

Those who go around boasting they can eat nails and live accordingly are in for an unpleasant surprise. So are those who are blessed with wonderful digestive and assimilative ability, if they do not take certain precautions, for they will end up with obesity, which is a disease.

What are the precautions that healthy persons must observe? The first one is to eat abundantly of alkalizing foods and here we shall merely remind you that nearly all fresh fruits and nearly all fresh vegetables are alkalizing; so is that nourishing food, milk. No matter how healthy a person may be, it is best to have over fifty per cent of the total food intake consist of alkalizing or protective foods. The reason for this precaution is that civilized man tends to grow progressively acid with advancing years, and excessive acidity, which is really a lowering of the alkaline reserve within the system, tends toward disease.

The second precaution is to eat in moderation so that the slender figure of young manhood does not gradually deteriorate into the paunchy, hippy figure so often seen in middle age along with the mental slow down that usually accompanies this degeneration. If a man in health takes these precautions he also takes one step towards maintaining his health.

Other important ones are plenty of exercise, enough rest and cleanliness of all the inner organs, largely aided by the exercise and the consumption of enough water to wash all the tissues during every hour of life. Another tremendous aid to health is to maintain an inner calm that refuses to permit the highly tense and nervous state, truly a mental state, that wrecks so many able human beings during middle age.

A THIRD precaution is this: Allergy is rather common and those who find themselves somewhat allergic to certain foods should consume as little as possible of them. In the September issue of this magazine we called attention to the fact that catarrhally inclined persons are usually allergic to milk, cream and cheese, and this is true of many who think they are in splendid health but are annoyed with some catarrh.

We had among our patients one otherwise healthy woman who was so allergic to wheat that entering a kitchen where wheat flour had been used an hour previously caused terrible congestion and swelling of the eyes, nose and throat. We human beings are peculiarly constituted.

But what about those who are sick? Here is a little tale from recent private practise: A patient was recovering from duodenal ulcer, which first manifested itself to him when he had a hemorrhage. When he was able to eat solid food he was given, for one meal, baked potato with butter, one cooked vegetable puree and a dish of cooked fruit, always rejecting foods containing coarse cellulose strings, the tiny irritating seeds of some fruits and the peels.

When he had potatoes, a vegetable and fruit in one meal, enough internal gas resulted to annoy him so we gave him the fruit separately, three hours after the meal, with the result that he had no gas. Because of his recent illness he was not able to digest the combination of fruit with a vegetable and potatoes.

The nontolerance of the combination of starch and acid is very common among those suffering with digestive disorders, also among individuals who are inclined to be nervous and tense. This observation is based on much experience with the sick. (Continued on page 82)



*Holiday
High Sinks*

Black Star



H. Armstrong Roberts



Holiday High Jinks cover a world of winter sports—ice skating, sleighing, snow-shoeing, downhill skiing, slalom, or just getting your hands on some snow—and there's no better way to spend a holiday than out in the open—out where the zest begins



Smith and Associates



Monkemeyer Press Photo Service



Philip D. Gendreau



Lionel



Ewing Galloway



Pix Publishing



H. Armstrong Roberts

These flighty young ladies obviously don't realize the gravity of the situation for they seem to have forgotten that whenever you go up you are sure to come down, either on your tummy on a toboggan or on your—on skis which always want to go their own way

THE BODY



BEAUTIFUL

A remarkable action shot showing the soundly developed physique of Vincent Grasso, Columbia University shot-putter

Erving Galloway

Stretch

YOURSELF INTO SHAPE



To get an inch or two more of height, lie flat on your back, grasp something stationary, tuck your toes under something heavy and pull both ways at once

BY HELEN MACFADDEN

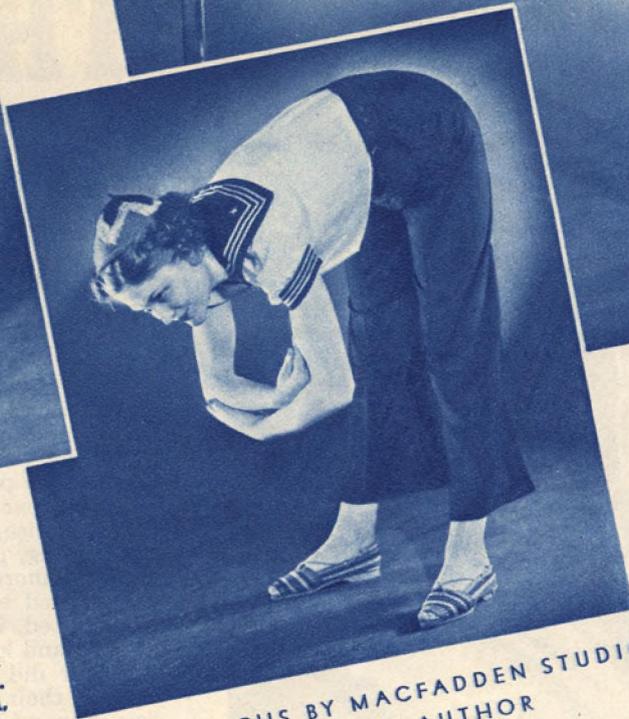
One of the best ways to start any exercise is with a good old fashioned stretch. With your legs straight and your chest out, throw up your elbows and then stretch for all you're worth. A lazy yawn or two won't hurt you any

Here's one for the office. After you have been sitting at your desk for a long time, slouch forward and relax yourself completely by letting your arms hang straight down, with your chin on your chest. Then straighten up, grasp your hands tightly behind your chair and stretch your legs out in front of you as far as you can. Try to do this every couple of hours





For stretching shoulders and back: Bend forward and form a circle with arms, as shown at right. Make circle smaller until the elbows come together. Then throw arms backward, palms in, as shown above



Here's a good way to get those kinks out of your back and legs. Place one foot on top of the back of a chair and, with both legs held straight, touch your knee with your head. Keep on until you make it

PHOTOGRAPHS BY MACFADDEN STUDIO
POSES BY THE AUTHOR

HOW many times have you watched your pet pussy cat, or perhaps your dog, wake up from a nap? What's the first thing he does? Stretch, of course. And how he enjoys it!

To you his actions might seem cute, but meaningless. Actually, the animal's actions are responses to nature. His legs, curled around his body, have become cramped while he slept so he takes the most sensible way toward awakening himself.

Stretching is the most sensible way because it is a gradual exercise, one that serves a slow but definite purpose. When we sleep, like any animal, our bodies assume varied positions and in order that we get the circulation flowing properly again we should start the day with a good stretch.

Stretching has more than one purpose, however. It is also an exercise that will help your posture greatly. Your job may be one that requires sitting in a rather rigid position throughout the day. In that case you should sit up straight every hour or so and throw your shoulders back, drop your pencil for a few minutes and allow your fingers to assume a straightened position, and throw your legs out in front of you under the desk.

For anyone who does considerable mental work, stretching occasionally can do wonders. It seems to relieve tension of the mind and body and reminds the worker that he or she has a body that's not to be forgotten because of the brain work. In school I remem-

ber a teacher who used to make everybody in class stand up and stretch after every hour.

Any athlete will tell you of the benefits of stretching. To the athlete it is a toning process that gets his body ready for competition. Calisthenics go hand in hand with stretching. If you stretch a few times you will be much more inclined toward doing a few bending exercises than if you try to start them without warming up.

I realize that many people are exercise dodgers, but nobody in the world should be too lazy to stretch. And if you stretch a few extra times that even constitutes exercising.

Stretching, above all, will help keep your body in shape. It will iron out the kinks and eliminate those telltale cracking noises which we sometimes hear after a long period of inactivity. If your knees and shoulders crackle, then you definitely need a good stretch. Try it sometime.

You can compare your body with a motor-car. Leave it in the garage for six months or more and the car will not behave as well as one that has been in constant use. The same is true of your body. Sit around for a week-end without at least one good walk and you'll find yourself very stiff in the joints.

For younger girls, stretching will actually add to their height. Although the averages point that way, it is not a universally accepted fact that everybody stops growing at twenty-one (Continued on page 50)

HEALTH PLAYS THE LEAD

Bernarr Macfadden Interviews Hollywood's New Leading Man, Walter Pidgeon, Who Has Found that If an Actor Takes Care of His Health, His Career Will Take Care of Itself

I WENT recently to Hollywood on what might be called a physical culture pilgrimage. One of the things I wanted to find out at first hand, by personal talks with stars of the screen was what part physical culture, in terms of abundant exercise, right food, and other principles of right living, plays in the strenuous daily lives of these glamorous people.

I wanted to know how much right living had contributed, in their estimation, to their ability to earn and keep the popularity which is theirs. How far did their personality, their grace and charm, their physical beauty and wholesomeness, depend on their loyalty to that way of life the teaching of which has been my own career for the last half century? I wanted the evidence at first hand, from their own lips and not through someone else. And I got it.

And of them all, none of the stories they told seemed to me to constitute a finer tribute to physical culture than did the story of Walter Pidgeon. The physical culture way of life brought Walter Pidgeon back from the edge of a slide downward toward obscurity and an early death; and by giving him back his lost health, it made possible his present remarkable emergence as one of the "comers" in Hollywood.

Pidgeon's reputation on the screen is now firmly established. And to physical culture living, goes the credit. That's not my say-so;





BY BERNARR MACFADDEN

Tennis and walking are two of Walter Pidgeon's favorite exercises—but his all-consuming passion is sailing o'er the briny deep. He hails from the Bay of Fundy where men go down to sea in ships, and the one boyhood dream he has never outgrown is to set sail across the Pacific

it's Pidgeon's. And it was to me, founder of the physical culture movement, that he said it.

"I'm here today through going on a sane diet," he told me. "A lot of strenuous living, which included service in the World War, had put the skids under me. When I was twenty-five, an age at which any healthy young man shouldn't even know he's got a stomach, I began to have constant abdominal pains. I stood it for six years. I went to many doctors. They could find nothing wrong. Finally, in desperation, I went to a good surgeon for an exploratory operation. He took out my gall-bladder which he told me later was like a rotten plum. He also took out my appendix.

"That fixed me up for about a year. Then exactly the same thing happened. The pain was much worse than it had ever been, and it came at more frequent intervals. My weight dropped to one hundred and seventy. My blood pressure went down to ninety. I was so doped with my own toxins that I would sleep eleven or twelve hours a day. It doesn't take a prophet to foretell that when that sort of thing begins to happen to a man a shade over thirty, as I was by then, his years are probably numbered, and no life insurance company in its right senses would take a chance on him. As for my prospects of making a name for myself in my chosen profession, all that seemed to have gone glimmering.

"I dragged along that way till the fall of 1934, carrying this incubus of ill health, and staggering more and more under the load. I was in Cincinnati and was very sick. I was doing a show for Lee Shubert at the time, and I didn't have enough strength to get my voice over in the last act. (Continued on page 61)

Beauty Tips

FOR MISS
IN-BETWEEN



Courtesy Best & Co., New York

IN AN era when fashionists have exploited the "frankly forties" as the quintessence of chic, and middle-aged psychologists have decided that nothing worth while happens in an individual's career until he or she has concluded the thirties, it is consoling to remember that the most glamorous love story of the ages was built around a fourteen-year-old girl.

How sweet she must have been, this youthful, ill-starred heroine of Shakespeare's immortal tragedy, with her dark eyes, her flower-like body, her gallant spirit! In many ways she symbolizes girlhood as we love to think of it—merry, naive, eager, beautiful, with that aura of untouched youth that is like the dew on a rose, intangible, yet as clearly perceptible as its fragrance.

We remember her, of course, because the genius of the Bard of Avon took a simple love story and from it achieved a drama of shimmering beauty and a heroine whose youth had a heart-stopping quality. Juliet as a "frankly forty," clever, sophisticated, highly polished, would no longer capture our imagination. As a fourteen-year-old whose dewy charm enslaved the worldly-wise Romeo and later brought her to an untimely death, she practically heads the list of glamorous ladies of fact or fancy from the beginning of recorded history.

In reality, she may have been not one whit better looking than the youngster across the street to whom Joan Crawford is the incarnation of swank and allure, or your younger sister with the bridge of freckles across her nose and the funny little wistful smile that gives her face such individuality.

But she had in common with them, despite all "forty-ish" propaganda to the contrary, the priceless ingredient that is youth, the disarming, radiant quality for which duchesses would toss aside their coronets and Holly-

wood would part with a king's ransom to be able to reproduce convincingly. It is youth in the long run that most poignantly stirs the imagination, that has the strongest box office as well as heart appeal.

Do you wonder therefore at the rages which consume me when I am consulted by these dewy-eyed adolescents for the purpose of helping them to metamorphose themselves from the delightful creatures they already are into something obviously artificial, painfully unreal?

For when all is said and done, the ultimate purpose of make-up of any sort is to simulate the appearance of youth, the freshness, the bloom, the incandescent charm of girlhood. Then why should one who already possesses it, attempt to cover it up with a gaudy coating? Or wish to exchange its blossomy daintiness and softness and fragrance for that which is unmistakably hard and displeasing?

ON THE beach this past summer a goddess-like young creature showed me a swimming cup she had recently earned and asked me shyly if I thought it would be all right for her to use a little lipstick. She felt so stupid, so undressed, as she put it, to be with the older girls, who quite frankly reddened their lips.

I looked at her, tanned so exquisitely to a honey color that matched the bloneness of her hair. I noted her slimness, her small, rounded breasts, the pure arch of her eyebrows, the beautiful planes of her face, and I thought how little she knows the breath-taking quality of the loveliness which is already hers, the untouched loveliness that is youth as we dream of youth and that Hollywood has never been able to duplicate.

And I gritted my teeth at the thought of adding artificial color to lips that might (Continued on page 57)

If You Want to Grow Up to Be a Beauty—
Begin Now, in Your Early Teens, to Lay a
Firm Foundation for Loveliness and Charm



Eving Johnson



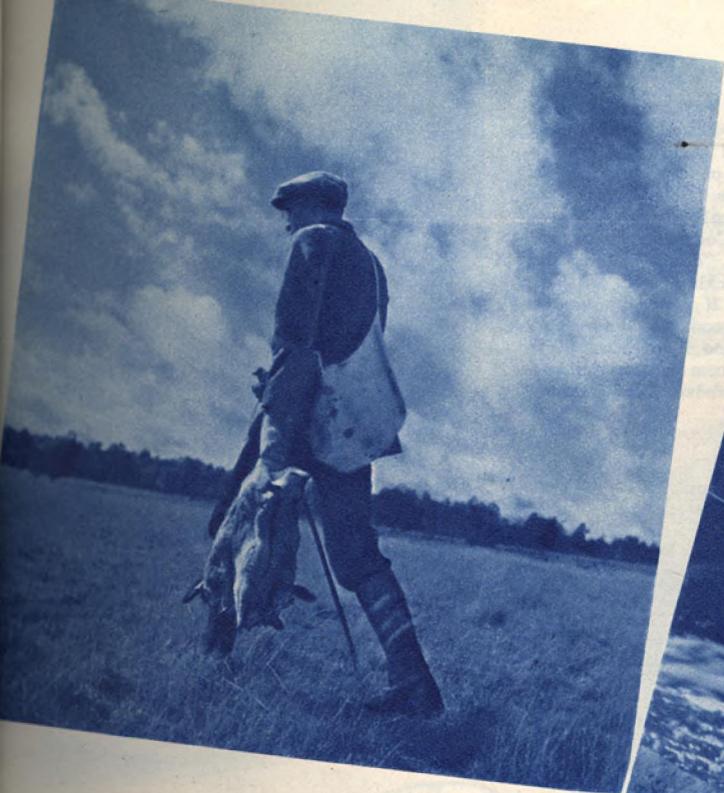
H. Armstrong Roberts

BY
CAROL
CAMERON

Grow up to be a beauty—
our Early Teens to lay
for Loveliness and Charm



Photographs by H. Armstrong Roberts, Philip D. Gendreau, Pix Publishing



BUILD STRENGTH

AND VIGOR IN THE OUTDOORS

BY L. E. EUBANKS

NOT long ago an exceptionally healthy man asked me why his muscles were not larger when his organic condition was so good. "I swim an hour a day in the summer and walk ten miles daily in the winter," he said.

He wanted bulky muscles, but he will never acquire them on that system. He is somewhat underweight, and no wonder; he is using "reducing exercises"—at least he is carrying his exercise to a reducing degree.

Swimming and walking do not develop large limbs, though both are good health and grace exercises. When swimmers or walkers are above the average muscularly, they owe that condition to some other exercise or to natural endowment.

Several years ago a young man of twenty-three came to my gymnasium and asked if I knew of any way in which he could *quickly* develop wind endurance. He explained that the men where he worked were organizing a football team, and that because of his

exceptional muscular strength a great deal would be expected of him. He picked up a sixty-pound bar-bell and handled it as easily as I could. His arms and shoulders were tremendously strong, but he said that a brief trial on the football field had shown him that he had no wind.

Here was another proof that gym exercises and outdoor sports often produce radically different results. That man had practised weight-lifting with his brother, but neither of them had ever done anything calling for good wind. A few weeks of daily running gave him remarkable respiratory endurance.

My nephew played on the same football team. His muscular development was not above the average, but his wind was in excellent condition because he had played hockey for two seasons.

Just how much benefit from outdoor sports comes from the outdoor air itself is a rather difficult point to decide. The postman walks (*Continued on page 63*)

Left, Barbara Cochrane and Mildred Stewart in one of their fast practise bouts at the salle of Mr. George Santelli, American Olympic Coach. Below, Miss Cochrane shows one of the "don'ts" of fencing—attacking with a bent arm. If your opponent is any good, you'll probably run into what Miss Stewart's arm is performing—a decisive "stop thrust"



Fence for a

So swift are the attacks, parries, ripostes and counter-ripostes of fencing that each tournament bout requires five sharp-eyed judges: two flanking each fencer, who watch for touches on the opponent; one in the middle to watch the lightning play of the blades. Above, Barbara Cochrane (left) and Mildred Stewart, national ranking fencers, and members of the Salle d'Armes Santelli





Right, the former metropolitan champion, Miss Madeline Dalton of the Vince Fencing School. Below, Miss Dalton crosses blades with Mrs. Vince, the former Marion Lloyd, twice national champion and a member of the last three American Olympic Teams



Fine Figure

Miss Stewart and Miss Cochrane show below, first, the formal salute. Feet form right angle, body is turned sideways to offer as small a target as possible. Second, "On guard." Blades are crossed, left hand up for balance, right foot forward. Third, Miss Stewart's swift riposte scores and, fourth, Miss Cochrane's attack is parried, before Miss Stewart can parry and counter-riposte



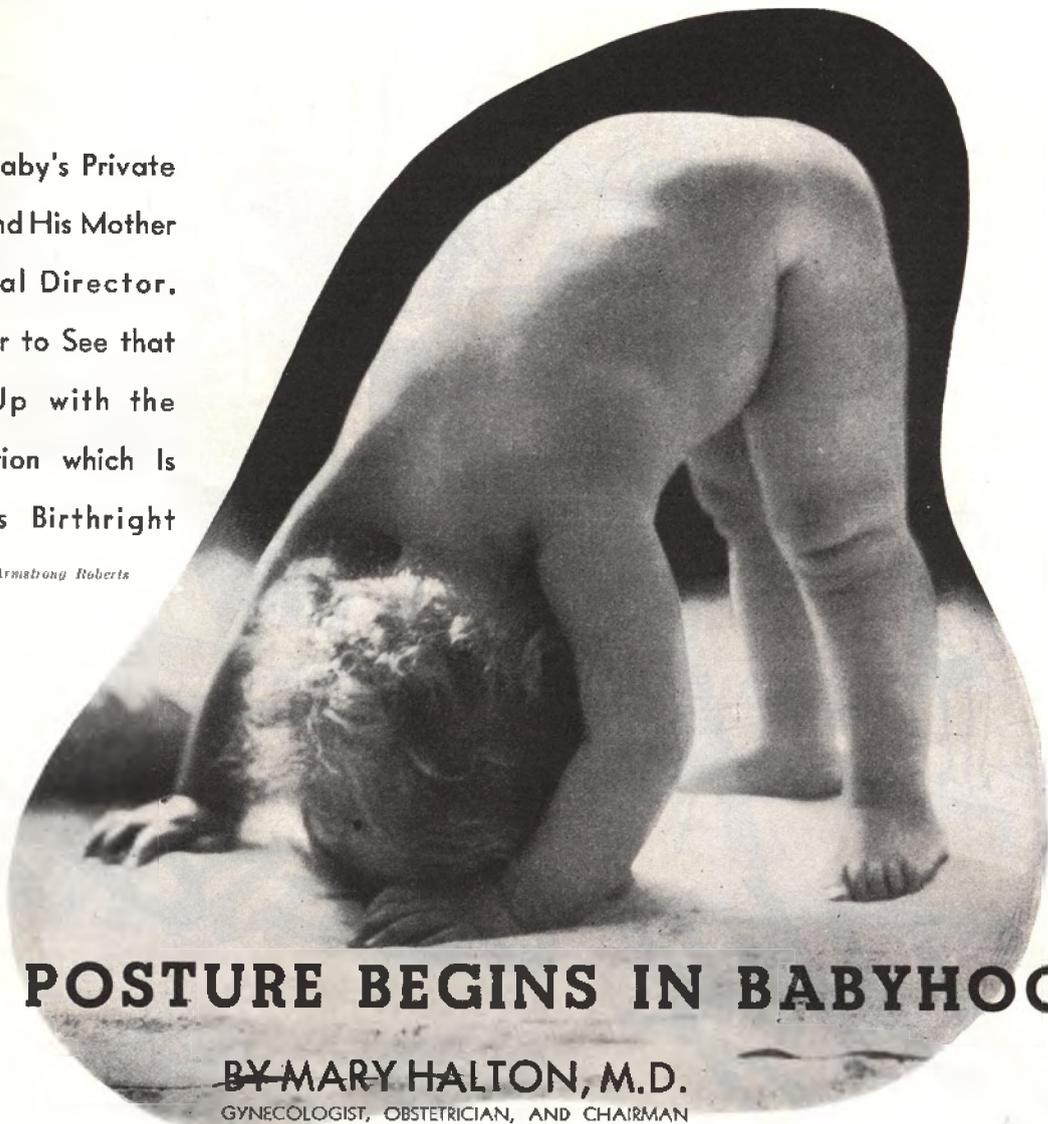
PHOTOGRAPHS BY SHANDOR



TWO WINTER SPORTS

His Home Is Baby's Private
Gymnasium, and His Mother
Is His Physical Director.
It Is Up to Her to See that
He Grows Up with the
Bodily Perfection which Is
Every Child's Birthright

Photograph by H. Armstrong Roberts



GOOD POSTURE BEGINS IN BABYHOOD

BY MARY HALTON, M.D.

GYNECOLOGIST, OBSTETRICIAN, AND CHAIRMAN
OF THE EQUAL RIGHTS FOR BABIES COMMITTEE

THROUGH many ages the Greeks have inspired the world by leaving to us in their statues, magnificent immortal sermons in stone which speak to us every day of the great truth that physical strength and beautiful development are the basis of grace and nobility of the human body.

Each little baby has, in his own body, the germ of his own perfection. If his natural powers are properly cultivated, he will develop like a Greek statue into a human being of supreme excellence.

Few of us realize how very many people are affected with poor posture, which is only the expression of a poorly developed body.

In a recent silhouettograph survey conducted by Mrs. Mary Lombard Knapp, in charge of the physical education of two hundred and eighty-six women of the freshman class of California State Teachers College, at San Jose, California, only one woman was found to exhibit a natural grade A posture and only eleven per cent were graded B.

When President Hoover held his White House conference on Child Health and Protection, a few years ago, prominent experts from all over the country attended.

The Committee on Medical service reported: "We may reasonably believe that perhaps seventy-five per cent of the male and female youths of the United States exhibit grades of body mechanics which are imperfect." And later on, in the report, "Throughout the country the amount of intelligent attention which is being given by parents to the body mechanics of their children is negligible."

Poor posture is the term which has been used in the past by physical educators to describe the slumped figures, crooked backs, protruding abdomens, weak

shoulders, narrow chests and shambling legs, so commonly seen. But now the term "poor posture" is being discarded in the scientific lexicon, for it has been found inadequate to describe these body discrepancies.

They are found to be not entirely the result of poor habit positions of the body. They depend for their existence upon more deep-rooted causes, a number of varied pathological factors. Therefore the term "body mechanics" is rapidly displacing the old word "posture."

Educators in physical training have struggled for years with growing boys and girls trying to correct round shoulders, crooked backs, prominent abdomens, and the rest of the bad postures, and achieving not very good results. Their work has been an attempt to repair a machine which slumped down because it was originally of poor construction.

NOW science is announcing that in order to achieve good posture it is necessary to secure a good body through well-balanced nutrition which should begin in the prenatal state; good gland balance and good development, which rests largely upon well-rounded exercise begun at an early age.

In other words, in order to attain good posture, or rather fine body mechanics, it is necessary to have a healthy father and mother and especially for the mother to be scientifically cared for and fed a well-balanced diet for the nine months of her prenatal state. Then the infant himself must have good care and a proper diet so that he can develop. These things have been discussed in other articles so that now we come to the remaining requirement, namely, good development of the body. How is this attained?

An outstanding authority on physical training, Dr. Josephine L. Rathbone, assistant (*Continued on page 65*)



Why WE ARE

Most Adult Fears Are Carried Over From Youth, and Only By Healing the Psychological Scars of Childhood Can We Ever Hope to Cure Ourselves of Emotional Invalidism

THE most pursuing, persecuting, and cancerous emotion from which human beings suffer is fear. After examining and analyzing the multitude of emotions catalogued by psychologists, Professor John B. Watson, internationally known as the founder of the school of Behaviorism, concluded that there were only three fundamental emotions: fear, love, and rage—and of the three fear is the most consuming and ubiquitous. From childhood to old age, we are haunted with fear which assumes so many guises and manifests itself in so many forms, one more spiritually crippling and paralyzing than another, that we find ourselves its constant slave.

Some of us suffer from fears of a minor order which, nevertheless, may make our lives into a major disaster. Take the fear of darkness, for example, with which most children are afflicted but from which all of them can be cured by intelligent educational technique.

Many people carry over that emotion from childhood with results which are often most unhappy and sometimes disastrous. Here is a case to point: that of a young man with a weak heart who was brave in the face of most things, but who had never escaped a childhood fear of darkness, and who even in his own home dared not turn off the lights in the halls lest he awake and be plunged into a state of panic. There are thousands of young men—and young women—like that.

He was invited to spend a week-end in the country home of an old friend of his and he accepted the invitation with eagerness, because his friend's home was near a lake, and, loving outdoor sports, especially aquatic ones, he knew he would find abundant delight.

On the third night after his arrival, his friend, a successful author who enjoyed cards as a form of relaxation, invited him to come over to a neighbor's house to play a game of poker. He was not interested in cards, but agreed to come along in order to be sociable. Once there he soon became bored with the game, and pleading a headache he begged permission to return to his friend's house and retire. Everyone implored him to stay, but when he insisted, they smiled understandingly and his friend gave him instructions as to how to find his house which was about a quarter of a mile away.

The young man listened as carefully as he could to the directions, flourished his flashlight to assure them that he would have no difficulty finding his way, and started off.

Everything might have gone well, if he had not discovered, after he had walked a hundred yards within the radius of a roadlamp, that his flashlight did not work. He fiddled with it, even tried to take it apart, and for a second decided to return to the house he had just left, the lights from which were still faintly perceptible in the distance.

He soon decided, however, that it would look silly for him to return, so he walked on and soon found himself in a dense thicket. His instinct told him to go back, but his desire to conceal his fear from his friend compelled him to go on. Within a few minutes he found himself completely lost in the brief forest of foliage; the roadlamp had vanished; all trace of the house itself was gone. He was lost in the *darkness*.

He clicked at his flashlight, still held tightly in hand, but it remained dark as night. (Continued on page 54)



Afraid

BY
V. F. CALVERTON
AUTHOR OF "SEX IN CIVILIZATION"





FALL IN FOR THE 1939 HEALTH WALK

Top picture shows the pioneers of the 1935 Macfadden Health Walk gathered in triumph on the steps of the Physical Culture Hotel. The 1936 group was made up of enthusiastic veterans plus a number of recruits. Fifty-two hike fans finished that year, and the Walk definitely became an annual event

In Four Years, the Macfadden

Health Walk Has Become an Impor-

tant Event. For Those Who Will Join the

Hikers for the First Time, as Well as for

The "Repeaters"—We Present Here a History

Of Past Walks and a Glimpse of the Plans for 1939

BY JAMES F. EDWARDS

IT LOOKS just now as if this spring's Macfadden Health Walk would start from Pittsburgh two or three hundred strong, go swinging along in the wake of the Commissary Truck to Dansville, and, a couple of weeks later, wind up with bells on at the gates of the New York World's Fair, maybe with Mayor La Guardia and Grover Whalen doing the honors.

No, it isn't settled yet. It is merely tentative. Mr. Macfadden has been sort of playing with the idea ever since the 1938 hike. "Next year," he said at the conclusion of the 1938 hike, "we hope to have twice or three times as many." And apparently he has been turning that thought over in his mind ever since.

If the present tentative plan goes through, it will about double the average length of these hikes, both as to distance and as to time. It will probably start from Pittsburgh during the first week of June, stop at Dansville for a week-end two weeks later, and end in New York sometime during the first week of July.

Some hikers will doubtless stay with the hike through the whole four weeks, from start to finish. Others, away from their occupations, perhaps on two-week vacations, will not be able to spare that much time, but will cover either the first or the second lap of the journey.

If the hike does go through on such a scale as that, it will be one of the liveliest bits of publicity for Walking, King of Sports, that has ever been put over.

In 1935 the first of these hikes started, New York to Dansville, with a corporal's guard of thirty-nine Vitality Walkers. That history-making hike began at the old Macfadden Building at Sixty-Fifth Street and Broadway, with Mayor La Guardia, assisted by Benny Leonard, former lightweight boxing champion, giving the starting signal.

After a lot of friendly spoofing from the newspapers and after some genius had named it "The Cracked Wheat Derby"—they were off! Away they went to the whirr of news reel cameras, the blare of a brass band, and the sirens of the police escort that took them up old Broadway.

The *New York American* and the *Herald Tribune* both sent reporters, hand picked for huskiness, to accompany the Vigor and Vitality procession. The rear was brought up by the Macfadden Publications truck, carrying not only baggage but cracked wheat, brown sugar, honey, raisins, dishes, an oil stove, and a cook; and the whole outfit was almost radio-active with vim, vitamins, vigor, vitality, and all the other V's.

At the time it seemed to many amused and diverted onlookers to be just one more colorful and pleasant item of the American scene. Just a novelty—here today and gone tomorrow! It was thirty-nine bluebottles who had dropped off the wall and were making a big splash. Non-walkers and automobile, street car, and bus addicts stared incredulously at the little group, as it swung out on its three-hundred-and-twenty-five-mile route across New York State, singing songs and bearing a banner with a strange device which announced to all and sundry that they were walking for health with Bernarr Macfadden to the Physical Culture Hotel in Dansville—and were telling the world.

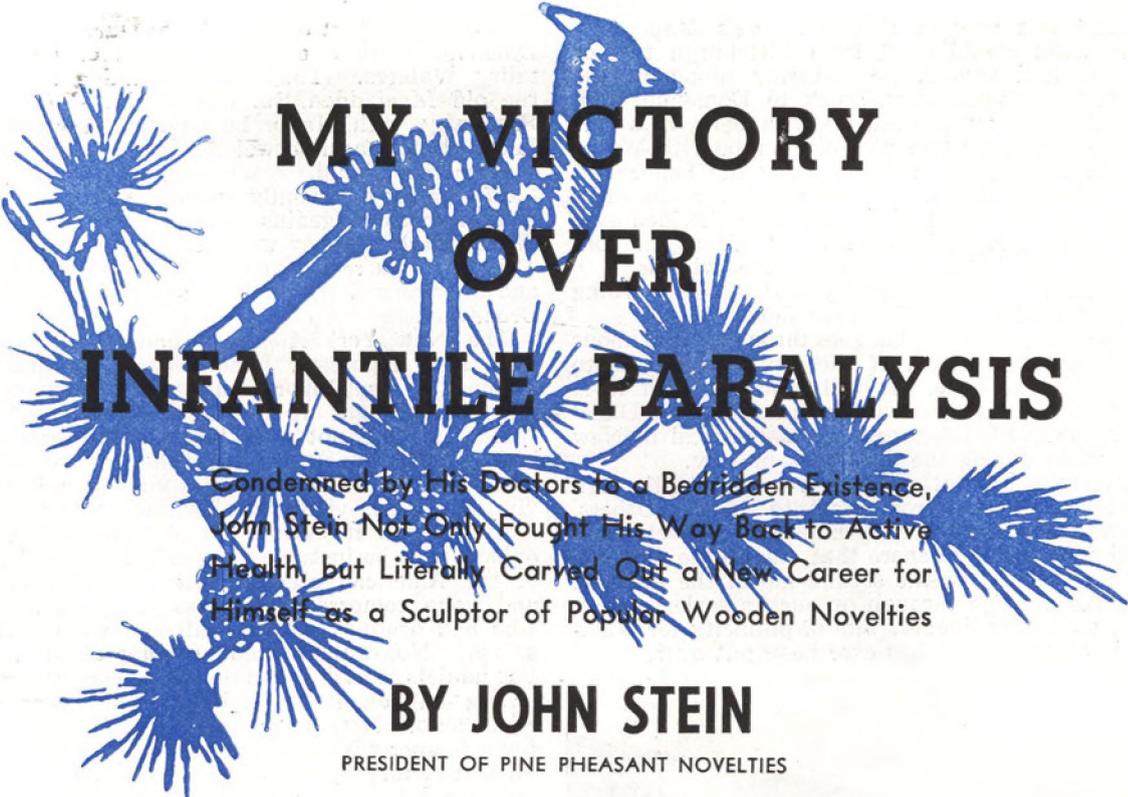
The oldest of the lot was a man of eighty-four; the youngest a personable young woman of nineteen. It was probably the first time in (Continued on page 66)



Floyd Gibbons fired the starting gun that sent the 1937 Health Walkers on their way. Also present, to cheer Mr. Macfadden and his hikers, were Tony Canzoneri (far left) and (at far right) James Montgomery Flagg.



The Fourth Annual Macfadden Health Walkers, 101 strong, pose at the Physical Culture Hotel, after hiking from Cleveland, Ohio



MY VICTORY OVER INFANTILE PARALYSIS

Condemned by His Doctors to a Bedridden Existence,
John Stein Not Only Fought His Way Back to Active
Health, but Literally Carved Out a New Career for
Himself as a Sculptor of Popular Wooden Novelties

BY JOHN STEIN

PRESIDENT OF PINE PHEASANT NOVELTIES

THE degree of health a person enjoys depends largely upon himself. There are hundreds—yes thousands—today who have not as yet tapped their resources of strength and vigor. It is my hope that by telling of my own experience I may help others find the more abundant life.

But the victory has not been mine alone. It has been shared by, and is largely due to, my wife, Hazel.

In the fall of 1931, at the age of thirty-nine, I found myself standing six feet tall, weighing nearly one hundred and sixty, the embodiment of radiant, glowing health with a joyous spirit born of the assurance that I had nothing in the world to worry me.

I had risen to a responsible position with a prominent Milwaukee concern and was making an excellent income. I was amply able to give Hazel and our two children the comforts and luxuries of life—despite the much talked of "depression."

We were already planning to give our children every possible type of preparation for the living of happy, healthful and successful lives. We rejoiced in our ability to finance their complete education in whatever fields they each might choose to enter.

Howard was then fourteen, Jean was barely twelve. They were both athletic. In fact we were an athletic foursome. Our son and daughter were daring swimmers at an age when most children were paddling under supervision and keeping "close to shore." They were brought up to believe that it was their privilege and their duty to develop in themselves moral, mental and physical health.

I was so radiantly, joyously well that one evening when I came home and complained of feeling a bit indisposed, we none of us thought much about it. I went to bed fairly early and slept like a top through the night.

In the morning I got out of bed but found it difficult to walk. Something seemed to be wrong with my feet. They had a Charlie Chaplin flop. It would surely pass off, I assured myself as I shaved and dressed for breakfast.

But somehow I seemed to grow worse instead of better. As I crossed the threshold into the dining room, my knees caved in. I collapsed and fell headlong toward the table where Hazel and the children were seated waiting for me.

My terrified children and Hazel tried to help get me up from the floor. I could not move. I was paralyzed

all over. My legs, my torso, my arms, my neck, and my vocal cords on the right side. I could not even speak so that they could understand me.

It is not often that nature robs a man of all his powers when infantile paralysis strikes. But with me there were no half way measures. My left lung was in the unrelenting grip; my right vocal cords were "frozen."

My legs and feet, my hands and arms, hung utterly limp and useless.

My faculties I fortunately retained. I could hear what was said, see what went on about me, and *think, think, think!* And this is what I thought: I shall get back on my feet! I shall support my wife! I shall give my children an education! I shall drive that new car that we've just purchased!

That car was the star to which I hitched my wagon. I realized that if I should recover enough to act as my own chauffeur I would then be able to accomplish the other ends so essential to the carrying out of lifetime plans.

"Sell the car," said my relatives who feared the financial burden of my family. "Sell everything you can. Your children are too young to go to work. Your Southern-born wife has never earned one penny in her life—sell the car and use the cash to pay some of your medical bills with."

"Sell the car," said my friends. "You will never be able to walk, let alone drive an automobile. You ought to sell it."

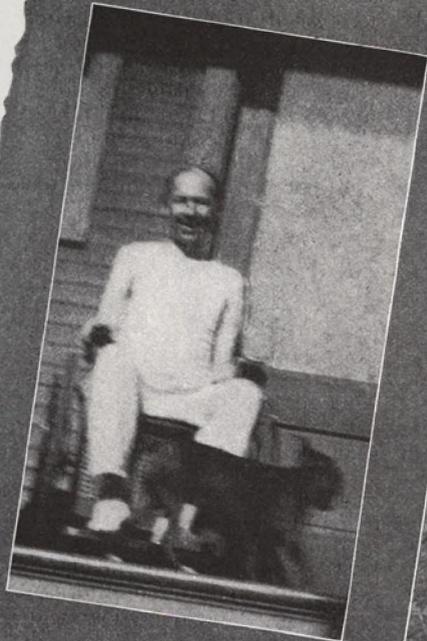
"Sell the car," said some doctors. "We medical men know this disease. Your case is hopeless. You never will be able to ride in an automobile, much less to drive one."

"I am keeping the car," whispered Hazel. "None of us can drive it but it shall patiently wait for you."

And wait it did. That was 1931. This summer, in July of 1938, my boy and I came East to New York together in that *same* car. And I drove it!

But that's getting ahead of my story. On the morning that I was stricken I was rushed to a hospital in Milwaukee and there I stayed six months in a plaster cast—I who had never had a sick day in my life before!

For weeks I had constant attention lest unalterable muscular contractions should occur. So long as the sensitiveness lasted there was little that could be done for me except to protect my skin from the much dreaded bed-sores. I had to be gently rubbed with alcohol, fed nourishing food, and kept extremely quiet. I could not



Stricken at the age of thirty-nine, Mr. Stein spent the first two and a half years of his invalidism in a wheel-chair where he learned to sculpture the little wooden novelties the sale of which he later developed into a world-wide business. By means of hydrotherapy, and with the unflinching encouragement and assistance of his wife, John Stein is today a strong active man. He is shown below with his exhibit at the New York Housewares Show

lift my hand, I could not turn over in bed, and I had to be rolled from side to side every twenty minutes.

It was six long months before the sensitiveness and pain made it possible for me to be moved from Milwaukee to Chicago. But what a joy it was when at last the day came when I could make that trek by ambulance!

Still unable to move I was carried up the steps into my father's home there to stay in bed twelve more months—paralyzed from head to foot.

Was Hazel discouraged? If so she never told me. With the help of a Swedish nurse Hazel lifted me—I had lost more than sixty pounds and weighed less than one hundred now—into a tub of water twice a day there to try to develop my muscles.

The water had to be over ninety degrees Fahrenheit for I chilled so easily. But it buoyed up my body and made it easier to carry out the exercises that were prescribed.

We made a game of it. "Today I will move that toe," I would declare, "or die in the effort!"

Then Hazel and the nurse would laugh and cheer me on.

But toe movement was a very advanced stage. For months I was given massage, my limbs were gently moved for me, to prevent my muscles from wasting entirely away. Hazel had become an expert in the proper technique to be used. With her aid, exercises were regularly carried out six days every week. The seventh we rested a bit.

"I must move my muscles myself," I kept saying. Then I would lie in bed and think: "Now here is my head, my power over my body lies here in my brain. It is working perfectly—but how am I going to get the message from here to my foot, my leg, my hand, my arm, and make them obey orders given? How? How?"

Never did I ask myself "Can I?" Not once did I



allow myself to doubt that I could. And I did! One joyous morning I moved my leg—began to draw my knee toward my chest! I shouted to Hazel!

"Thank God," she fervently said, while furtively brushing a tear from her eye. "But be careful. You must take it very slowly."

At first Hazel put her hands under my knees and helped me bend them. At last came the time when, sitting bent forward, I could actually straighten up with my hands on my hips, or with my hands clasped behind my back, (Hazel helping me put them in position).

And then we advanced to stages where resistance was offered—very gently at first, but gradually more and more pressure was brought (Continued on page 90)

DO WORKING WIVES Lose THEIR HUSBANDS?

Continuing the Story of a Wife Who Took a
Job To Help Her Struggling Husband—And
Then Found She Had To Choose Between Them



"You seem to forget that Julia Barnes isn't your wife."

IN THE PRECEDING INSTALMENT:

MY husband could never understand why I wanted to go back to work after we were married. At first he thought it was a freakish whim. The fact that holding a job in a department store while running a home and raising three children meant an exhausting ordeal for me, did not occur to him. He finally concluded that I didn't love him any more.

"The children mean more to you than I do," he accused me when we were quarreling about the children's expenses one night. His accusation was unfair. But I couldn't tell him the truth, that I went back to my job because I felt I couldn't rely on him any more. He was half sick all of the time. Every winter he had a siege of colds that kept him at home several days each month. I lived in a chronic state of fear that he would lose his job. But he wouldn't admit that he had a health problem. He dragged through one cold after another and refused to take care of himself. In 1935 he was away from the office so often owing to illness that he was demoted from sales manager of the Sanders Insurance Agency to salesman again. His salary cut made it impossible for us to go on living in Hamilton, a suburb in Westchester, unless he could make more sales above his quota each month. He didn't have the stamina for the extra work. He suggested that we move away from Hamilton to a cheaper place. But I couldn't face uprooting the children. We had moved to Hamilton chiefly because of the fine progressive school. The only alternative was for me to go back to the Marlboro department store and earn the extra money we needed.

"You make me look like a poor fool that can't support a family,"

he challenged bitterly when I was finally able to get my job back.

During the following weeks we became like strangers. We "made" conversation at the dinner table for the children's benefit, and there were long uncomfortable silences when we were alone. I wanted to tell him about my job at the store. But if I even mentioned my job he bristled, and would even get up and leave the room. When I asked him about his work and how things were going for him, he would become sarcastic. "Oh, that wouldn't interest you!"

Then he began staying in town for dinner. He was vague about the reason for these frequent absences. One night I noticed lipstick stains on one of his handkerchiefs. He left the handkerchief on his bureau in plain sight. I wondered why he had done that—unless he intended it as a gesture of defiance!

A few nights later I noticed him on the train with Betty Warren, a demure, pretty little thing who lived a few blocks away from us. Something about the way they were talking to each other arrested my attention. They were having an affair! Was Jim trying to humiliate me before all of our friends? I tried to assure myself that I was imagining things. I said nothing about it to Jim that night.

But when, a month later, I saw them in a taxi together in New York, laughing and talking together intimately, I realized I must say something.

"She's awfully young, Jim. She might take you seriously," I warned him.

"And if she does?" He stared at me hard, his blue eyes cold and unyielding.



the mother of your children." Jim glared at me for a moment and then replied hoarsely, "I only wish to heaven she were!"

THE STORY CONTINUES:

I FELT dazed. Could this be Jim talking? My husband, my darling? I found it difficult to believe that he could possibly mean what that remark suggested. The silence in the room became painful. Tears stung my eyes. I left the room quickly.

The following night they were on the 6:17 train again. Jim knew I always took this train! How could he embarrass me in public like this? What had come over him?

A few nights later he took her to the Hamilton picture house with another couple, friends of Betty's. After the show they went to Murray's on the Bronx River Parkway. Lillian Markoe had seen them. Jim did not come home until late. The Warrens were bound to hear about it. The next time I met Mrs. Warren on the train, she flushed uncomfortably and passed on without her usual friendly word or two. She knew! I felt hot with mortification. Then a week later Jim took Betty dancing at another roadhouse. This time Madge and Bill Clark saw them.

"I just thought you ought to know, my dear," Madge explained when she told me. I winced. That night I resolved to speak plainly about it to Jim.

"The whole town will be talking about it!" I begged. "Wouldn't that be terrible!" he observed mirthlessly. "Don't you care, Jim?" I asked, unbelieving. He was the one that always worried so about appearances.

"I can't say that I do," he offered flatly. "You've already made such a laughing stock of me that a little gossip more or less could hardly make any difference."

So that was it! It seemed incredible, but it was true. He felt humiliated about my holding a job, so he was deliberately trying to humiliate me before the whole town by having an affair with a chit of a girl—under my nose! He didn't really care about her. She simply offered diversion and a chance to get revenge on me.

"Jim Meredith, have you taken leave of your senses?" I exclaimed, exasperated beyond endurance. "Making a laughing stock of you! I suppose working myself to the point of exhaustion day after day in order to help you meet the monthly bills is an unbearable affront! Just how would we pay the dentist to have Tommy's teeth straightened if I were not lucky enough to have a job? Where would the money come from for Mary's dancing lessons? Or for the cost of having Jack tutored in algebra? You haven't (Continued on page 85)

A New Step

IN CANCER DIAGNOSIS

An Ingenious Device Has Been Invented to Detect Cancer's Very First Symptom, the Increased Electrical Potential of the Body

BY DANIEL MANN

NOT long ago a group of investigators of the Yale University School of Medicine announced an ingenious device composed of radio tubes and similar trappings which would show, by measuring the delicate differences of electrical potential, just when women ovulate in the course of the menstrual month.

The possible practical importance of that seemed to be that with such a contraption in every household, the rhythm theory of contraception might be made to work with a higher degree of certainty than is otherwise possible — since the effectiveness of the Ogino-Knaus method of conception control depends on knowing with certainty that ovulation (the casting off of an egg-cell by the ovary) is about to take place, or that it has taken place. According to the theory, the "safe period" begins a day or two later.

Now this method of measuring changes in the electrical potential of the body suddenly assumes a possible importance transcending anything suggested by its uses for birth control; for it may become a means for diagnosing cancer, especially in its early stages while it may still be curable.

Laboratory mice that develop breast cancer, for example, show marked rises in potentials, amounting to several thousand micro-volts, in readings across the chest. This voltage rise occurs, in some cases, as much as ten days or two weeks before the cancer can be detected by palpation.

Drs. H. S. Burr, G. M. Smith, and L. C. Strong, who have been doing this research, conclude that "the onset of cancer does something to the electrical pattern of the organism which can be measured with some degree of certainty." Apparently the change in electric potential is initiated at about the time the new growth appears. As it proceeds the chest potentials seem to go up till they reach a peak not long after the tumor becomes palpable. Later the potentials drop back to normal, showing that the animal has probably established a new equilibrium with respect to the new growth.

Pectin Dressing—The latest thing about pectin is that it makes a fine dressing for infected wounds—and diminishes the time required for healing.

Of course you know all about how pectin causes the jelly to jell. There's more of it in apples than in most any known fruit, but it is abundant in bananas, too, and in most vegetables and fruits. And lately it has been found that owing to the abundance of pectin in apples, applesauce and apple powder are a help in the treatment of colitis.

But now they are using it on wounds as well—which sounds logical. Dr. James E. M. Thomson, of Lincoln, Nebraska, tells about it in *Industrial Medicine*, for July, 1938.

If you want to be really wise about pectin you will need to commit its real name to memory before you go any further. Here it is. Arabino-mongalacto-diacetyl-heptamethylxyl-octogalacturonic-acid-with-resulting-split-products-of-arabinose,-galactose,-methyl-alcohol-and-galacturonic-acid. Just try that on your ukelele and then astonish your friends. But you can see why pectin makes the jelly jell and why it's good for wounds. Any bacterium that saw a monster like that approaching would naturally take to its heels.

Dr. Thomson has used pectin (let's stick to the nickname) on old infected burns, pressure sores, osteomyelitis (a bone infection), infected compound fractures, and infected soft tissue wounds. For its successful use, however, the lesion must be wide open and draining freely. Sinuses and pus pockets are hard to treat by the pectin method.

Dr. Thomson says that one advantage of the pectin dressing is that it does not stick to the wound or tear the granulations when it is removed. It can therefore be changed frequently without discomfort to the patient. The wound remains clean and free from any purulent odor. The granulation tissue is firm and healthy. And the scar tissue formation is smoother and flatter than when pectin is not used.

As to the reasons why pectin acts that way, Dr. Thomson (Continued on page 95)



Give Your Lungs BREATHING SPACE

BY

SAMUEL EDWIN OLMSTEAD

The Capacity of Your Lungs Often
Determines the Cleanliness of Your
Blood and Vitality of Your Body

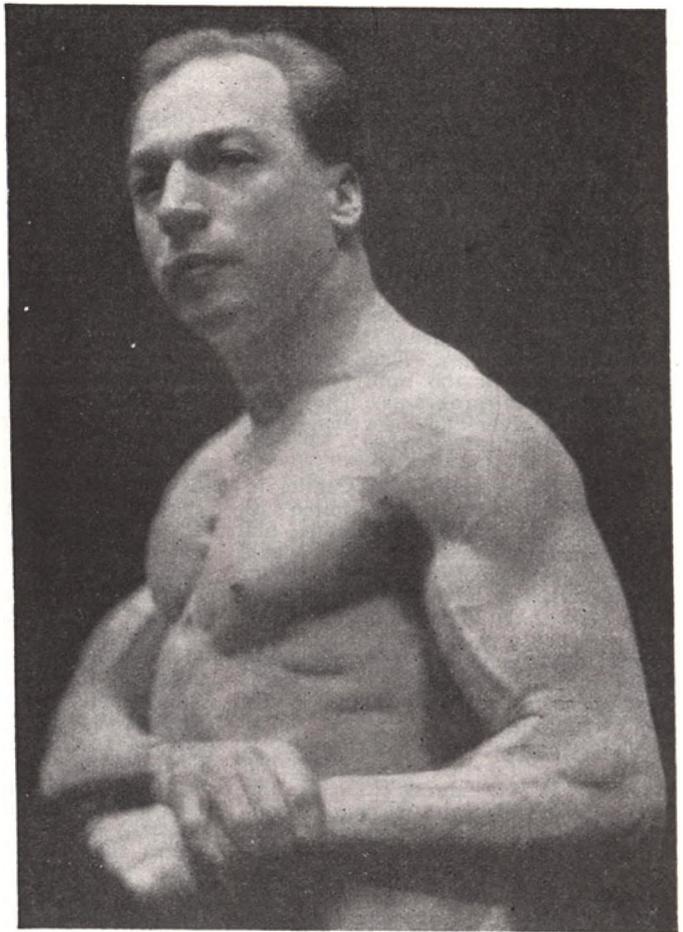
ALL too often, young men of prodigious strength, and young women with marvelous dancer's legs, fail to cultivate their lungs and chests. This is foolish neglect. Suppose an automobile concern built a large, handsome car, and equipped the powerful engine with a puny, inadequate carbureter. Would you be able to get satisfactory speed and power? Certainly not, and you'd soon forget the beauty of lines and other external enticements in a wave of disgust and disappointment.

The same is true of the human machine. Unless the chest and lungs are developed to a point of commanding admiration, a person is not fundamentally fit.

Just a few weeks back, when viewing a newsreel showing a coach selecting some recruits for a college crew, I was struck by the significance of the spirometer test given each man. A spirometer, in case you do not know, is a device for measuring the capacity of the lungs. Here was a coach who knew his business! He unquestionably knew that in rowing a winning race, endurance is the chief factor. And he also knew that big lungs are the basis of that endurance. The chances are that a skinny, gangling youth with a big pair of lungs, would have received preference over a husky looking recruit who showed a disappointing test on the spirometer.

Every one of us is endowed with a breathing equipment that was intended to work along very simple, automatic and efficient lines. There is nothing intricate, fancy nor difficult about natural breathing. What has happened to most of us is that our ultra-civilized environment and habits have had a tendency to reduce the full usage of our respiratory organs, and we have become weakened in vitality and development. And if we continue in this manner, we are in danger of becoming a race of slump-chested, shallow-breathing, deoxygenized beings—a race where dynamic, indefatigable, live-wire people are the exception rather than the rule.

Did you ever notice a group of boys swimming in a



Samuel Edwin Olmstead, lecturer and teacher of physical culture

near state of nudity? Did you notice that virtually all of them were flat chested and ribby looking? From a side view, most youngsters look like a question mark! The chest is concave; the back is convex. The shoulder blades are prominent and the neck skinny.

Occasionally these lads will round out into some semblance of a well developed adult as maturity is reached; but all too often, their adult bodies are but a larger edition of the same deplorable lack of symmetry possessed by the youngster. If we could make boys proud of their chests and cultivate in them the desire to build room for their lungs to function fully, we would make gigantic strides towards regimenting physical sturdiness.

While our greatest interest in chest and lung culture centers upon the bodily functioning as a whole, we can't avoid stressing the personal appearance factor. Whether it is a presidential aspirant delivering an address, or a young chap applying for his first job, a fine, full-chested appearance will impress his audience most favorably. One instinctively recognizes that a highly arched chest denotes lung power and that this in turn presupposes a more forceful character; one who can put across the ideals he believes in.

Perhaps some who read this will argue otherwise, but the fact is that a little research will soon prove that most men of big affairs have been big chested, vigorous men. There are, of course, exceptions to the rule. And it is also true that at times some of these big-chested giants of achievement have allowed their chests to follow the laws of gravity, so that their waistlines form an equator of astonishing proportions! But even then, while we deplore this gargantuan midriff and all it implies, he still remains an impressive figure, compared to a flat-chested, sunken torsoed dyspeptic!

Big breathers are big doers! Perhaps such people are not even conscious of differing in this respect from others, yet tests that I have made personally with my spirometer upon hundreds of persons, (Continued on page 92)

Health for 30,000,000 Workers

(Continued from page 11)

"Just what is the scope of this undertaking, Dr. Heiser?"

"Well, the object is two-fold; to point the way to a broadening of industrial medical service to workers, and to help industry in general toward the formulation and the practising of a really adequate health program.

"We have plenty of data to show that this two-fold objective has already been partly accomplished by many of the larger industries. They have made vast progress in the applying of industrial health programs. They have had the resources and the vision necessary for that first big step.

BUT in the meantime the smaller industries, with their limited resources, their inelastic budgets, and their lack of a leadership which would enable them to pool their resources for such a purpose, have been falling behind. One of the biggest objects of this job will be to work out methods by which these smaller companies can adapt to their own needs the systems already so successfully used by the large companies.

"This project seems to me one of the greatest things ever undertaken in industry. It is a shining chance to improve the physical health and happiness of millions. That is why I felt I could not sit back when the chance came to take a hand in it. Just consider the scope of it. There are thirty million workers in American industry. Sixteen million of them are employed in small industries. Most of these workers have families. This means that at least forty-five million persons are involved—more than a third of our population.

"Here, in short, is a chance to influence the life and health of forty-five million persons in ways that might well revolutionize the vital statistics of this country. Change the living conditions and the health level of that third of the population and you have something that should sweep like a resistless and beneficent contagion into every nook and cranny of our civilization."

"Dr. Heiser, what are some of the specific conditions your committee expects to deal with?"

"Our main concern just now is to make a concerted attack on the absenteeism in factories, and on occupational diseases. Here are some significant facts: two hundred and forty million dollars is the estimated compensation paid yearly to injured workmen in the United States. Of that amount, seventy-two million dollars goes for hospital treatment and medical aid. More than two million industrial workers are injured yearly.

"One survey made in 1936 of a cross-section of employees showed that 352,591 workers lost 208,649 days of work from industrial injury—about one-half day per man per year. The non-industrial time lost during sickness was fifteen times as great. Applied to thirty million workers that means an annual loss of about two hundred and forty million work days to the nation's industries. The effect on wages and production is tremendous.

"Non-industrial diseases are thus the thing that calls most urgently for attention but there is no desire to place less emphasis on the importance of occupational diseases.

"In connection with our approach to

such problems, I feel that I am especially fortunate in having the assistance of my colleague, Doctor Donald Shafer, whose experience in industrial medicine has included several years with the Standard Oil Company of New Jersey."

"Will you undertake any new research?" I asked.

"No—our present object is to correlate and coordinate the great mass of excellent material already available. We want to bring together the best practises now employed in American industry, and show how they can be adapted to the needs of small individual plants which have not felt they could afford the methods used by the big industries. Such plants may employ three hundred men or less; yet they account for nearly half of the industrial population of the United States.

"We hope to show the small industrialist that in helping the employee, he is helping himself, and that he can make more money than he does at present. It is a clear case where both can benefit."

"And that would improve the ethical tone of industry besides, would it not?" I commented.

"Yes—I was coming to that. The greater profits that would come to employers, and the better and steadier wages that would come to employees under such improved and enlightened conditions, would be a by-product. The real, the basic, argument for such improvements is that they are decent and right and humane. And experience shows that the industries which follow such a course almost invariably prosper in the long run.

"We know the small industrialist can't spend much money. But suppose we can show him, from our collected data, just what this or that will cost, and approximately what it will save him—say, in workmen's compensation costs and other items of that kind?"

"For instance?" I asked.

ALL right," he shot back, "here's an example. The United States Public Health Service reports that proper measures against accidents in plants have been found to prevent seven accidents per one thousand per year—and that doesn't mean minor accidents; it means accidents sufficiently serious and disabling to call for compensation to the injured workman, paid by the employer.

"Another estimate of the Public Health Service is that effective industrial medical service saves each worker \$6.20 a year, and that the saving to the employer is \$4 a year for every man that he employs. Suppose he employs a thousand men. Four thousand dollars is four thousand dollars, especially on a tight budget. Not to mention the greater productivity and better quality of goods likely to be put out by such a plant."

"Has very much been done toward the prevention and treatment of occupational diseases, Dr. Heiser?"

"A great deal; but it still has a long way to go."

"What are some of those diseases?"

"The most prevalent is dermatitis—skin inflammations of various kinds. In the canning industry, for example, there are certain vegetables, such as spinach, peas, and the like, the continual handling of which without

proper precautions will produce a dermatitis on the hands. Zinc workers tend to get a dermatitis due to metallic poisoning. Cement workers are affected with skin trouble especially on those parts of the body where the clothing binds—under the belt, for instance, or under the collar band. Constant and industrious washing with good old soap and water is one of the best preventives for that. Cutting oils in shops are another source of dermatitis.

"Some of the other occupational diseases are lead poisoning, silicosis from breathing in silica dust, asbestosis from breathing in dust from asbestos fiber, benzol poisoning, poisoning from working with analine dyes, carbon monoxide poisoning, radium poisoning, and the like.

"But the biggest cause of loss, both for the workman and the employer, is respiratory infections ranging from the common cold on through influenza and pneumonia. The working days lost and the impaired productivity resulting from colds alone runs into hundreds of millions of dollars a year. Proper heating, ventilation, air conditioning and cleaning in an industrial plant cuts that sort of thing down enormously.

PROPER food, freedom from nervous strain and anxiety, secure employment, peace of mind, preventive medicine, and prompt medical aid in case of illness are all factors in this situation. I know of no class of costly diseases that responds so readily to improved working and living conditions or that pays a quicker money dividend to all concerned when eliminated from the industrial picture."

"Has very much been accomplished in respect to air contamination?"

"A good deal. We are at the beginning of that. We are in touch, for instance, with the Air Hygiene Foundation of Pittsburgh, which has its headquarters in Mellon Institute; and we are all able to pass along their findings. And then there is the American Standards Association, concerned with the formulation of more than four hundred codes for various industries.

"The formulation of such codes is often a matter of very exact experimentation and measuring. Take the matter of exhaust fumes, for example. Is the workman to be allowed to subject himself day after day to toxic amounts of various fumes that are in the air he breathes, or is the industry to safeguard him from that and the consequences of it? If the workman is to be safeguarded, what are the standards of air contamination? What is the limit to which contamination of this or that kind must be reduced in order to be harmless?"

"There are such limits, and they can be found. Is a traffic policeman standing all day on a busy corner being injured by carbon monoxide gas? We know that he is not getting enough of the gas for that. But you can't guess about such matters. We must know. It's the same all along the line.

"Smoke and dirt in the atmosphere of cities is another problem. And it should be, when you consider that there are cities where the fall of dirt in the air amounts to eight or nine hundred tons a year. The respiratory tract can cope with dirt up to a certain point. But very minute dirt tends to get deep into the lungs and stay there. And

what certain forms of dust can do is shown in the silicosis problem."

"What about preventive medicine, and medical care for the worker when he gets sick, Dr. Heiser?"

"Broadly speaking the most important thing is the prevention of disease. That is more economical and more productive of good than waiting till illness sets in before doing anything about it. But it goes without saying that if there is illness, it must be taken care of. The important thing is to show the worker how to safeguard himself from accident and occupational or other disease within the plant, and how to live when he is outside of it; to provide for him and his family, if possible, periodic physical examinations so that disease may be nipped in the bud.

"WE DEAL with this point in a report we are preparing. We expect to set down and describe the best policies practised by some of our most important industries, and under each item we may put down certain questions for the employer to ask himself, as a means of checking up on his own policies. For instance, he would ask himself, 'Is our policy consistent with this? Is it inconsistent? If so, should we change? Or is our present policy preferable?'

"Here is the item about care of the health of employees, as practised by the most enlightened industries: 'Preliminary physical examination by qualified physicians of all new employees in order to select and place them on jobs for which they are physically qualified, and also to have a record of their physical condition at the time of entering the company's employ; also

periodic physical examinations of employees as occupations and working conditions may require.'

"You see that is pretty searching. Note particularly that the idea of the physical examination is not to refuse the man a job if he isn't a hundred per cent healthy, but rather to fit him into a job he will be able to do. A first rate example of that policy in practise is to be found in the Ford organization.

"Henry Ford employs many individuals who are handicapped. He does not discharge or reject a man merely because he has heart disease, for example. He gives him something to do that is suited to his condition. Henry Ford even has jobs for blind people. It is all perfectly practicable, and sound business; and in the long run it is profitable to all concerned—as doing right usually is. Society and the employer both benefit moneywise, moreover, because the more idle persons there are, the greater the taxes. It is better, if only in terms of dollars and cents, to employ such persons than to support them."

"May industrial medicine be regarded as something of a specialty?" I asked.

"Yes—especially with respect to certain industries. There is great need for better surgical facilities, for example, for the treatment of industrial cripples, such as is available today at the Reconstruction Hospital in New York and in similarly well equipped institutions.

"Great advances have been made with respect to such equipment. We used to expect, for instance, only about a sixty per cent restoration of func-

tion in cases of fractured femur (thigh bone). Now we expect about a one hundred per cent restoration. Why? Because we have abandoned the old-fashioned method and are using instead a device called the Balkan frame, which leaves the patient free to move while he is in bed. Now every surgical ward has it. An essential part of the treatment also, of course, is the functional re-education of the limb."

"Dr. Heiser, could you tell me more about the question of extending medical service to the worker's family, and how that can be accomplished?"

"The Visiting Nurse is one key to that," he answered. "And she is really a great institution—one of the most powerful and economical instruments for health in the world if only our industries can be taught to make extensive use of her services.

"One of the very best ways to keep a worker well and happy is to help his family to be well and happy. Nothing can so pull down a workman's health and make him absent-minded and prone to accidents as worry and ill health at home.

"WITH respect both to the workman and to his family the visiting nurse connected with an industrial plant either takes over some of the highly intimate, personal functions of the old-time family doctor, or brings the family under the guidance of their own physician. Of course that is another way of saying that to hold her job she's got to be capable; that she's got to gain respect of the men; for unless she is the sort of person who can get their liking and their confidence, she will get nowhere fast. On the other



Photographs from Pix Publishing, Inc.

hand, if she is good, she has a job whose importance ought to thrill her.

"The visiting nurse concentrates on aspects of the health problem in industry that the physician has not the time for. She takes care of many of the minor injuries and ailments of the worker herself under the doctor's supervision.

"IF HE needs attention from the doctor she sees that he gets it instead of allowing the difficulty, whatever it may be, to be neglected. When she puts iodine and a clean bandage on that cut finger there's time for a bit of personal, friendly talk. She finds out things; she gets the story of how things are going at home; she learns that when his hand came too close to the machine, he was thinking about some home problem and how to swing it—about Johnny's frequent colds, or his wife's need for dentistry, or the next payment on the mortgage on his little home.

"The one important thing that happens, if that nurse is a woman of merit and heart and common sense, is that pretty soon she is bringing those problems of the workman to the boss, and helping the boss to a personal, intimate, human insight into such problems.

"But it goes even further than that. She learns about that irregular heart beat, or that "indigestion", or that pain in the shoulder, or those fallen arches, or that recurrent headache, or that pain in the small of the back, or whatever it may be—and then gets her man to the doctor, and thus probably catches in time a condition that might have made plenty of trouble later on.

"The result of these preventive activities is fewer workers laid off because of sickness, better payrolls, no

docking, and a higher level of productivity throughout the plant.

"In plants where the activities of the visiting nurse extend into the workman's home, the results are the more striking and beneficial. She gets, not only for him, but for his family, the sort of medical attention they need—oftentimes when they don't even realize that they need it. And when she gets into the home, there is much that she can do toward showing the wife some of the principles and standards of right living that should obtain in the homes of all workmen.

"She can tell her about food, for one thing. And then there's the care of the children's teeth—how to use a toothbrush—what shoes to put on their feet—thorough elimination and the avoidance of that major curse, constipation; and so on. And every bit of it is vital to a high level of prosperity in our industries. It reacts on the worker and the employer in a score of ways."

"Are there many of these industrial nurses now, Dr. Heiser?"

"Not many—about three thousand. It's a new specialty in nursing, and they are still hard to get. But it is a career for nurses that promises to grow by leaps and bounds.

"We are in touch with the National Organization for Public Health Nursing. That organization is making these specially trained nurses available to industrial plants, particularly to small industrial plants where there has to be some contriving to finance the system. In Philadelphia, for instance, there is a group of five plants that share the services of a staff of visiting nurses, thus cutting the cost of the service to each plant. And these plants are enthusiastic about it.

"There is a plant over in New Jersey

that has recently adopted the system, and one of their executives came in here the other day to tell us about it. He was so pepped up about it that I wished all the owners and managers of industrial plants in this country could have heard what he had to say. We are noting such reactions more and more. They are straws that tell us which way the wind is blowing these days in American industry."

"Do you find it difficult to convince employers that they should take measures to establish in their plants the health standards you advocate, Dr. Heiser?"

"Less and less so. Most of them agree that such measures are desirable. But they do tend to put it off for one reason or another. About twenty-two stock objections have been listed. It costs too much. The plant has just bought a lot of new machinery and can't undertake it now. There is no room for a dispensary. The plant pays its men a bonus and expects them to look out for themselves. The plant pays such high wages that the men should be able to afford their own doctor. Business isn't very good just now; we'll wait. And so on.

But there are many employers who see that here is one way to make business better, to avoid paying out money on workmen's compensation losses, to avoid strikes and slacking and sabotage and ill feeling, and, through their factory, to help make the world a better place to live in.

"This is a chance to help people—by the million. It's a chance to start a war—the kind of war we need—a war on sickness, and for the establishment of health. That's what the National Association of Manufacturers wants to do, and that's what I'll be proud to help them do."

Painless Childbirth for Every Mother

(Continued from page 15)

means of careful physical training, the physical equal of the primitive woman who is forced by the circumstances of her life to do hard physical work, to do many of her tasks stooping or squatting, to walk on uneven ground, and to get about without the use of the shoemaker's heels and short vamp shoes that throw the "civilized" woman's body out of plumb?

Yes, common sense says all that. In fact, it is continually shouting the facts at our modern woman and screaming them at her during the racking pains of childbirth. But loud as are these admonitions of common sense and nature, it is still difficult for the "civilized" woman to hear them. Somehow it is so much easier to turn a deaf ear, to take no systematic or specific exercise and to ignore the patently obvious fact that any normally formed woman who really wants to can make herself as physically fit to bear children as those primitive women to whom the delivery of a child isn't much more than a slight interruption of the daily routine.

Herbert Spencer once said that man's first duty is to be a good animal. Consider the case of Mrs. Hosfall, a half-breed Indian woman, mentioned by Dr. Angenette Parry in a paper in the *American Journal of Obstetrics and Diseases of Women and Children*. Mrs. Hosfall was educated by missionaries in the summer. The rest of the year she followed a band of Indians of her

mother's tribe. She was married at twenty. She trapped with her husband, poled their boat along the streams, swung an axe, built their cabin, hunted, fished, and also performed all the more ordinary domestic duties.

This woman bore four healthy daughters in five years. The two youngest of these children were each born on the bank of a river, when the temperature was many degrees below zero, and when the woman was entirely alone, with no one to help in keeping a fire going and cooking the meals. She passed through all this successfully, an indication, comments Dr. Parry, of the advantages of leading a natural life.

Civilized woman, of course, can't ordinarily do the sort of thing Mrs. Hosfall did. But she can, without spending her days in the sort of protracted toil that was necessary to this woman, condition her body for childbearing just as effectively as did Mrs. Hosfall. A very small expenditure of time and of intelligently directed effort will produce the desired result—especially in the case of the growing girl who has been trained in right living from early childhood.

This story of Mrs. Hosfall is but one of many similar instances of childbirth among the so-called "nature peoples." It does not mean that such women experience no pain in parturition. There is plenty of evidence that they do. But there is also plenty of evidence

that the pain is not excessive. Presumably even animals experience some pain in parturition. Possibly it serves some useful biologic purpose, producing a glandular or nervous effect of which we know very little.

If our women approached childbirth in anything like the physical condition of the primitive woman, it is safe to say that the need for interference by the doctor would approach the vanishing point. The normal maternity that nature intended for women is, however, something that must be earned. That women do not set out to earn it means just one thing—they have not been educated.

FOR those who do set themselves to learn there are rich rewards. It is more than merely a matter of bearing children with the minimum amount of pain and danger to the mother and child; it is a matter of making maternity a constructive and beneficial thing in a woman's life. It is not always that now. Sometimes it marks the beginning of chronic invalidism. Often it drags women down; they lose their figures; their beauty fades; their marital happiness flies out the window. They just aren't up to it. But in contrast to this, we all know mothers who are a living proof of what maternity can do for women—how it can make them bloom. We all know women who have been so formed by nature that

(Continued on page 48)

Nervous and Mental Breakdowns!

They tell you . . . "Your troubles are only imaginary . . . FORGET THEM!"

The Psychology of Your Fears

NERVOUS and Mental Breakdowns are primarily due to FEAR. These FEARS are due to your possessing a sensitive, emotional, impressionable nature. Such people are known as introverts. No one who has never experienced such a state can conceive of the suffering and torture which is possible. These FEARS become very real and intense in character—to the point perhaps of one becoming panicky and even hysterical. You feel "trapped" and know not which way to turn. Your relatives tell you it is all foolishness, your physician tells you—"to forget it," and you are ashamed to tell your friends of your trouble for fear they may think you queer. Thus you suffer in patience and wonder what the end is to be. Deeper and deeper into the mental mire you sink and inwardly cry—"Oh, what shall I do?"

What Your Imagination Can DO

You are told your FEARS are not REAL, but yet you suffer quite as much from them as though they were real. You do not understand the condition, therefore your mind is full of doubt. If a good friend told you that a dear one had been killed in an automobile accident you would suffer keenly and pass through some very pronounced physical reactions, even though that friend was mistaken about its being your dear one. You believed him and that was enough. In a like manner you believe these fears you have are likely to culminate into realities, and believing it causes keen reactions. Through constantly holding these fears you generate a very real poison in your body, with a definite chemical change, which produces an auto-intoxication. This means a lowered vitality, functional inaction, and supersensitive nerves—all of which forms fertile soil for the growth of very real disorders. Every fear has its reaction on the Sympathetic Nervous System and is a shock which is felt throughout your entire being.

Your Fears as a Neurasthenic

Neurasthenia is a child of FEAR. It is due to your sensitive, emotional nature getting the upper hand and dominating YOU, instead of your controlling and directing it. Frequent indulgence in these fears form fixed HABITS which trap you. Some of the more common fears are: Fear of insanity, fear of suicide, fear of injuring a loved one, fear of crowds and closed places, fear of being alone, fear that something might happen to you, fear of death, fear of disease, fear of germs or dirt, fear that people may recognize your trouble, fear that you might lose control of yourself and make a scene. You find it practically impossible to forget yourself and you assume an overserious and over-anxious attitude toward most everything.

Dr. Leavitt has been helping people make adjustments for THIRTY-FOUR years; ten years in the practice of Medicine and Surgery, and the past twenty-four years exclusively devoted to Psychology and Physical Culture. He has made several trips abroad and is thorough, scientific and practical in all his work. He is the author of several books which have had a wide sale, a writer for magazines, and conducts a Psychological Department in one of our leading magazines. Each month, since the beginning of Psychology Magazine, he has carried his message to its readers and thousands have profited by it.

You lose interest even in life, and each morning you get up to—"just another day." Where the fears and feelings are acute the nerves become extremely sensitive and weak and you have peculiar sensations, such as uncertainty in locomotion, a slight dizziness, nervous indigestion, etc., which seem quite alarming to you. Remember, worry alone, which is a form of fear, can upset your nervous system completely.

You Ask—"Is My Mind Weak?"

No, only those with active, "going" minds experience these breakdowns. It is merely due to lack of understanding and repressed emotions which have accumulated to such an extent that you are like an overloaded boiler—just about ready to burst. This good mind of yours has become introspective, that is all. But to just continue to drift of course will mean more and more acute suffering. Such a nature as yours is capable of carrying you to great heights. The truly successful have just such a type of mind. You are out of adjustment, that is all. The depressing reactions you are experiencing are NATURAL reactions for the life you have been living. Things are according to LAW. It is a matter of "reaping what we sow." You lack UNDERSTANDING, TRAINING and DEVELOPMENT.

You Are Wasting Your Energies

RIGHT thinking and living along with proper mental and physical training and development will set that delicate and wonderful machinery of yours working FOR you instead of against you, and will bring HARMONY. You have tremendous power, the SAME power that others have used to win success and happiness. Your confidence has been badly shaken and you are now on a negative plane of life, with your life's batteries short-circuited and low. All this CAN be changed completely, and has been in thousands of cases.

Life Is What We Make It

Nature does not say at birth to one child: you are to live a life of misery, be full of fears and make a failure of what you undertake; and to another—you are to be showered with life's richest blessings and be most happy and successful. In the early period of development training, environment, companions, etc., of course, play a big part in forming good or bad habits. But what this represents is ONLY HABIT and tendencies, and habits can be broken and new ones formed. We do not come into this world with the power of thought, but more as a piece of clay which the potter (which is represented by our early training) moulds into one type or another. This may at this moment seem rather vague to you, but I assure you we are NOT "fate-driven," but to a great extent MASTER OF OUR OWN DESTINIES. It is a matter of first understanding just what to do, and then of being willing to pay the price in effort.

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(Continued from page 46)

they find motherhood relatively easy and natural. They "are built for it." They have child after child and get healthier with every baby. Motherhood is good for them and they arrive at their middle years physically and psychologically fulfilled. Such women give us a hint of what nature intended child-birth to be. The primitive woman gives us more than a hint. There we have the ideal in its fullest fruition. The question is, how far would it be possible for women, living under the conditions of civilization, to travel along that road.

Dr. Kathleen Vaughan's book "Safe Childbirth" offers much valuable material on this subject. Dr. Vaughan was formerly a British medical officer in Egypt and India where she had extensive opportunity to observe child-birth among native women. The fact that her book carries a commendatory foreword by Dr. Howard A. Kelly, professor emeritus of Gynecological Surgery in John Hopkins University, and an internationally known authority in his field, is sufficient recommendation for the book's authenticity. I am indebted to it for much of the following factual data.

THE point of first importance is proper formation of the pelvis, and particularly of the pelvic brim, which is the opening in the bottom of the pelvis through which the child must pass in being born. The properly formed pelvic brim is round and is characteristic of women who were properly nourished in childhood, who got plenty of Vitamin D, whose skeletons developed well, and who have not been thrown off balance by the continual use of high-heeled shoes during their formative years. It is typical of women in primitive tribes. The pelvic brim of the "civilized" woman, on the other hand, is likely to be oval in shape. This means that though it has the same circumference as the round pelvic brim, it has a smaller area. That, of course, makes the passage of the child more difficult. The majority of our women have a tendency toward the oval pelvic brim to a greater or less extent. But now that our young girls are being better fed than were the young girls of twenty-five years ago, because of our better knowledge of nutrition, it may be expected, and it certainly is to be hoped, that round pelvic brims will gradually come into vogue again.

A woman's teeth, her jaw formation, and her gait in walking are pretty good indicators of her pelvic capacity. Poor teeth and jaws usually go with poor skeletal development; and a poor gait often indicates deformities of the pelvis. The stronger and more athletic a woman, the straighter her gait. That is to say, she puts her feet down parallel to her line of advance; she neither toes in nor out. As her pelvis widens her gait widens.

Toeing in or out indicates something wrong in the position or shape of the pelvis at the hip joint. Such a deformity causes the femur, or thigh bone, to rotate, either in or out, which in turn causes in-toeing or out-toeing.

High heels do plenty of mischief to this pelvic mechanism, especially when worn by young girls, whose bones are still soft and formative. The net effect of high heels is to diminish the capacity of the pelvic brim. It also throws the body weight forward onto the arch of the foot which eventually breaks down. The natural poise of the body is upset;

the lumbar curve (small of the back) is accentuated; the sacrum (base of the spine) is bent forward to the limit; and the foolish victim of all this has to toe out in order to have a wider base to stand on. The net result is what is known as the "dancing master position." Such a woman has no need for a bustle. But when she comes to have a baby she'll have plenty of need for a doctor.

Parents ought to learn that when any schoolgirl treads her shoes down on one side, she will get a pelvic lesion to correspond to it. A child who constantly uses a scooter is likely to get a pelvic malformation from so one-sided an exercise. Sitting askew at a school desk day after day can also deform a child's pelvis. Tight elastic belts worn by girls tend to produce the funnel shaped pelvis which is appallingly common today.

But, as already indicated, the causes

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for these malformations are not merely mechanical. Diet plays a very important part, both with the young child and the growing girl. Not only does nutrition determine to a large extent the normal or abnormal formation of the pelvis, but it also has much to do with the ease, or lack of it, with which a pregnant woman is able to have her baby. Wrong eating, for example, may result in an abnormally large child instead of a normally small one—and abnormally large children are mighty difficult to bring into the world.

An authority on nutrition once said to me, "I am sure, after years of observation, that the woman with a normally formed pelvis who avoids rich, spicy, greasy foods, and who sees to it that fully sixty per cent of her food intake consists of fresh fruits and fresh vegetables—a large part of them raw—can condition herself so that child-birth will not be nearly the ordeal it usually is.

"To be sure of that, it is necessary to catch them young. But in general, I consider that sound diet and right exercise form the ideal combination."

The point about exercise brings us to the next matter to be considered—the problem of keeping the pelvic joints flexible. The pelvis must be properly formed by right nutrition. The pelvic joints must then be kept flexible by right exercise. This is a point on which there are differences of opinion among doctors. I talked recently with a gynecologist for whose skill and professional knowledge I have great respect. He ridiculed the idea that pelvic joints were movable—or at any rate, sufficiently so to make any perceptible difference in the mechanics of childbirth.

The view in general, comments Dr. Vaughan, is that the pelvis is immobile. It is so because we don't exercise it. It becomes a ring of bone. In pregnancy we even put on a "surgical corset" to prevent softening and pliability.

To this carefully cultivated immobility of the pelvic joints, Dr. Vaughan attributes the back pains which the civilized woman accepts as an inevitable accompaniment of parturition. The civilized woman, with the rigid pelvis, cries "Oh, my back!" as the child's head advances, tearing apart and opening the stiffened articulations (joints). "That cry," observes Dr. Vaughan, "is not heard from Indian women, because all joints are in constant use which keeps them supple and elastic."

The importance of having the sacro-iliac joints pliable in childbirth (the sacro-iliac, in case you are rusty on physiology, is the joining between the base of the spine, known as the sacrum, and the two hip bones) is that this enables the sacrum to swing back and thus more or less adjust the size of the pelvic opening to the child's head. The ancients, according to Dr. Vaughan, recognized this swinging back of the sacrum and called it "the sacred bone"—whence its name. The swing back takes place whenever a squatting position is assumed with the knees apart. Primitive peoples are constantly assuming this position in connection with the activities of their daily life, just as do our young children in their play. A little girl making mud-pies is a perfect throw-back to her remotest ancestors in that respect. The things a primitive woman works with, including the fire and the cooking utensils, are on the ground. She must be continually stooping, squatting, crouching, or sitting tailor fashion. Such positions do not tire children, nor adult people who have habitually assumed them since childhood. But they tire us civilized adults because we have let our pelvic articulations and the ligaments of legs and back stiffen by lack of use.

NOT only does crouching and squatting, practised daily, keep the pelvis of the primitive woman mobile and supple, but it massages and, to that extent, conditions the pelvic organs and stretches the perineum—the region at the opening of the pelvis. More than that, it forces the abdominal viscera upward, gives great support to the abdominal wall, and creates the position of greatest possible mechanical advantage for the expulsive muscles used in childbirth.

Persons who have read Pearl Buck's novel, "The Good Earth," will recall the graphic pages wherein she tells how O-Lan crouched over a tub in giving birth, and how she accomplished the whole thing by herself, without even the aid of a midwife.

In contrast to all this, the civilized woman in labor usually lies on her back. This puts her, thinks Dr. Vaughan, in a position of mechanical disadvantage when it comes to the use of the expulsive muscles. Moreover, the kindly aid of gravitation is lacking.

To make up for all this, the woman is placed usually on a special sort of table with hand-holds against which she can pull and strain. Dr. Vaughan heartily condemns this prevailing practise, and her opinion takes on added weight from the approving comment of Dr.

Howard Kelly in his foreword to her book. "Before such a wealth of clearly and logically presented, challenging data, preconceived notions regarding these vital matters should be held in abeyance until we have given the matter fullest and fairest consideration."

I recently sought the opinion of a physician who is a colleague of Dr. Kelly at Johns Hopkins. "What do you think of it?" I asked. "Is it a freak theory, or is it sound?"

"IT IS horse-sense," he answered. "Putting a parturient woman on her back is done for the convenience of the attendants. It is not convenient for the woman. As a matter of fact, however, there is a good deal of compromise in this matter. It is rather common practise to have the woman sit up or take other positions that are a help to her. In Europe they make considerable use of a specially constructed low chair, with a rim for a seat."

We come now to the last but not least important aspect of this subject—exercise as a specific preparation for childbirth.

First, it cannot be said too emphatically that there are certain forms of exercise which are a very bad preparation for childbirth, and which are very bad for women on general principles. Violent, competitive athletics fall into this class. One especially bad thing about them is that they involve nervous as well as undue physical strain. There are also various forms of exercise which are very objectionable because they tend to stiffen the perineum instead of relaxing it. In this latter class Dr. Vaughan places toe dancing, which, she says, requires such a stiffening of the perineum that it is difficult for a woman who has had a child to become a competent toe dancer. Ordinary dancing, on the other hand, is excellent. So are such sports as swimming, tennis, rowing, walking, and others which call for a general and not too violent activity.

Incidentally, walking on uneven ground is one of the things that keeps the pelvis of the primitive woman mobile. Unfortunately our women do most of their walking on level floors and pavements.

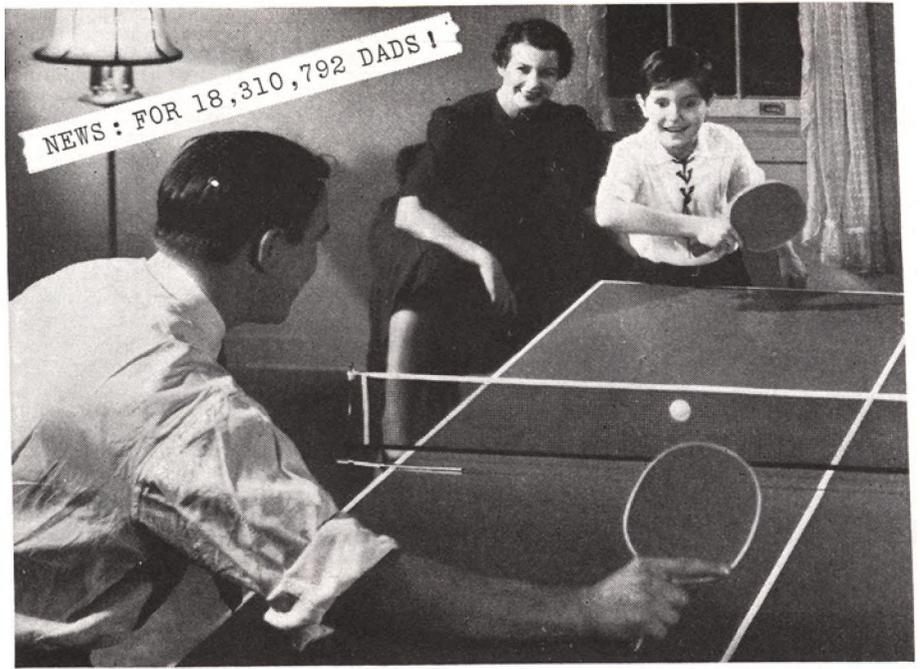
It goes without saying that properly chosen sports and gymnastics have their place in the lives of growing girls and of mature women, and that women who get enough of the right kind of exercise will develop such muscle tone that they will find it easy to maintain correct posture and avoid the slumping that can store up so much grief for a pregnant woman when her time comes.

In any case, exercise should be begun long before pregnancy, if possible. But the pregnant woman may exercise also, provided she is careful about it. Plenty of brisk walking is one of her best bets.

Dr. Vaughan relates that some years ago she took a class of fifteen pregnant women with a view to studying the effects of exercise on the abdominal muscles. The exercises were designed "to loosen the pelvic joints, to stretch the sacro-sciatic ligaments and the muscles of the pelvic floor, to give tone to the abdominal muscles, and to help the fetal head to descend into the pelvis."

Here they are:

1. Deep breathing with open windows.
2. Leg swinging, holding onto the bed, and kicking up, forward and back.
3. Leg swinging in circles.
4. Standing before a chair, each leg raised in turn and the foot placed on



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a chair seat. 5. Bending forward, holding low foot-rail of the bed, feet together. 6. Squatting, holding onto the rail of bed, knees well apart. 7. Squatting, knees together. 8. Ascending of an eighty-step stairway two steps at a time, not holding onto bannisters—and descending the same way.

This drill was given twice a day. It improved the condition of the women and shortened their labor, though it was not undertaken till about ten days before delivery.

Exercise after confinement is, of course, to be avoided for some weeks, and even then undertaken with caution. One of its effects is to diminish the flow of milk. And, naturally, any form of exercise undertaken by a pregnant, or by a recently confined, woman should be under the close supervision of her doctor, otherwise she might do herself harm rather than good. Pregnancy is no time to start experimenting with half-baked ideas.

In general the attitude of physicians toward specific exercise for pregnant women is conservative. There are some who even hold that a flabby, soft-muscled woman has an easier time. Most of them, however, take the position that plenty of walking provides all the exercise necessary, and that mobility of the pelvic joints is a myth, and hence not worth trying to achieve.

Some years ago Dr. H. Koster, a Brooklyn obstetrician, read a paper before the New York Academy of Medicine in which he urged "The Value of Abdominal Exercises Before and After Delivery," both in the interest of general health and of ease of delivery. Dr. Koster made the point that abdominal muscles lacking in tone often are stretched, during pregnancy, so far beyond their elastic capacity that they don't regain their normal shortness, but that exercise before pregnancy will prevent this, and will usually restore elasticity if it has been lost. Thus the woman keeps her figure. Normally, he says, the natural tension of abdominal muscles of proper tone should be sufficient to insure a "flat stomach,"

and to squeeze the viscera up to their normal position in the abdominal cavity. They cannot maintain that position without the help of the abdominal muscles. The cavity is shaped something like a pear with the small end down, so that proper tension of the muscles at the lower end readily forces the internal organs up and helps them to stay there.

Dr. Koster prescribes lying on the back and raising the leg to perpendicular, then lowering it and raising it again, holding the knee straight, and not allowing the leg to touch the floor. Some women are so weak that they have to bend the knee to make it, but this can gradually be overcome. The woman should gradually work up till she can make a hundred movements with each leg in about four minutes. Dr. Koster states that this "is all that is needed to develop a firm, elastic, supporting wall. By daily use of this exercise for a year a woman's abdominal muscles should be at least as well developed as those of a man."

Another obstetrician who has contributed to the rather scanty medical literature on this subject is Dr. Greer Baughman of Richmond, Virginia. In a paper in the *American Journal of Obstetrics and Diseases of Women and Children*, Dr. Baughman takes a similar position, and prescribes five simple exercises for the abdominal muscles.

He suggests these exercises begin by the time a girl is thirteen or fourteen years of age and that they be continued in addition to regular gymnastics and other forms of exercise. The exercises are progressive.

Here they are:

Exercise One: Lie on the floor with shoulders back, chest out, and the whole body fixed rather rigidly. Raise the right leg slowly to perpendicular and slowly bend at knee, allowing leg to descend slowly upon thigh and then to be slowly extended. Do this three times with one leg and three times with the other, and then three times with both together.

After several days add this exercise: **Exercise Two:** Same position. Leg lifted from the floor to perpendicular, then brought down slowly till it lies parallel to the other leg. Three times with one leg, three times with the other, and then three times with both together.

Some days later add this:

Exercise Three: Like Exercise Two except that leg is lowered almost to the floor, and then from that suspended position is again raised slowly to perpendicular. Three times with one leg, three times with the other, and then three times with both together.

Exercise Four: Feet fixed under bar in bed, shoulders back. Bend the body at the waist, with chest forward, till the thighs are touched; and then slowly fall back to the original position. Do this three times.

Exercise Five: Erect position, chest forward, shoulders back, hands on hips, feet stationary. Rotate the body to the right, with the pelvis as the axis on which it turns. Bring the body back to original position, with chest and abdomen facing front. Then rotate body to the left, with same return. Five times or more.

THESE exercises may be resumed usually six weeks after delivery. It is noticeable that neither of these physicians suggests the pelvis-limbering, perineum-stretching exercises provided by Dr. Vaughan.

The facts gathered and presented from these various sources should be sufficient to show that for most women it is possible for childbirth to be made much easier than it otherwise would be and that it is possible for women who want to take the trouble to achieve motherhood with something of the joyous ease and naturalness which comes to primitive women by reason, chiefly, of their mode of life.

We can't live primitively; but we can make an art of living, and so give nature a chance to do her magnificent best for the civilized woman as well as for her more primitive sister.

Stretch Yourself Into Shape

(Continued from page 23)

years of age. Gene Tunney, former heavyweight champion, grew two inches after he was twenty-one.

We might try many things for relaxation, some of them not too good for us. For immediate relaxation, the natural kind, you can get relief from nervous tension by allowing yourself a good stretch.

Stretching and relaxing go together. You have to relax after you stretch and there is where the benefit comes in. The body enjoys a mellowness that rids it of that worn out feeling and after a minute or two you can start your work again with renewed vigor.

I believe you can have fun exercising, just as you can enjoy any other activity. It doesn't have to be hard work, a tedious chore that you go through every day just to lose a pound or two. You can get exercise just sitting in a chair if you want to. Bending, reaching for things on the office floor will provide you with plenty of body activity.

With that idea in mind—enjoying your exercise—I have devised a few exercises that should be easy and beneficial. The next time a few of your girl friends get together with you, try these exercises and you'll see you'll

soon be laughing with enjoyment as you do them.

Then, too, this is the time of year when our bodies are liable to stagnate a bit. Our legs and arms need a little extra workout to keep them in shape. In the summer months there are many more activities to keep us healthy and strong. But in the winter, unless we have skating facilities, or have the time for a good walk every day, we should be careful about not letting ourselves get out of condition.

FIRST, let's start with a good old fashioned stretch. Stand straight, chest out and throw up your elbows and s-t-r-e-t-c-h for all you're worth. That's fine! Now, get in a yawn or two if you feel like it.

Now here's one that can be done while sitting at your office desk. Slouch forward and allow yourself to relax completely. Then throw your legs straight out in front of you and grasp your hands behind the chair. In this position stretch with determination and that's what will do you some good. It should rid you of that feeling we all get when we sit too long in one position.

Bend forward from the waist and place one arm inside the other in a

half-circle fashion. Then stretch your back and shoulder muscles by making this circle smaller and smaller until your elbows are opposite each other. From this same bent forward position, turn the palms outward and swing arms behind the back as though you'd like to have the hands meet.

Another good stretching exercise is to place one leg on top of a chair and touch the knee with your head. Both knees should be kept straight.

For adding those inches to your height you might try this: Lie on the floor where it is possible for you to grasp the bottom of one piece of furniture while putting the toes under the ledge of another far enough away to give yourself support. Then pull both ways at once and with effectiveness. If you're actually serious about getting taller, you should practise this exercise several times daily. Naturally the more you do it the better. Another one that would be helpful is hanging from a bar supporting the full weight of the body by the hands.

Stretching exercises can be coupled with anything we are doing, as they serve mainly to relieve nervous tension—and that's something we need in this fast moving age.

The X-Ray Racket

(Continued from page 13)

There are no exceptions to any group dealing in health. A medical doctor can be just as ignorant of X-ray operation and diagnosis as an osteopath or chiropractor. And dentists are no exceptions either. There are good and bad in all the various branches of health. Those who are expert have become expert by mastering the principles of the X-ray machines they operate and have taken the time to study X-ray interpretation.

Many doctors have admitted they never received sufficient training in college to qualify them to operate an X-ray machine, or to diagnose a patient's health from a negative. The wise doctors realize their lack of knowledge and take their negatives to someone who has had lots of experience in reading negatives. Other doctors, however, rely upon their insufficient knowledge, refusing to admit that they do not know everything about everything, and hypnotizing themselves into believing they do because they have some form of medical degree.

X-RAY has become a "racket" in other ways besides operation and interpretation. Fee splitting is practised by many of the largest X-ray laboratories and by doctors who are considered "most ethical." But one can get it straight from the doctors themselves that "ethics" are almost a thing of the past, something that belongs to "best societies," "better business bureaus" and Chamber of Commerce organizations.

These organizations are only sheep's clothing for them. Fee splitting has become so bad with some laboratories that they "kick back," "fee split," or "rebate" to the doctor as much as seventy-five per cent of the money they receive from the patient. The patient, of course, does not realize that he is paying both the laboratory fee, which is later split, and also an extra fee which goes back to the doctor who has sent him to the laboratory. The patient usually believes he is paying only an amount to cover the work of the laboratory.

It is time for the public in general to question doctors on points of this nature. But it is often difficult to do this because known fee splitters deny that they stoop to this practise while others frankly admit that some of the best doctors accept rebates in more ways than one—so why shouldn't they do it too? It's a regular merry-go-round, and the sick patient furnishes the money for extravagant homes and the swankiest of automobiles.

Some of these rebate X-ray laboratories cannot afford to use any but the cheapest of materials. In photography, even an amateur will insist on the best quality films. But not most rebate laboratories. They have to buy cheaply to be able to rebate and still have a profit. Film manufacturers make different grades of X-ray film just as they make different grades of commercial film. Then there is also crushed box films, and out-dated films. These inferior quality films are paid for by the patient who doesn't realize that a diagnosis of his health is being made from material of this type.

Another common practise is making a darkroom of any "catch all" clothes closet which may be hardly large enough to turn around in. This type

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of darkroom in itself is a menace to the health of the patient in two ways: first, because most of these closets do not have fresh running water with which to wash films. The wash water is often allowed to stagnate for a month or more. Films washed in such water, which usually contains stale developing solutions washed from previous films, never rinses the negative properly. In these same dark rooms will also be found exhausted developing solution far too "used up" to develop anything more than a finished negative which is not diagnostic. Yet the patient has taken it for granted that everything is a hundred per cent.

The other menace to public health is in those dark rooms where dental films are developed and where the wrappers of the films, which in many cases have come in contact with infected mouths, are thrown on the floor in a corner until they pile up. Any developing solution supply house will tell how lax this condition is, and how it is to be found not in one or two remote laboratories, but in "you'd be surprised" how many laboratories—some of them having the finest "front" appearance. It is something like the housewife with a nice parlor and a dirty kitchen.

WHY should conditions like these be permitted to exist? Why shouldn't X-ray laboratory inspection come under the inspection of the Board of Health as do beauty parlors, barber shops, and restaurants? There surely should be as much protection against disease where disease is being treated as there is where it is not. A patient would no more have X-ray work done, knowingly, under the conditions mentioned than he would eat in a restaurant that is unclean.

There is no reason why X-ray laboratories should be so secretive about everything that goes on behind their doors. Most anyone who has had major X-ray work done knows how hard it is to get the least amount of information from an X-ray operator. Sometimes he will tell you casually that "such and such" is what is wrong with you. But you should not let the matter rest at this point. If your ailment is serious, you should ask questions of your doctor. If his diagnosis from the negative is correct, he will not be reluctant to have you show the negative to another equally capable doctor, or to two or three doctors, and have your case diagnosed by different minds. When a doctor is unafraid to have the X-ray work shown openly, you can be assured that he is sincere, but when said X-ray negatives are placed in private files and only reports are given, it is the right of the patient to know why those negatives should not be shown.

Every state can bring order out of this chaos. Every state should have unbiased and unprejudiced investigators who know X-ray technique and X-ray interpretation, and who examine every operator of an X-ray machine as to his knowledge and ability. There should be no class exception to this examination: Medical Doctors, Osteopaths, Chiropractors, private laboratory technicians, Dentists, Doctors' assistants, and Dentists' assistants. Such examinations could be made in the doctor's own office on his own X-ray machine so that there could be no excuse that the examination X-ray machine was not the same as the one in the doctor's office, or that other things like films, solutions, and accessories were not the same.

At the time this examination is being made, the inspector could check developing solutions, sanitary conditions, etc., making it compulsory that such conditions be adequate before X-ray work is begun.

In the case of making diagnoses, the diagnostician, before taking an examination, should pass the State Examination in X-ray technique so that he will be capable of knowing whether the negative he is diagnosing from is, or is not, diagnostic. At present, many capable diagnosticians, who know X-ray from every angle, are presented with negatives from which to make diagnosis when such negatives are next to being worthless. Such capable diagnosticians should demand quality negatives.

Every X-ray laboratory should be presented with an inspection report issued by the state which should be placed near the operator's controls, and in view of the public. This report, and also a license as a diagnostician of X-ray work, should be in every doc-

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tor's office where diagnosis from X-ray negatives is being made.

With a state blanket law covering all fields of health treatment from X-ray diagnosis, Medical Doctors, Osteopaths, Chiropractors, and X-ray specialists would be required by the law to make and diagnose X-ray negatives as well as it is humanly possible to do so. There would be no gross errors such as calling a gas bubble a tumor; a cyst, healthy bone; or allowing abscessed teeth to go untreated because the interpreter of the negative is incapable of recognizing the condition.

Besides raising the health standards in X-ray for the general public, the fee splitting racket could also be abolished by standardizing the fees charged for X-ray work and diagnosis. A committee of X-ray experts could be brought into consultation and a fair standard price for different types of X-ray work arrived at, these prices being based upon laboratory time, labor and material, and individual diagnosis or consultation diagnosis.

Were such a price schedule issued by the state to every laboratory, and prices charged accordingly, the patient would know that that laboratory was not out to pick his pocket and rebate part of the pickings back to the doctor sending him to the laboratory. And with rebating stopped, the doctor would automatically demand first class X-ray negatives. At present he doesn't care what kind of negatives of the patient are sent back so long as the monthly rebate comes too.

In large cities, a patient would not have to go to a laboratory on the opposite side of the city to have X-ray pictures taken when a laboratory that does equally as good, if not better, work is within three minutes' walk of his doctor's office. The reason for the long trot across town is because that laboratory "plays ball" with the doctor,

while the laboratory close by refuses to "kick back," but does "play ball" with the patient by giving a dollar's worth of work for a dollar received.

If this were not true, why does it happen that the same doctors who are known to accept rebates from a distant laboratory come to the non-rebating laboratory when they are in need of extra good X-ray negatives for some wealthy patient—and then tell the nearby laboratory to charge the work to their private account, which means that that rich patient is going to pay plenty for having the work done? And why is it that the doctor, who sends patients to a laboratory on the other side of the city to have their work done, goes to the non-rebating laboratory for X-ray work of himself? Why isn't the non-rebating laboratory good enough for his patients if it is good enough for himself? Surely, he must think as much of his own health as he does of his patients' health.

The state could also control X-ray school standards. At present there is no definite knowledge required to be "graduated" from several private X-ray schools, but it is absolutely necessary to pay the tuition fee. X-ray technique courses range from three weeks to six months. Tuition fees range from seventy-five dollars to one hundred and fifty dollars. Some students are "graduated" with a one hundred per cent average in theory, and a thirty per cent average for practical work. State requirements would compel such schools to make their graduates as practical as they are theoretical, for, after all, students are paying and studying for the purpose of doing high grade X-ray work.

There should be no restrictions in X-ray work between "pretty girl" students, as one school requires, and those who are not so pretty. The ability to make diagnostic X-ray negatives has nothing to do with being pretty, but it does require common sense, logic, reason, tolerance and patience.

REAL medical men and laboratory men do not care whether a girl is pretty or not so long as she is neat, courteous, ambitious, accurate, and tolerant. Those who are fortunate enough to be blessed with exceptional "looks" do have the advantage but only if they have "brains" too.

It is true that much of the X-ray knowledge gained by X-ray machine operators comes from supply house men, or from X-ray salesmen. But this spotty information is not always sufficient for routine work. No salesman wants to do any more X-ray instructing than necessary after he has sold the machine. It is true that these salesmen will help the buyer when called in, but the buyer usually follows the line of least resistance and waits until something radically wrong happens before calling for advice. If the operators first understood the principles of X-ray before they purchased their machines, instead of purchasing a machine and then running it as best they can until they gather enough knowledge to know what they are doing, it would be a bit more advantageous to the patient they treat.

At present, no one seems to care much about the deplorable conditions that exist in the use of the X-ray, but an awakening will come in the near future when someone, who has an interest in health and justice at heart, will clean house and take a decisive step toward ending once for all the X-ray racket.

The Man Who Succeeded in Failing

(Continued from page 6)

or farming on a rented farm for myself. I hated every day of it but thought that was the only thing I could do. So I stuck to it till I had to go to a hospital to get fixed up.

I had several operations and treatments for ailments over a period of eighteen months. While there I tried to work out a plan for some other kind of employment that I could stand better than farming and I did so, but that didn't solve the problem of the loneliness that haunted me almost incessantly.

I lacked the strength and stamina to do the farm work and I was so completely exhausted from the work that I couldn't do anything socially to relieve the loneliness. Then I got that feeling of inferiority so that I couldn't be company that anyone would enjoy at all. It took all the grit I had each day to go through with it and on top of the work was that incessant loneliness and dissatisfaction with life that left me so unstrung at the end of the day that I couldn't sleep. And since I lost sleep, the days were so much harder and longer to me.

I got worlds of advice from well meaning friends. "Get interested in some hobby," "study psychology," "go to the mountains and rest up," "try Christian Science." I tried to bury myself in my work, I tried taking courses in psychology, I tried all the different species of doctors I knew of and could get the money to try. I liked music, so I tried to get as intense an interest in that as I could. I tried the company of the best women and girls I could find, as one physician advised me to do.

After using up all my energy at work you can imagine what good company I would make, especially when I had such an inferior feeling and a sense that I was a failure in life anyway on top of exhaustion. That naturally failed just as other remedies did in my case.

I tried children and found I enjoyed playing with them and that I got some relief that way more than any other. So I have used that whenever I could.

I wouldn't marry in spite of my friends telling me I should. I was bothered with jealousy and the other things that go with this condition and didn't feel that I could adjust myself to a married life till I got rid of these obsessions and got back to normal.

I see people all around me living happy, normal lives. In fact, I work with one every day that has a home, a wife and little girl, and I know he has as many financial problems as I have and still is contented and not full of queer obsessions and unable to be his best in public or in his relations with his friends.

One psychologist told me to forget myself, that I am too introspective. Maybe I am. I can manage that fairly well while I am at work, but I have to stop work and sleep and then I can no more control my thoughts and relax than I can fly. If I have had any trouble during the day or anyone has slighted me or mistreated me, that thing haunts me so that I lie awake all through the night.

One reason I am writing you is that I am taking a health course and I want to get on my feet and get all there is in that course. If my mind is in a whirl and my emotions boiling and agitating me continually, I feel that will be a hindrance to my recovery. I have tried

so many things that I am easily discouraged. I realize that it will be slow and uphill work at best, so I need to remove all the hindrances I possibly can.

I just read in the last issue of your magazine an article on the long "hike" and what some of the participants had to say about what it did for them. No wonder more join in it every year. It just seems too good to be true. Life means something to those people that it never has meant to me, so if there is any way I can get even partially the buoyancy and joy of living they tell about I will be thankful for the day I started this course, even if I do have to wonder how I am going to carry out my part of it physically and financially.

If you will please give me an idea of what I can do to get these kinks out of my mind and get emotionally balanced so I can be at my best in my work and in my social life it will be a big lift.

Please help me if you can. I am going to study the books sent me and see if there is anything in them to help.

—ANONYMOUS

THIS is a letter from a deposed king who has been living a lie all his life. For the better part of fifty years he has been looking back to his lost kingdom while telling his friends he wants to become adjusted to his life. He doesn't at all. All his courses, all his visiting doctors, all his talks with friends about what is the matter with him, are so much dust in the eyes of the world. And of himself.

He knows that his life is not good, is not healthy. He makes these gestures toward a "cure" in order to appease his sense of guilt and to make his friends think him a grown-up man. He can claim that he has tried "everything": courses, work, books, music, companionship of women and children, and so forth. And nothing works. Is it not clear that he must be a very important, a very difficult case; as he himself says, a case of long standing? Then surely no one can blame him if he is still unhappy and lonely.

He was not an interesting companion to women, but this was never his fault. It was the fault of the work that exhausted him so. He might have enchanted them with his brilliance if he had not had to work.

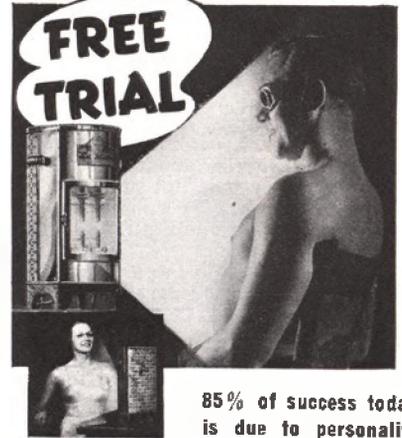
He tries the companionship of children when he can find them. But if there are no children available it is not his fault; he is ready and willing to play with them if they are brought to him.

Now he is making a great effort. He is taking a health course and he wants to remove anything that will prevent him from profiting from this. Actually, he has already accepted the failure of this. He has three alibis ready.

One, his case is of such long standing that recovery must be slow, and he grows easily discouraged because so many things have failed. Two, he won't be able to stand it physically. Three, he won't be able to pay for it. We can hear him telling his acquaintances how sad it was that he could not stick to the course. But it was not his fault!

Other people can take the long hike. Life means something to these lucky people. They have so much fun "it seems too good to be true." Why could he not take the hike? He has to work, and then he is not strong

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anyway! The outlines should begin to be clear now.

It is the world that is wrong. Too much is expected of him. It is ridiculous to expect a little boy to do a man's work. Naturally he hasn't strength enough for it. And it is ridiculous to scold a little boy when he doesn't do the work right. And, of course, it is ridiculous to expect him to get married; he isn't ready for marriage yet.

He cannot pay for the things he wants. They really ought to be given him. He cannot pay with money, he cannot pay with effort, he cannot even pay by being nice to other people. Those women he went to see expected too much of him. People on the job expect too much of him and mistreat him, and he worries about this at night so the next day it is not his fault if he cannot do his work as well as the lucky people who have slept all night.

EVERY little child is a king for a time. He has everything done for him; nothing is expected of him. He has the tender, devoted care of a woman, the protection of a big strong man. And he does not have to pay a thing for all these services. He does not even have to return the love he receives. He is the only absolute monarch left in the world. Why should he surrender his kingdom or relinquish any of his power?

We are not told much about the actual behavior of this man when he was a child, but there are certain clues. He is still hurt and amazed that his father did not like the boy's arm around his neck while he slept. We do not know if this demand of the boy was during his mother's life or after he acquired a stepmother. Whenever it was, it was a way of making himself of paramount importance, excluding everyone else. He says nothing of resentment to the step-brother, but here again we see the older child as a deposed king; he has to take on responsibilities of an adult while the younger boy is free of these and is still a king and can do as he likes.

Then there is the fantasy of the one woman, the little girl he knew and lost in school. It was not his fault that he lost her! She disappeared from his life while he was having to work like a grown-up man. It was not just that

he should have to be a man. If he could have gone on being an irresponsible child he would not have lost the one girl with whom he would be willing to spend his life.

Of course we know that he knew very little about this girl, that she may not have been at all as he fancied her, and that if he were to see her now he might be amazed at the dream he has kept alive of her. We know that there is no one person in the world whom we can love or live with; that the normal person is able to love many people.

It is only after living with a person, working and suffering together, that a relation is set up which is unique, a place occupied in our lives which cannot ever be quite filled by another person. But people who have had such a rich experience may lose the friend or mate, and have to find some way to build up a new life. Other relations are developed and new ways of happiness found. The healthy growing person can not stand still, cannot live in a vacuum. The healthy person finds something to care about, something to devote his life to. With some it is parents or a mate, with others a child, a dog, a garden, a house, a job, a cause or a hobby. It is the fact of loving which is most important, not the object.

But this dethroned king does not want to love; he wants to be loved. He does not want to work; he wants to be taken care of. He does not want to make an effort toward health. He does not want to adjust himself to life; he wants life to adjust itself to him. And not to him as he actually is but to him as a small child, expecting nothing of him, giving him everything.

Anybody who is sick or acutely unhappy may have moments like this. Regression is the technical name for it. But most people do not remain in this state. They gather their courage and push ahead in the work that belongs to adult life. They do things for other people and come to care for them; they invest their time and best efforts in work and come to be interested in it. The child, too, does not want to grow up, but little by little he does, under pressure from the environment and encouragement from those near him. Eventually he finds it is more fun to be grown up and does not want to go back to being a baby in the cradle.

Why We Are Afraid

(Continued from page 34)

Trying to run he tripped over the stump of a tree. By this time, knowing he was lost in the dark he became panic-stricken, hysterical.

He tried to race on, but once more he fell, his feet tangled in the underbrush which had collected near the banks of a stream which his friend had warned him about when he started back to his place. He tugged at the earth, cried out at the top of his voice, and suddenly, after a crucifying agony of fear, fainted off to unconsciousness, his right hand clinging like that of a sculptured fragment to the weeds and mud.

When his friends returned from their poker game that night, they found his body. He was not dead but had been stricken with a coronary thrombosis from which he partially recovered after a long session in the hospital. But at the present time, and until the end of his life, he will be a permanent invalid.

And all of that, typical of thousands of cases, with different origins and aspects, is what many people have to suffer simply because their parents or their teachers have been guilty of the worst of all crimes: of not being able to cure them of one of the simplest of fears, the fear of darkness.

Today no child should grow up, who has the advantage of modern education, with such a fear, because of all the fears to which we are subject, the fear of darkness is one of the easiest to cure. The tragedy is that even today, with all the advance which we have made in education, it is only the children of the rich, or at least the middle class, who have the money to attend modern progressive schools, and who are in a position to be cured of such an affliction.

What we must aim at, as should be obvious, is a condition in which the children of the poor, in the average public school, are also saved from such

It is time this man of fifty began to live! He cannot go back to being a little boy. He probably wouldn't like it if he could. It is probable that he will never marry, but in this country there is no tax on bachelors, no standard requiring everybody to marry. But we do have social requirements upon adults that they shall carry their load and be of some use in the world. The child sees all the adults as very tall, strong people, able to do as they like, able to have fun as they please. This man sees people around him being happy, and wonders why he must be so different. Yet the people around him have felt sick, weak, inferior, frightened, just as he does. They have had their moments of great unhappiness. They have felt they could not go on, could not do the things they must do. But they *have* gone on, they *have* done what they must do.

No one can take a hike without the ability to take punishment. Feet hurt and muscles ache and bodies grow tired and the spirit flags. No one ever did a difficult piece of work without the moral strength to endure discomfort. This man can take a hike next Sunday, by himself or with friends. And the next Sunday he can walk a little farther, the next still farther. He can believe in his will to be cured if he can make himself stick to the course, taking a little punishment in order to achieve his objective.

IT may well be that the test of the health course which he has begun is the most vital and important thing that will ever happen to him. He should shut up his books on psychology, which only help him build up alibis, stop telling his friends about his sad case, forget that he is a case, and resolve to do one thing he can do: make himself into a healthier and stronger man.

Physical health is the basis of all health, and it is enough of an objective for him to aim at. Nothing should be allowed to prevent his going through that course. When he finishes the last lesson he may find his soul's salvation there, and suddenly break through into new horizons of existence. His purpose must be to grow up, by doing something that is hard to do. A little boy of fifty has no real life, but a man of fifty can begin to live tomorrow.

a catastrophe. That can be achieved only by making the public schools psychology-conscious and by making it possible for them to devote sufficient time to the children's psychological as well as their physical difficulties.

As it is, we have sufficient doctors, employed by the educational system, to examine the bodies of our children, but few psychiatrists to examine their minds—and it is that necessity which is one of the great imperatives of modern, public school education.

At this point let us consider what fear is. Like other fundamental emotions, it is easier to describe than to define. At basis, it represents *insecurity*—a condition in which the organism, or personality, finds itself unable to adjust itself happily to its environment and expends its energies in fruitless attempts to achieve an adjustment which is beyond its powers. We become afraid when we are not sure of ourselves, when we don't know

where the next step will lead and are afraid to chance it.

Freud, the originator of psycho-analysis, maintains that there are but three fears from which all children suffer: the fear of being alone, the fear of darkness, and the fear of strangeness. These, he explains, arise from the child's anxiety concerning the possible loss or absence of his mother.

Regardless of how we account for the origin of the fears, the fact remains that most children suffer from them, and the job which we face is how to cure them. If we don't succeed in that job what happens is that the fears plague them all the rest of their lives and make living into a constant agony.

THERE are people, for instance, who are so afraid of thunderstorms that they shutter up all their windows, put their silverware away lest it attract electricity, and hide themselves in dark rooms or closets until the storm has passed. Those people are suffering from childhood fears which could have been mastered had the victims been subjected to sound educational discipline in their youth. In order to eliminate such fears from the lives of adults, it is necessary to discover their childhood origin. After that, the therapeutic requisite to destroy them is relatively simple.

Modern progressive education has made one of its greatest contributions in the work which it has done in curing children of fear-complexes of almost every variety. Few children in a progressive school, for example, have any fear of the dark. Wherever such a fear crops out, due usually to parental ignorance, as Dr. Mary Cover Jones, an authority on the theme, has shown, it is combated at once, by the most advanced scientific technique—a technique worked out in clinics and laboratories as well as in schools.

The child is taught to associate the dark with pleasant things which is always the most direct way of dealing with the emotion. At night, for example, a game of hide-and-seek will be initiated, and the child, playing with her friends, will soon find herself so interested in the game that she will be racing through the dark as intrepidly as her comrades. In time, if this technique is repeated, the fear will be eradicated.

In other cases where children are afraid of certain rooms or closets which their imagination has peopled with nightmarish goblins or griffins, they are required to walk into these places in the daytime, explore them carefully, build up an intimacy with them, realize that no animals or outlandish creatures could possibly secrete themselves in them, and, after repeating this procedure a number of times, encouraged to examine them again in the dark to make sure that they are still uninhabited by any thing strange or fantastic. This treatment in the majority of cases has proved most efficacious.

This technique of associating the fear object with something pleasant has been applied successfully in the conquest of almost every variety of fear. The idea is to get the child into a happy state of mind when it is confronted with whatever it fears.

The fear of being alone has been overcome by giving the child some object: a toy, a plaything, an apple, that delights it and which will make being alone an experience to be desired and not avoided.

The fear of things strange has been removed by making the strange familiar. A child who is afraid of a rabbit is intro-

duced to a group of rabbits, and is shown other children playing with them in order to discourage and destroy his fear. As Dr. John B. Watson has revealed by his extended and elaborate experiments with infants, most fears are acquired and can be gotten rid of by re-conditioning the child's reactions.

Contrary to Freud's contention, he maintains that the only fears children are born with are those provoked by loud sounds and loss of support. He has made children afraid of rats by producing loud sounds every time a rat was brought before them, and then he has destroyed that fear by projecting a pleasant sensation every time a rat was introduced into the children's presence. This is what is known as the re-conditioning technique of eradicating fears.

The healthiest advance made by modern education in freeing children from fears is in the new attitude which it has adopted toward the child. In the old Puritan days, the child was viewed as nothing short of a limb of Satan, and was reprimanded and suppressed at every turn. If a child found that he could not resist the compulsion of his fingers, palate, and stomach, and somehow got into the jar of jam while his mother was visiting her great aunt, he was promptly spanked that night, deprived of his regular dinner and sent to sleep, in tears, upon a diet of bread and water.

If he actually went so far as to steal a nickel, dime or quarter from his mother's pocket-book, he was thrashed so hard that sitting down became an ordeal. If he did anything worse, even the genius of a Houdini would not be sufficient to aid him in escaping the punishment involved.

In fact, a child in those days lived by a *verboten* (forbidden) psychology which made him afraid to do anything which he liked. Everything he liked he automatically knew his parents would dislike, because their way of life and their theory of education was based upon the principle that children's tendencies were bad and had to be corrected, curbed, and counteracted. Even when he did something new, which was good, he found himself opposed because it was different from the old, different from what his parents had known.

IN brief, he viewed himself as a different being from his parents, something almost infra-human living in a world of straps and switches in which he constantly heard his parents say "if you spared the rod you spoiled the child." That attitude continued down into this century.

Fortunately, it has been replaced today, in progressive schools like the Beacon Hill School, the Dartington School, and the Neil School, in England, and the Walden School, the City and Country School, the Lincoln School, and the Little Red Schoolhouse in the United States. It has been replaced by an attitude of freedom which is founded upon the belief that children develop best when they are least repressed.

In those schools today children grow up with few, if any, fears because the conditions which provoke them have been largely eliminated. There are none of the reprimands, penalties, and punishments which parents and teachers have forced upon children in the past and which are conducive to so many fears which cling to the personality throughout life. Fear of darkness, of being alone, of things strange, are eradicated by instilling the children with a sense of independence and security which is incompatible with such emotions.

Turning from children to adults, we



What Are YOUR Mistakes in English?

They may offend others as much as these offend you

IF someone you met for the first time made the mistakes in English shown above, what would you think of him? Would he inspire your respect? Would you be inclined to make a friend of him? Would you care to introduce him to others as a close friend of yours?

These errors are easy for you to see. Perhaps, however, you make other mistakes which offend other people as much as these would offend you. How do you know that you do not mispronounce certain words? Are you always sure that the things you say and write are grammatically correct? To you they may seem correct, but others may know they are wrong.

Unfortunately, people will not correct you when you make mistakes; all they do is to make a mental reservation about you. "He is ignorant and uncultured," they think. So you really have no way of telling when your English offends others.

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find that most of their fears are traceable to childhood experience. In many cases, if the experience which originally produced the fear can be discovered, the individual can be freed of his fear. Adults suffer from so many fears, it is difficult to choose those which are most representative.

The fear of meeting people is one of the most common of such fears. People in youth, middle age, and many even in old age, suffer from a fear of meeting people they have never met before. They attend a party, go to a lodge reunion, visit a new group, take a new job, and are immediately flustered and confused by the presence of new faces, new voices, new personalities. They want to run away when they enter the room in which these new people are gathered; they don't know what to say; they feel embarrassed, hesitant, confused, and yearn for the simple atmosphere and environment of their own home, the places and people they know and have known. What they endure at such times is indubitably painful and pathetic.

NOW what is wrong with them is simple. They have built up an illusion about the people in the room. They believe, for reasons which in most cases are false and fictitious, that the people assembled there are better than they are, know more than they do, and as a result they become unconsciously afraid of them.

That type of fear is a cousin to another fear from which even more people suffer, namely, the fear of superiors. Life's tragedy is scarred with that torture. Young people grow up, middle-aged people grow old, and old people die, burdened with the feeling that they are inferior to other people. Few fears are worse than that because the individual's whole life is crippled in its most important aspect by the pursuance of that fear.

In time, if the fear continues unabated, the victims become, as the phrase goes, afraid of their own shadows. They begin by being afraid of their parents, a fear which intelligent parents should cure in childhood, and before long they become afraid of their teachers, of their boss, of the policemen on the beat, or anyone and anything which symbolizes success or security. In other words, their lives are ruined by a feeling of failure and insecurity.

More men have been driven to drink, to drugs, and various forms of perversion and depravity, by the conviction that they have not succeeded than, perhaps, by any other fear. There lives in all of us a desire to succeed, to be, as the French put it, "someone" and when we fail to be the "someone" we had hoped to be, we very frequently resort to stimulants or narcotics to blur our vision and hide from our eyes the failure which our conscious mind is convinced we are.

That tendency, which represents fear in one of its most vicious forms, is associated with many things, but none so much as the psychology of "keeping up with the Joneses" which makes the wife nag her husband because he hasn't given her what Mr. Jones has given his wife, and which makes the husband, handicapped as he often is by circumstances over which he has little if any control, prefer the corner saloon to his home.

The tragedy is that the corner saloon makes the husband worse instead of better. He buries his fear in drink, but before he is aware of it the fear has crept out in other ways and transformed him into a being whose whole life is conditioned by phobias. He is afraid of

his wife, his friends, his landlord—everyone. Of course, sometimes this same fear develops reactions which are just the opposite, making the victim of it boastful, aggressive, and pugnacious. Beneath it all, however, this opposite reaction is just as craven as the former. The individual is merely disguising the inner fear which is consuming him by trying to put on an act to show how bold and brave he is, and whenever a real crisis arises that fact is borne out with all too tragic consequences.

Another fear with which too many people are afflicted is the fear of sickness, of being rushed away to a hospital, of death. In many cases that fear grows out of childhood experiences—which, alas, is true of almost all our fears—that have written themselves into the unconscious mind of the individual. The illness of a mother or a father or some intimate relative, or, what is even worse, the illness of the person himself, may impress itself so indelibly

It Won't Be Long, Now!

To those who have been waiting patiently (we hope) for the outcome of our YOUTH PRESERVATION CONTEST, we say: "It won't be long, now." The judges, for weeks buried under mounds of manuscripts and photographs, are beginning to emerge, prize winners clutched in each judicial hand. If all goes well, we will announce the winners next month, in the February Physical Culture.

into the mind that the individual is harassed with it the rest of his life.

If he has a little twitching pain in his right side he is certain that it is incipient appendicitis; if he has a heavy feeling in his chest he is positive that it is heart-weakness or impending acute indigestion; if he falls down and bruises his leg he is sure that it will develop into lockjaw. Such fears often wreck a person's whole life. They make it impossible for him to be normal. He lives in constant terror that the slightest pain may be his last.

In most cases, an examination of the individual in question by a competent doctor is a sufficient cure for such an affliction. The doctor will inform him most likely that there is absolutely nothing wrong with him, and once he learns that from a competent authority his anxiety will cease.

Of course, such people often never want to see a doctor; they are so convinced that they are desperately ill that they claim they are afraid to see a doctor lest he make them even more jittery about their condition. But if they can be forced to see a doctor, and this holds as true for middle-aged and old-aged people as for younger, the cure usually can be effected.

In all these fears, the discovery of the original experience which caused it is decisive. The discovery of that experience, with all the illumination of personality which accompanies such a revelation, very often emancipates the individual at once from his fear. Of

course, there are cases where even that type of discovery does not free the individual from his phobia—and that happens more often with elderly people than with young or middle-aged. In such cases, an entire reconditioning of personality may be necessary, the same, as we pointed out, is oftentimes necessary with children.

What all this shows is that the fears of children are the fears from which we suffer when we grow up and become men and women. The man is not separated from the child. What the child is, the man to a large extent is also.

All of which means that the need to cure children of their fears while they are still children is one of the greatest necessities of our generation.

So far we have discussed fear in terms of psychological causation; now we must consider it in terms of its sociological aspects.

It is a mistake on the part of many psychologists to neglect the sociological fears involved in the fear-emotion. Today, especially, the fear-emotion has been accentuated by the insecurity of economic life, the unsteadiness and ephemerality of jobs, the widespread and woeful dissemination of unemployment. Since the World War millions of men in this country—and millions more in Europe—are never sure of their jobs from day to day. They live in constant fear that they will never get a job again, or that if they get one it will last for a short while and cease.

This type of economic fear is most profound and pervasive. It has never been as accumulative and as destructive as in this generation. It strikes at the new generation as well as the old. It is not necessary here to enter into a discussion of how that situation could be remedied, but to deal with its psychological consequences.

It is the wives and children who, in the end, suffer more from these fears than the men themselves. Day by day, these people live in constant fear of the future. If their husbands or fathers are on relief, they see them gradually developing phobias, inferiority complexes with physical aspects which grow worse and worse from week to week, until finally they often become so impossible and irrepresible that they drive their victims into all sorts and varieties of behavior: fist-fights, gangsterism, suicide.

THOSE who are not on relief, ache out their lives hoping for a way out of their distress, and before long become subject to all manner of fears, one more irrational than another. The wives frequently become victims of hallucinations, delusions of despair, and the children grow up dreading the sight of their own shadows, enslaved by a psychology of insecurity and terror. No one in the family can escape such desperation.

Beginning at first as a logical fear, namely fear of being jobless, it soon becomes an illogical, irrational one, growing all the worse when it becomes groundless, persisting often long after the husband has found a job. The children are reared in the shadow of that fear and by the time they reach adolescence they are often beset with other fears born of that original one. Very frequently their fear of being alone is accentuated by that condition and before they are aware of it, it has developed into a phobia.

In the man himself what evolves is an inferiority complex, which is nothing other than fear translated into intellectual form. It is worse, however,

than the momentary fears that plague us because it lives with us day after day and we can't escape it. In the case of the middle-aged and elderly man, it expresses itself most disastrously in his conviction that his life is useless, that there is nothing he can do to render it useful, that he is a failure, that no matter what he turns to he will always be a failure.

This breeds in him a fear, totally irrational and groundless, which becomes consuming and vitiating and from which he will never escape unless by some lucky chance he secures a job which is reasonably permanent and which bolsters up his *ego* and makes him *feel secure* again. Note that security is the best cure of fear, whether it is in children or adults.

WITH the younger man today the situation is even worse. Assume that he graduates from college and his parents do not have a superfluity of money. What he has to do is search for a job. What happens? In the vast majority of cases, he finds that there are no jobs open for a young man of his equipment. What occurs is either that he doesn't find a job and becomes a burden on his parents, or he takes a job as a taxi-driver, an elevator operator, or a work-hand with a contractor.

He then invariably becomes a violent discontent because he is forced into work which he loathes. And to which he feels so superior he feels *inferior* to be working at it. If he stays at it, what

happens is that he, too, develops an inferiority complex and blames himself, instead of the unhappy economic situation over which he has no control, for his failure to be what he hoped to be. He either takes to drink or some drug, or allows the inferiority complex to master him and cling to him the rest of his life—unless he is fortunate enough to get a better job later on.

But most youths, in our very confused and crowded economic situation, do not get better jobs, and the result is that not only this inferiority complex sets in, but, as its corollary, a number of other fear-complexes develop and before long he becomes as nervous and jittery in his reactions as a psychopath.

At first, such a fear seems perfectly rational and by no means groundless, but before long what occurs is that the young man builds other fears from it. He becomes convinced that he is no good, that everything he tries is bound to be no good, and within a short while he has persuaded himself that it is futile for him to try to be good at anything. After that, he becomes an economic paralytic. His fears are groundless fears, to be sure, but nonetheless undermining and destructive.

To cure groundless fears is always difficult, but as every psychologist knows, what is first necessary is to cure the *grounds* out of which the original fears arise. Once those grounds are removed, by economic and educational readjustment, the minor fears can be counteracted and combatted.

Beauty Tips for Miss In-Between

(Continued from page 26)

have belonged to Juliet, or Elaine or a very young Helen, but I checked myself remembering that at fourteen or fifteen or thereabouts it is often fatal to one's social success not to be standardized, so I merely said, "Rose-colored pomade if you feel that you must have it. But not too brilliant, please!"

You youngsters in your early teens do not realize how fortunate you are in your *natural inheritance* of good looks! The young girl of today has never known anything but comfortable clothes, year-round sunshine, exercise, a diet that will keep her skin fresh and clear, her body supple as well as sound. She has the *joie de vivre* of a young animal and the assurance that comes from the ability to do a number of things skilfully.

It is taken for granted today that the sub-deb will be an accomplished swimmer. She looks like a water nymph when she's in action and if her bony framework is at all symmetrical, her figure on emerging from the water will be something to make the frankly forties gasp with envy. She dances well, too, because along with her exercise she has picked up coordination, which is just as essential as grace, and she lacks the self-consciousness, that prevents the older generation from "letting go," the primary *must* of successful ballroom dancing.

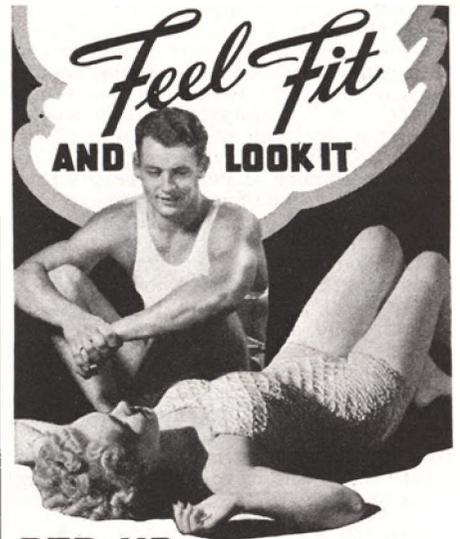
So taken all in all, the *jeune fille* of today has at least fifty per cent more chance to be good looking than her mother had and the curious part of it dwells in the fact that it's actually fashionable at the moment to look like a school girl, and the younger, the more clean scrubbed and healthy you can appear, the better!

The only advantage that we oldsters possess over you dewy-eyed young creatures is our wistful knowledge of what a priceless possession youth is and our determination to guard what we have left of it to the best of our ability.

We have also learned the necessity, from the standpoint of charm, of careful grooming, a thing which in too many instances is neglected or overlooked by the early teen age. (I have had some male comments on that subject which might surprise you!) A deodorant should be used daily if you want to appear as sweet and appealing on close inspection as you do across the room.

YOUR hair should be shampooed frequently—at least every ten days. I hope that you can manage to have a permanent twice a year, for it helps amazingly in keeping the hair neatly groomed as well as attractive. But remember that the permanent is only the foundation of well-cared-for hair. The rest is in your hands, literally, as well as metaphorically, and your crowning glory will live up to its reputation only in proportion to your treatment of it. A daily brisk brushing with a stiff brush, and the frequent application of oil or brilliantine will keep your hair silky and manageable, and give it the appearance of being naturally curly.

Don't attempt a formal hair-do, even for parties. The smartest sub-debs in New York City wear their hair swept back from their piquant young faces, plain on top, loose waves at the sides. For evening they wear a sparkling pin to hold back an occasional rebellious lock or they tie on a spray of natural posies—gardenias or freesia or rosebuds. The effect is utterly charming,



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particularly when they carry out the floral theme by using a matching scent.

I don't need to add that a strong perfume has no place in the charm equipment of the early teens. It just doesn't belong somehow, any more than would a purple dress or a sequin jacket or crimsoned fingernails. For you there are any number of delicate fragrances that will give you the atmospheric setting your daintiness and freshness so well merit.

And don't despise the floral scents on the strength that they're obvious while the oriental scents seem to hold such mystery and allure. Some of the best romancing this old world has ever known has been done to the theme of honeysuckle, lilac, mimosa or violet.

Did you ever stop to think that what you do or don't do to your skin when you are quite young is the determining factor in how it is going to look when you grow up?

I'M WELL aware of the fact that in the early teens, your so-called "school-girl complexion" is a frequent cause of anxiety and vexation, but you can do a great deal yourself to combat the effects of the occasional irregular functioning of your glandular system (a perfectly normal accompaniment, I'm sorry to say, of adolescence) by keeping your body scrupulously clean on the inside as well as the outside.

This means regular and adequate daily elimination and cutting down on sweets and pastries—all the things you love best, probably! It also means drinking plenty of water and getting sufficient sleep.

Keeping your complexion clean on the outside is a matter of pure soap, a complexion brush, quantities of warm rinsing to wash the loosened impurities out of the pores, quantities of cold rinsing to get the pores closed up again.

An occasional pore-deep cleansing with one of the many liquid cleansers made for that purpose, helps to keep the skin free from blemishes. When they are present and it seems advisable to open them, the greatest caution must be observed not to bruise the skin and you can manage this by softening the skin around each "bump" with cotton pads dipped in hot water, then working out its contents with the gentlest of pressure. Afterwards, use a carbolized lotion or witch hazel to smooth down the injured feeling of your skin and encourage its healing.

Don't ever attempt to cover up these annoying little blemishes with powder or a camouflaging lotion for you will have achieved nothing more than another proof of the old saying that two wrongs never made a right!

I am frequently asked whether it is advisable for a young girl to use a cold cream or nourishing cream on her skin and my answer is yes, if she feels that her skin needs it. A delicate skin requires an occasional lubricating in order to preserve that dewy bloom we so much admire.

Now we approach the subject of make-up and I realize that I am treading on dangerous ground. Does it console you to know that the smartest young girls favor only the finest and lightest of powders, and never think of using rouge? Lipsticks, are another story and, as I pointed out a few paragraphs back, I have come to look upon a natural-colored lip rouge as a sort of necessary evil, because the girls all do it and there's no point in your being considered eccentric.

But don't smear on a flaming color and expect to look like the adorable

innocent you are in reality. And don't use gaudy nail polish or eye shadow of any kind if you want to be popular with the prep-school lads. They hate both, because they lend your personality a curious sort of hardness and make you stand out in a crowd in a way that isn't just to your credit.

Another charm secret that I'd love to have the teen age take more seriously to heart, is manners. Manners in the way you stand and sit and move about can count so much for and against you! I see so many potentially exquisite figures ruined by sloppiness of posture, stomachs out, chests in, the whole spine sagging like a bag of bones.

Mostly the reason for this is laziness or lack of confidence in your physical appearance or your clothes. I remember a fourteen-year-old girl who was so ashamed of her unusual height that she forced herself to walk in a hunched up manner. This faulty posture threw her whole body out of balance and destroyed every bit of the grace and rhythm of movement she should have possessed. To complete the distressing picture she was so conscious of the fact that she looked awkward and ungainly, she was never at ease with people and on many occasions was thoughtlessly rude. This unhappy situation was eventually cured by her seeing a fashion model going through her paces and understanding for the first time what a beautiful effect height and slenderness can achieve when they are utilized correctly.

Another manners "minus" that the early teens might dwell upon is the giggle and its equally annoying sister, the fidget. Somehow I can't imagine

Juliet giggling in that famous balcony scene or fidgeting while she waited for news of Romeo, but many a movie has been ruined for me by my having the ill fortune to sit next to a row of silly young creatures whose caramel unwrapping, excited whispers and restless movements drowned out most of the screen dialogue. I also observed the glances cast in their direction by various members of the audience and have thought how true is the expression about needing to have one's rough corners smoothed off!

I wonder if you fortunate youngsters understand how much beauty and charm can dwell simply in the restful effect you may have on those about you? That is where the older woman shines by comparison, even in spite of your April charm and adorable freshness. She has acquired in addition to her knowledge of physical grooming, a mental kind as well that enables her to meet people serenely, understandingly and tactfully. Three unexcelled qualifications for social success that it wouldn't hurt you a bit, from the standpoint of your future charm, to begin practising right now!

PRELIMINARIES

Remember how I'm continually nagging at you to brush your hair? Well, here's a brush that is ideal for that daily ritual. And the makers have designed a line of dresser sets—brush, hand-mirror and comb—that will delight your feminine heart. They range from hand-decorated ones to sets of natural wood. Any one of them would be an asset to your dressing table.

You'll like the three floral colognes—gardenia, lilac and lily of the valley—that are now appearing on your favorite toilet goods counter. They come in gay boxes decorated with the flowers from which the eau de cologne is made.

A famous star of the silent films is presenting to American women the cosmetics which she herself has used for years. They are especially designed for the woman whose taste demands the best, but whose resources are limited. Attractively designed in white and her favorite shade of blue, each container bears a cameo-like portrait of this beloved screen favorite. The products themselves are of exceptional quality, pure and wholesome.

How would you like a twenty-minute pick-up for your skin? This one will leave your face refreshed and glowing, with a feeling of greater smoothness and firmness. It contains an absorbent element that softens the dead cells of the skin surface, and it can be used directly around the eyes—one of the places that generally needs it most.

When a line of beauty products flourishes for nine years, simply by one woman telling another about them, they must have *something*. They have. They aid in the proper functioning of the skin through effective stimulation, give better protection, and in short, bring out the natural beauty of your complexion at its very best.

The best in lipsticks is synonymous with the name of the famous American cosmetician whose Fifth Avenue salon is the mecca of New York's loveliest women. She has two new lipstick colors that are exciting news. One is perfect for skins that are golden in tone; the other is a rich, clear, red-red which gives color and animation to a pale skin.

THE BERNARR MACFADDEN FOUNDATION

The Bernarr Macfadden Foundation conducts various non-profit enterprises: The Macfadden-Deauville Hotel at Miami Beach, Florida, one of the most beautiful resorts on the Florida beach, recreation of all kinds provided, although a rigid system of Bernarr Macfadden methods of health building can be secured.

The Physical Culture Hotel, Dansville, New York, will also be open during the winter, with accommodations at greatly reduced prices, for health building and recreation.

The Loomis Sanitarium, Liberty, New York, for the treatment of tuberculosis, has been taken over by the Foundation and Bernarr Macfadden's treatments, together with the latest most scientific medical procedures can be secured here for the treatment, in all stages, of this dreaded disease.

Castle Heights Military Academy at Lebanon, Tennessee, a man-building, fully accredited school preparatory for college, placed on the honor roll by designation of the War Department's governmental authorities, where character building is the most important part of education.

The Bernarr Macfadden Foundation School for boys and girls from three to eleven, at Briarcliff Manor, New York.

Complete information furnished upon request.

Questions from Health Seekers

(Continued from page 7)

drying the hands properly after washing and apply some of the fatty preparations after drying the hands. The addition to the diet of wholesome fats in liberal amounts will often be helpful, but do not overdo the use of the fats if there is a tendency to obesity, catarrh, gall-bladder trouble or diabetes.

Increasing Height

QUESTION: Is it possible to increase one's height after reaching eighteen years of age and what methods should be employed to do this?
NICKY

ANSWER: Yes, it is possible in the average case, although your chances of becoming taller are somewhat influenced by heredity. Stretching exercises are especially helpful and notably spinal exercise and those exercises which may be taken while hanging from a horizontal bar both by the hands and from the knees. Hanging from the knees while having a rather heavy weight in the hands is excellent. Every possible attention is to be given to general health-building measures, such as a diet of natural, unrefined foods, daily bathing, sun-baths, plenty fresh air and sufficient rest and sleep.

Fasting to Gain Weight

QUESTION: I am anxious to gain in weight and have been informed that sometimes fasting is beneficial as part of a weight-gaining regimen. This seems strange to me and therefore I am asking your opinion regarding the same.

SLENDER

ANSWER: Fasting is often beneficial, when taken at the beginning of a weight-gaining regimen. Thin people, over-zealous in their desire to become heavier, frequently overeat and wonder why they do not gain in weight. Little do they realize that they may have impaired their powers of digestion and assimilation by over-burdening the organs and glands concerned in these two inter-related vital processes. It is an established fact that good digestion and assimilation are necessary in order to gain in weight. The fast aids digestion and improves assimilation. When one has been fasting, care must be taken to use the proper breaking-fast measures and to avoid overloading the stomach. It will be necessary to select the right foods, when resuming a normal diet and to

also thoroughly masticate all solid food which is eaten. Due attention should be given to all general health building measures, in order to insure good results.

Strengthening the Grip

QUESTION: I seem to be quite strong in general respects but do not have a strong grip. What exercises would help strengthen my grip?
F. K. D.

ANSWER: The following exercises will help to give you a more powerful grip. One: With the arms extended horizontally before you, open and close the hands until tired, after which shake hands vigorously for about one-half minute. Two: Holding the left hand in front of the chest, grasp one corner of a full page of a standardized newspaper in the thumb and first finger and then prepare to crumple up the whole page into a tiny ball of paper, using the entire hand to do so. Also take the same exercise with the right hand. Three: Place the fingertips of both hands together, having the fingers spread slightly, and then gradually press the hands together until the palms meet, at the same time resisting the closing together of the palms with the fingers. Additional exercises may be taken on a chinning bar and also in the form of hand wrestling.

Exercise During Menstruation

QUESTION: I would like to know whether exercise can be taken during the menstrual period or whether it would be best not to indulge in exercise at the time?

LORETTA

ANSWER: As a rule, a normal girl may take a reasonable amount of exercise during the menstrual period, but no strenuous exercise of competitive sports should be undertaken. Swimming is also taboo at such a time. If abnormalities are present it would not be wise to take any additional exercise besides the physical activity involved in ordinary life.

Certain abnormal conditions of the female generative organs may be benefited by special exercises, but such exercises are preferably taken between the menstrual periods and not when the menstrual flow is present.

Girls and women who are careful in their dietary habits, and who receive sufficient sleep and fresh air can usually exercise during their menstrual periods without any harmful effects.

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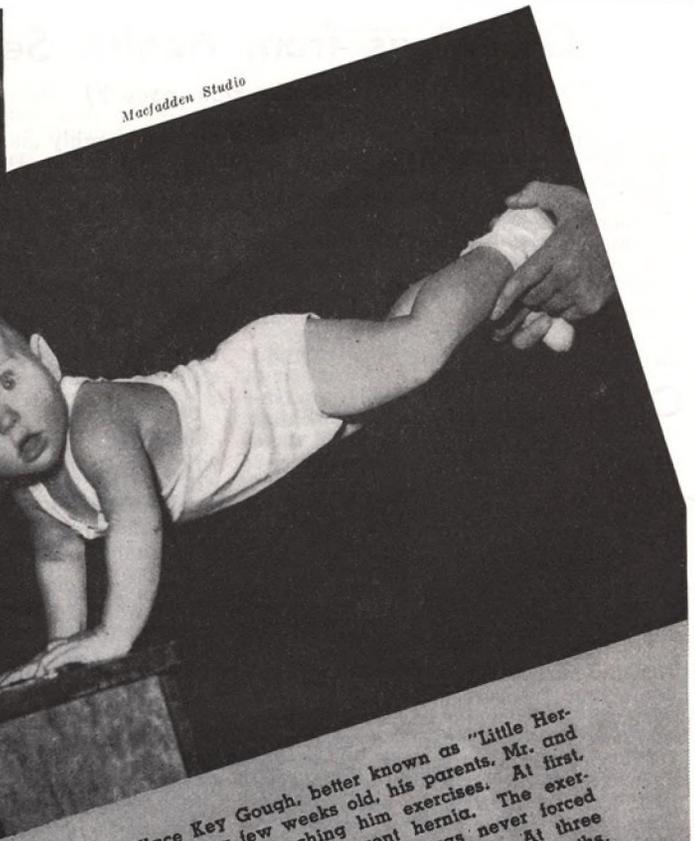
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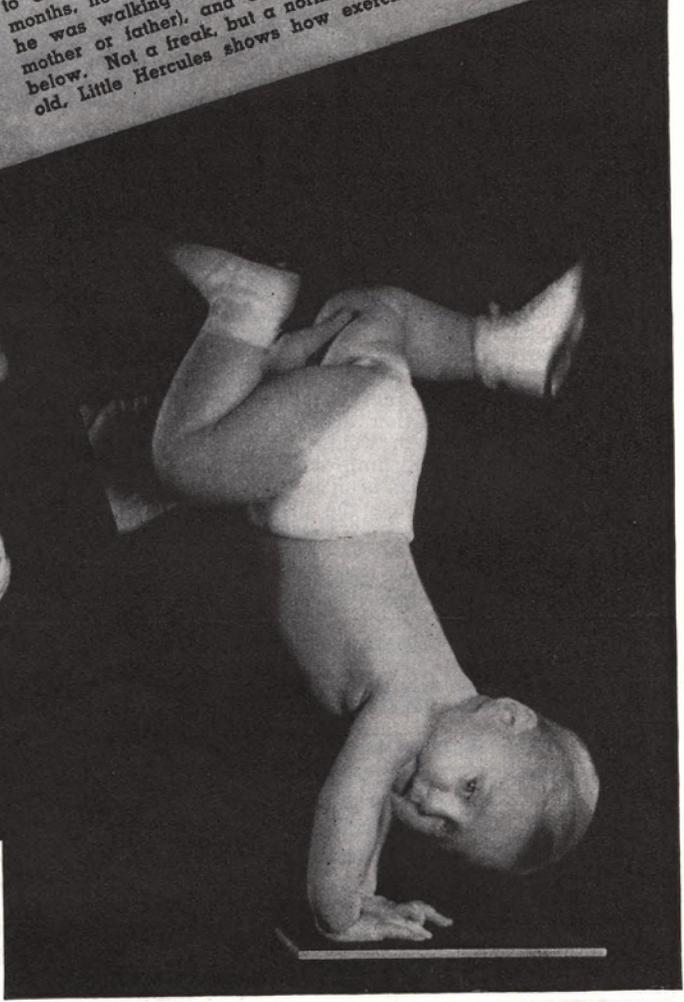
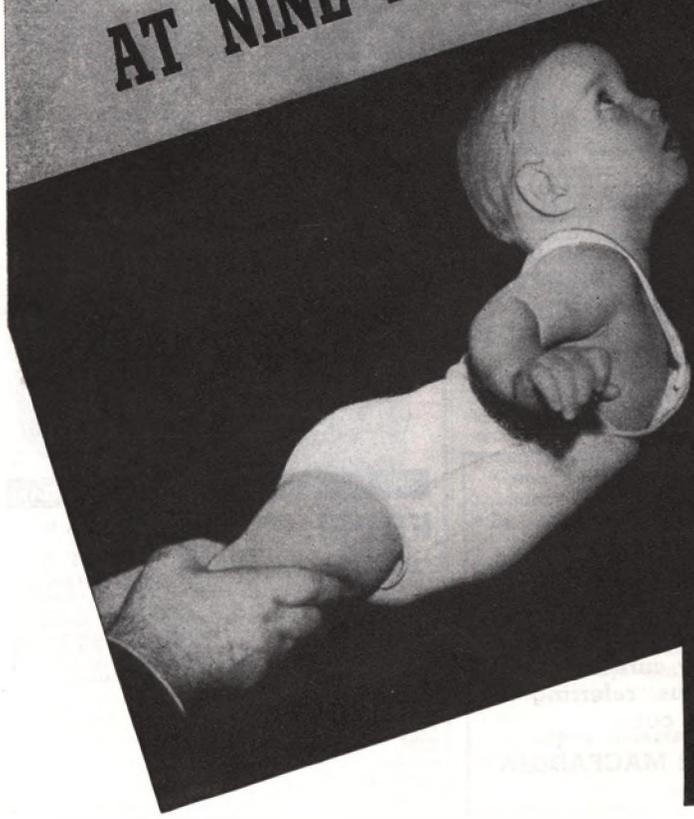
—BERNARR MACFADDEN

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HOW TO KEEP FIT AT NINE MONTHS

Folks, meet Wallace Key Gough, better known as "Little Hercules." When he was a few weeks old, his parents, Mr. and Mrs. Galen Gough, began teaching him exercises. At first, the child's navel was taped to prevent hernia. The exercises lasted five to ten minutes, and he was never forced to do any exercise that seemed to distress him. At three months, he could swing from a broomstick. At five months, he was walking around on his hands (his feet held up by mother or father), and doing the two difficult stunts shown below. Not a freak, but a normal, healthy baby nine months old. Little Hercules shows how exercise can benefit a child



Health Plays the Lead

(Continued from page 25)

"That more than convinced me that it was time to stop depending on doctors and do something for myself. So I went into a health restaurant one day and got me a meal from which I eliminated meat, all sweets and all heavy starches. No macaroni, no spaghetti, no potatoes, no white bread. I stuck to fruit juices, and fresh vegetables.

"I sat down with that cafeteria meal at a table with a very distinguished looking man. I found out later that he was one of the most important attorneys in Cincinnati. He said to me, 'You have a very healthful meal there.' And I said, 'I hope to heaven something will help me.'

"THEN, as we talked, he told me that he had practised law and had put a lot of money away, and that the fly in his ointment was arthritis. He had been all over, and taken all sorts of cures, trying to get rid of it. When he got back from his vain search for health he was in such bad shape that he had to have his chauffeur put him in the car and carry him to his office. Then, about nine months ago, he said, he had started eliminating from his diet all so-called dead foods. He ate plenty of fresh vegetables, steamed—and nuts and raisins. And within four months he was in much better shape. His improvement had continued.

"Well, I eagerly absorbed everything he told me. My mind had already been working along that line, and here was a fellow who had tried it out. I started on that diet. A few months later I went to Boston to visit my brother, a doctor. I told him what I was doing. He wanted me to go down to the Lave Clinic there. I did; and the doctor there said he wouldn't even take time examining me. He said I was on the sanest of diets, and that there was no need.

"Incidentally, my blood pressure, which had been at ninety, was now one hundred and twenty-eight; and my weight had jumped from one hundred and seventy to one hundred and ninety-five pounds—which is where it stands at present, four years later. Today I am in perfect health—able to work hard and enjoy life to the full. And when you've been the other way, that's a grand and glorious feeling."

"Before that change in your diet," I observed, "you were eating too much and were not being nourished."

Mr. Pidgeon nodded. "That's it. For instance, I'd breakfast on oatmeal porridge, toast, eggs, and coffee. I just couldn't get away with it."

"Do you require much sleep?"

"I never sleep more than six and a half hours," he answered. "That's a far call from eleven or twelve hours."

"Tell me some more about your present diet," I suggested. "For instance, what do you have for breakfast?"

"The first thing in the morning, I have an enormous glass of hot water with the juice of a lemon. Then I have a tall glass of orange juice with two tablespoons of wheat-germ—it looks like birdseed. Then I have a dish of peaches or strawberries or some other fruit, and then my glass of milk."

"How about lunch?"

"For lunch, when I'm not working, I have an enormous salad bowl—lettuce, tomato, chickory, endive, romaine—and a bran muffin. Sliced bananas and cream for dessert.

"As for dinner—well, tonight we shall have cream of tomato soup, made from fresh tomatoes; celery, olives, cucumbers with the skins on, eggplant stuffed with almonds and raisins, baked potato, string beans, and some bran muffins. Dessert will be strawberry shortcake made of whole wheat biscuit. No white flour in the house."

"How much water do you drink?"

"At least twelve glasses a day."

"How about exercise?"

"Mostly tennis and horseback riding. I don't play golf. Walking is good, of course. But when I'm working I don't do much of it."

"Swimming?"

"Yes, a good deal. I don't care for indoor games. I think there are too many outdoor games one can play here all the year round."

"Do you take calisthenics?"

"I do—ten minutes of it on arising. If I don't have time for that—as happens occasionally—I stick a bath towel right in the tub, and give myself a rub-down with a wet towel. Then I take my shower.

"But the thing I'm the most ardent believer in is fresh fruits. And I'm a stickler for really fresh vegetables. And they must be either steamed or baked—never boiled."

"Do you smoke?"

"Nothing but a pipe. No liquor."

On the basis of all that evidence it can surely be said that Walter Pidgeon qualifies as one of the outstanding physical culturists of the screen. But his standing as a physical culturist goes further than that. Full, joyous living has always been a passion with him, and a part of his creed. And that's good physical culture doctrine, too.

PIDGEON hails from up around the Bay of Fundy, where the tides are something to watch. He is one of the big, raw-boned, craggy men that are bred in that country, and has six feet two and a half inches of height on which to hang that one hundred and ninety-five pounds of bone and muscle.

The men of that Fundy region till the rocky soil; they go down to the sea in ships; they are big-fisted and big-hearted, and they are like the Wrath of God in a fight. Our own New England has produced a lot of them. It's a great breed. And Pidgeon is a birth-right member of it.

It's a breed of dreamers, doers, and adventurers, too—and Pidgeon qualifies under those heads also. For he is an incurable romantic whose boyhood ambition was to grow up to be a sea captain like his grandfather, though he could have become a steady wheel-horse in the business of his father, Caleb Pidgeon, of St. John, New Brunswick, who owned wholesale and retail general merchandise stores throughout the Dominion of Canada.

Perhaps it was from the trips he took with his father to remote parts of Canada that Pidgeon got his hankering for adventure. Anyway, he clung like a leech to the notion that the thing to do was follow his grandfather and sail the Seven Seas and the Spanish Main, hunt for buried treasure, fish for pearls, and follow always that long, long trail that makes toward the foot of the rainbow. As a boy he listened to the tales of old salts as they loafed along the Bay front. And he dreamed those tales at night.

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Here in 246 pages of intensively interesting reading you discover how you can gain complete control over your nervous system. How you can banish fear, worry, anxiety. How you can mend your shattered nerves and once again enjoy the thrill of living.

Conquering Nervous Breakdown

The danger signals of nervous breakdown are many. Often there is persistent headache; a feeling of giddiness; a twitching of muscles; a sensation of numbness; flushing; nervous perspiration; dyspepsia; inability to endure noise.

These are but a few of the signs that indicate unsound nerves. Persons who neglect these danger signals may suffer nervous breakdown in its most severe forms. Learn how to conquer the nervous breakdown before it reaches serious proportions.

Releasing Thwarted Personalities

Many, many thousands of persons laboring under the stigma of what they consider "thwarted personalities" are enduring untold mental anguish simply because of poor nervous balance or a definite physical condition. This type of nervous weakness takes various forms. Many a feminine

sufferer believes herself cheated of happiness in love and marital life. Continuous brooding over her unhappiness aggravates and magnifies this condition to a point which seems short of human endurance. Men troubled with similar conditions often believe that fate has placed a barrier in their road to business or financial success. They think life holds no rewards for them and they sink lower and lower into the depths of despondency.

Yet, conscientious folks who are willing to work out their problems can release their thwarted personalities and enjoy a happy, normal life.

Banishing Imaginary Fears

Fear is a form of abnormal nervous condition that marks those suffering from unhealthy nerves. Not sudden fear—but imaginary fear fixed in your mind. The fear of heights; fear of open spaces; fear of being alone; fear of confined spaces; fear of crowds and fear of nudity are but a few scattering instances.

These imaginary fears grow and grow and in due time you are a slave of your fears. If these fears master you, your sense of balance—your feeling of security is wrecked.

But Bernarr Macfadden shows how you can banish these imaginary fears through mental and physical retraining. You need not let fear destroy your life.

Overcoming Self-Consciousness

Another result of poor nerve tone—of sick nerves, is evidenced by those who are extremely self-conscious. Folks afflicted with this condition interpret all that goes on around them in terms of themselves. They imagine that people are talking about them; that people are finding fault with their clothes, their walk, their speech and their acts. They like to be by themselves; dislike criticism, are embarrassed at the slightest provocation and their confidence is generally undermined. Bernarr Macfadden here tells the truth about the self-conscious introvert, the errors of the extrovert, the frigid wife, the uncontrolled husband, even the problem child.

The price of this big, new, 246-page book is but \$2.00. Get your copy today—at your bookseller or direct from the publisher.

His first experience as an actor was in his boyhood effort to dramatize, with his playmates, the swashbuckling deeds of Captain Kidd, Lafitte, and bloody Morgan; or to reenact in a sail boat on the St. John River or on the more perilous waters of the Bay, some long-forgotten naval encounter.

Nor has he ever abandoned those boyish dreams. Some day, when he has made his pile, he is going to get him a snug little craft, gather together four other men who share his dream, and set sail out over the Pacific till he finds adventure. He thinks three years of sailing will give him a fair sample of this new dish.

Adventure, however, is no new thing to him. Already he has looked into "the bright face of danger" and loved her. When the World War came on, the first thing he did was run away and enlist, though he was under age, in the Sixty-fifth Battery of the Canadian Field Artillery. He was decorated three times for bravery in action.

But if he could fight, he could also sing and act. And that was how, while he was in France, he happened to meet up with Elsie Janis, and join her in entertaining in the canteens. It was Elsie Janis who urged him to go on the stage after the war.

HE DIDN'T take that advice seriously at the time; but later, with the war over, and no job in sight, he decided to have a whirl at it. So he went to E. E. Clive, an English actor, convinced Clive he could act, and got a job in "You Never Can Tell." That was followed by "Pygmalion" and "Androcles and the Lion."

But acting became monotonous. So Pidgeon decided to go into finance and banking and make him a quick fortune in order that he might kiss all jobs goodbye and get that boat and sail out over the Pacific. But the fact that two plus two makes four grew monotonous, too; and just then Fred Astaire, whom he met at a social gathering, urged him by all means to quit being a bum financier and go back to being a good actor—which he did, and joined up with Elsie Janis in her big hit, "At Home."

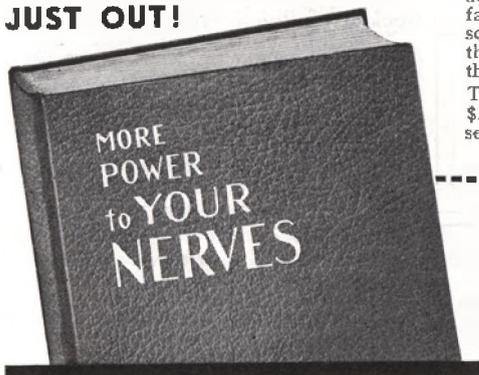
After that came a swing at vaudeville. And then the talkies developed, with big musical productions and a sudden demand for men who could sing as well as act. That spelled Hollywood for Walter Pidgeon.

He signed up with a Hollywood producer at a fantastically large salary; and then, to his utter disgust, he was left to cool his heels through months of idleness. The producer was keeping him on ice till he should find the ideal part for him.

Pidgeon did finally get into a few pictures. But at last he kicked over the traces, and, with impolite expressions of farewell to Hollywood, took a fast train back to Broadway and the stage. He didn't see Hollywood again till 1935—which was a year, you will recall, after he reformed his diet and got back his blood pressure and his weight.

By then he was so well known on the stage that Hollywood was ready to be good. They not only signed him up for a fat salary, but really put him to work. Pretty soon he got the romantic lead in "Saratoga." Movie fame took him by the hand at last. He went on from picture to picture till he was co-starring with Jeanette MacDonald and Nelson Eddy in "The Girl of the Golden West." Today he is reckoned among the important leading men in pictures, with a brilliant future looming up ahead.

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Walter Pidgeon is one of the solid citizens of Hollywood. He has the respect of every producer who has had contact with him, and of his fellow thespians as well. One thing that augurs well is that he is a man of substantial attainments and culture. For instance, he is an accomplished pianist, and keeps a piano with him at all times, as one of his chief means of relaxation. He loves symphonic music and is always on hand in the Hollywood Bowl for symphonic evening programs. He is adept at persuading his director to arrange the shooting schedules so that he can get to the Bowl in time.

Another of his passions is painting. He is an authority on paintings, and when it comes to stealing time for visits to the art galleries he's a down-right kleptomaniac. His favorite painter is Frans Hals, a seventeenth century Dutchman.

Pidgeon is an authority on all the top-notch pirates and buccaneers of the Spanish Main and the South Pacific.

He is a great reader of travel books, biographies, and adventure stories, with Dumas for a favorite in the last named class. Among the classical dramatists he gives five stars to Shakespeare. Among the moderns he swears by Kauffman and Hart. On the side, he collects books. General Sam Houston is his favorite historical character.

One of his relaxations is pumping returning vacationists who can give him vicarious trips to places he had never seen but hopes to visit some day. He likes to spin a good yarn himself.

He is an inveterate movie fan; goes partly for entertainment, and partly to study acting technique.

He has hunches. Some get him where he wants to go, and some get him into trouble. But he still trusts them.

And—oh, yes—one other physical culture feather in his cap: he fasts one day a week—nothing but water. And so far as I'm concerned, that qualifies him for the Thirty-second Degree.

Build Strength and Vigor in the Outdoors

(Continued from page 28)

in the open all day, but usually he is not above the average in health or strength; whereas a certain business man of my acquaintance plays golf exactly one hour a day and is in excellent physical condition.

Obviously, we would have to compare the gym with the outdoors while using the same exercise, and it should be the same person in both cases. The case of two college boys, brothers, comes to my mind. They both play basketball in the winter and tennis in the summer—sports very much alike, employing the same muscles. They both say that they feel better in the summer, and one of them is regularly heavier than in spite of more profuse perspiration.

HERE'S another indication that the outdoor air itself effects benefit. A man "juggled" trunks and other heavy burdens in a depot baggage room. Practice alone enabled him to do the work, for he was really not well. He was below his normal weight and suffered from dyspepsia. Having lost that job, he secured a similar one driving a transfer truck. In three months he had gained eighteen pounds, was no longer annoyed by dyspepsia, and told me that he was twice as strong as when working inside.

A recreative, entertaining element in their exercise is highly important to some people; and this is best supplied by open air sports. But they do not always lend themselves perfectly to athletic progress; at least, comparatively few people practise them in the progressive way that is necessary to get the maximum benefit.

To illustrate, a high jumper will, nine times out of ten, try day after day to beat his record, and yet never think of any progressive way to strengthen the springing muscles of his legs. I once trained a college athlete for this event. I put him to work on a comfortably easy jump but weighted his feet.

Day after day he jumped that particular height, paying careful attention to form, and every few days I added a trifle to the weight. Four days before the meet he jumped without weights and went three inches higher than ever before! Many track and field coaches now employ the same principle. Some

train their shot-putters with a fifty-pound ball to make the sixteen-pound shot seem lighter than it is.

Indoor exercises usually lack the exhilaration and recreation found in outdoor sports, but they can be ideally graduated. A football player, whether in an important contest or a practise game, never knows how much energy he is going to "put out." It depends on a number of conditions, particularly on the strength of the opposition. Possibly none of the work he does this week is as hard as that which he did last week.

But the person working in a gymnasium for development proceeds from easy exercises to hard ones, then harder, and continues on progressively. The football player will get more fun, and possibly more health, while the gym man (other factors being equal) will get more muscle.

Much valuable material in the comparison of outdoor sports with indoor exercises has been obtained by observation of athletes' progress in physical development. As a rule they do not care much for gymnasium work, preferring outdoor games. The fact that they usually improve so rapidly must then be significant. Nowhere could you find more striking collections of robust athletes than in our American educational institutions, and their training consists mainly of outdoor sports. Though I have practised, and taught, gymnasium exercises for many years, I have always preferred the outdoors, and prescribed it when such a course was practicable.

GYMNASIUM exercises, as used by most of the institutional physical directors of today, are mainly for corrective purposes—with the aim of preparing the person for outdoor sports in every case where such are advisable. The term "scientific research" means exactly that in these institutions, for the physical history of every student is gone into thoroughly before his exercise program is formulated.

Of course there is always one subtle danger in competitive sports: enthusiasm and rivalry often cause over-exertion. Applied exercises and corrective movements may be beneficial where such sports as football, basketball, hockey, etc., might be inadvisable,

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WHAT a glorious sense of satisfaction it is to enjoy perfect vision without the aid of cumbersome eye-glasses. Think of it—folks who have worn eye-glasses for years are now discarding their glasses forever.

Glasses are only eye crutches. They simply bolster up the eyes—they cannot cure or eliminate the conditions responsible for the trouble. They are useful just as crutches are useful for an injured leg, but they can no more restore your eyes to their former strength than crutches can mend a broken limb. The real help must come from other sources. In the case of the eyes it is exercise.

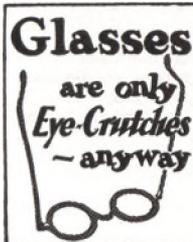
Over 20 years ago Bernarr Macfadden, father of Physical Culture, had a most trying experience with his eyes. Due to many nights of hard literary work under poor artificial lights they became terribly strained. The idea of wearing glasses was intolerable, so, always willing to back up his theories by experimenting upon himself, he immediately started in upon a course of natural treatment that he fully believed would help him.

The results were so entirely satisfactory that he associated himself with one of the few really great eye specialists and together they entered upon a period of research and experiment covering many years.

A System of Eye-Training

Upon their findings has been based a remarkable new scientific system of eye-training which quickly enables you to train these muscles of the eye so that you can make them work properly at all times, and without effort or strain. This new system has been prepared by Bernarr Macfadden, in collaboration with the eminent ophthalmologist who discovered the real truth about eyes.

If you already wear glasses, find out how you can discard your glasses—and see better without them! If you do not wear glasses, but feel that your sight is failing, then find out how a few minutes each day assures you perfect sight without the use of glasses.



"Discards Glasses for Good"

Here is a woman who writes: "After following the instructions in *Strengthening the Eyes*, I have discarded my glasses and read more now without them than I could with them." Another lady writes: "I must confess that it was with very little faith that I followed your instructions and began a daily routine of eye-exercises. But to my surprise I soon noticed improvement. Greatly encouraged, I went ahead with it, until one day I discovered I could lay off my glasses for good. It was the happiest moment of my life."

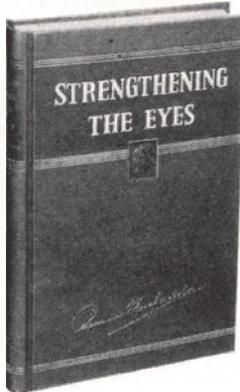


A simple test for astigmatism is provided by this illustration. To the normal eye the width and depth of color in the black bars of all four circles are uniform. When astigmatism exists there is variation in the width of bars.

These inspiring results bring a message of hope to everyone who is troubled with weak eyes or poor sight.

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Just sign and mail the coupon below and we will send the book. Pay the postman \$3.00, plus postal charges. If the book is unsatisfactory, simply return it to us within 5 days and we will refund your \$3.00. The combination price of this book and one year of *Physical Culture Magazine* is only \$4.25. The yearly subscription price of *Physical Culture* alone is \$2.50—you save \$1.25 by taking advantage of this combination price.



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even risky. Properly adapted exercises are for every person able to be out of bed, but competitive sports are only for those who are trained for them.

Many men with an athletic specialty confine themselves too strictly to it. They lose a lot right there, particularly if it is an indoor sport. Boxing is ordinarily an indoor game, but those who became champions are invariably men who also take constitutional training in some form of outdoor activity. Only cutting down trees in the Adirondacks would not have made Tunney a superior boxer. And hunting big game in the wilds is not alone what made Jeffries the champion heavyweight years ago. But this outdoor life gave them the constitutional vigor and hardihood required by boxing.

I think it can be proved that the greatest athletes are those who appreciate the value of both specialized practise and general constitutional training. Keep fit both in season and out—that's the best slogan. Ty Cobb, one of baseball's greatest figures, is an outstanding example of this. The game kept him outdoors from March to October, then, instead of hibernating through the winter, he went to Canada to hunt and fish, or to the South after Georgia quail.

THIS plan kept him in excellent condition for about twenty-three years of strenuous athletics. Max Carey, too, has had about twenty years of baseball and other sports, and has kept himself in top form by much the same plan as Ty followed.

Reasonable contact with the elements, with wind, sun and rain, gives one a hardiness that no form of indoor exercise can impart. Athletes know that road-work, running and walking in the open, is the builder par excellence of stamina and good wind. You might swing dumb-bells and pull elastic exercisers all your life in a gym and never secure the constitutional benefits that one summer of swimming, fishing or hunting would bring you.

"Play for play's sake," the gospel of athletics in most of our modern colleges, is rapidly displacing gymnasium regimen. The time will come when practically all physical exercise (when used as such) will take some form of sport or play. I have been teaching physical culture and coaching athletics a great many years, and long ago I began to suspect that the farther people went in the cultivation of health and strength, the more popular outdoor sports would become. The physical culturist wants to play, and he wants to play outdoors. I know many golfers, but I can think of only two who will ever play inside. And most of the swimmers of my acquaintance forsake the indoor pools for the sea or lake as soon as the bathing season opens.

Live in the open and take your exercise in the play spirit. Go camping, hiking—or motoring if you are unequal to more vigorous exertion. Adopt an athletic hobby. Surely the day's work can be arranged so as to leave you a spare hour somewhere; if not in the daytime, then at night. Choose some specialty you like, or believe you can learn to like. Don't practise it exclusively; take a whirl at various sports, but try to become really good at one.

If you join some athletic organization, almost any sport will be open to you. Running, basketball, tennis, hockey, rowing, fencing, archery and swimming are only a part of a long list. If you must do your exercising

alone, with little or no apparatus, you are unlucky, but even so, you can always run, row, skate or swim.

Get outdoors as often as you can—but don't ignore the gym. The reason why so many persons of fine health lack a consonant physical development is that they have taken no specific exercise. And the reason the "muscle fiend" so often lacks constitutional vigor and organic health is because he has confined his efforts to "bedroom exercises." Two-pound dumb-bells in a bed chamber do not create Jim Thorpes, Babe Ruths and Jack Dempseys. And neither will football, baseball or boxing develop the remarkable physique of a muscle culturist like Eugene Sandow.

In short, for the man or woman seeking excellent health and physical development, outdoor sports and gym work complement each other. A certain amount of outdoor activity is practicable the year round in this day when we have outdoor games for every

season; and gymnasiums are open rain or shine. The more outdoor air you get the better; but if you lack muscular development generally, or find yourself unevenly developed, go to the gym for specific corrective exercises.

If, because of time limitations, you are forced to choose, take the outdoor work. Health is more important than muscle, and outdoor recreation is the more dependable in this respect. Select the sport you like best and go into it whole-heartedly, trying to develop all the skill of which you are capable.

But before you do that, remember what has been said about the possible results of competition, and make sure that you are in reasonably good condition. You can employ for yourself the same discretion that would govern your instructor at an institution. And if for any reason you find yourself barred from vigorous outdoor games, there is consolation in knowing that gym exercises are far better than none—even a better choice in some cases.

Good Posture Begins in Babyhood

(Continued from page 33)

professor of Physical Education at Columbia University, says that "good posture" is built "first, by sufficient exercise of the right kind in the growing years, especially creeping, hanging, climbing and balancing."

As the baby grows he naturally takes to just these four exercises and since the home is his private gymnasium, with a little care it can be properly equipped and made into ideal training quarters for the young athlete's preparation for his battle with life.

For his "creeping" the floor must be immaculately clean and cleared of rickety pieces of furniture that he can upset.

For his "hanging" exercises, his first efforts are to pull himself up by grasping his mother's fingers. Then there is the rail of the crib to hang to and many babies derive much fun later on from swinging on hanging rings or a small rod suspended from the doorway.

For his "climbing" it is easy to provide low boxes and suitcases. The stairs are admirable for climbing and later he can tackle the couch. It is pretty wise to open the windows from the top during the most active part of his climbing career, for many ambitious babies have succeeded in reaching the window sill and have fallen out.

The "balancing" is by far the most important part of a child's physical training and is best attained through rhythm, for rhythm is the basis of all smooth, efficient, graceful motion. Psychologists tell us that in order to attain superior physical development, emotional satisfaction must be derived from exercise. Turn on the radio and encourage your baby to dance with the music and laugh. Remember that this foundation is invaluable. For if the child is to excel in games and such sports as skating, tennis or golf, rhythm is indispensable. In fact good rhythm is a fundamental necessity for success in any sport.

The mother who wishes a perfectly developed body for her baby turns herself into a good physical trainer, a laughing football coach, for babies love laughter and play, and after all, life is just a big football game. Train your baby right and he will be a winner.

There is one great enemy of good physical development. It is fatigue.

Fatigue tears down the body structures. Babies and growing children should sleep twelve hours every night, besides day sleeps according to age, and to quote Professor Rathbone again, "It is necessary for children to lie down several times during the day." Fatigue is exaggerated by such unhygienic measures as bad ventilation, lack of sunshine and improper clothing and especially bad shoes.

A factor that plays havoc with the body of many a child is another type of fatigue which comes from a pathological source. Some children are always tired and this may be the result of toxic poisoning arising from chronic infections, such as bad teeth, diseased tonsils, chronic indigestion or frequent colds.

Of supreme importance to the young child is prolonged rest after a serious illness such as pneumonia. If the body of the child is subjected to strain at such times it may slump down and years of repair effort may not undo the damage.

Mothers who have weak and delicate babies are carrying a handicap to begin with, but they will find an inspiration and an urge to ultimate achievement in the life of the late Anna Pavlova, the greatest of all modern dancers. Little Anna was an ailing sickly baby and doctors despaired of her life. She was taken by her grandmother to a health resort in Russia. Here she was brought up largely in the open and physically trained by her grandmother.

She entered the Russian Ballet school at an early age and developed into physical being of great perfection. The civilized world gazed at the beauty of her body and her movements and capitulated at her feet.

To quote from English and French critics writing of her in 1931: "The very soul of beauty—the embodiment of all purity and perfection." "Each of her appearances on the stage is in the nature of a miracle which cannot be rationally explained." "Anna Pavlova is not a dancer, she is a direct manifestation of the divine."

The fate of human beings is said to be in the "lap of the gods." Certainly the physical fate of your baby is in your lap, mother. There is a call to you that you make it a glorious fate.

DID YOU EVER TAKE AN INTERNAL BATH?

This may seem a strange question. But if you want to magnify your energy—sharpen your brain to razor edge—put a glorious sparkle in your eye—pull yourself up to a health level where you can glory in vitality—you're going to read this message to the last line.

What Is an Internal Bath?

Some understand an internal bath to be an enema. Others take it to be some new-fangled laxative. Both are wrong. A real, genuine true internal bath is no more like an enema than a kite is like an airplane. The only similarity is the employment of water in each case.

A bona-fide internal bath is the administration into the intestinal tract of pure, warm water, Tyrrrellized by a marvelous cleansing powder. The appliance that holds the liquid and injects it is the J. B. L. Cascade, the invention of that eminent physician, Dr. Charles A. Tyrrrell, who perfected it to save his own life. Now, here's where the genuine internal bath differs radically from the enema.

The lower intestine, called by the great Professor Foges of Vienna "the most prolific source of disease," is five feet long and shaped like an inverted U—thus "L". The enema cleanses but a third of this "horseshoe," or to the first bend. The J. B. L. Cascade treatment cleanses it the entire length—and does it effectively. You have only to read that booklet "Why We Should Bathe Internally," to fully understand how the Cascade does it—without pain or discomfort.

Why Take an Internal Bath?

Here is why: The intestinal tract is the waste canal of the body. Due to our soft foods, lack of vigorous exercise, and highly artificial civilization, a large percentage of persons suffer from intestinal stasis (delay). The passage of waste is entirely too slow. Result: Germs and poisons breed in this waste and enter the blood through the blood vessels in the intestinal walls.

These poisons are extremely insidious, and may be an important contributing cause of the headaches you get—the skin blemishes—the fatigue—the mental sluggishness—and susceptibility to colds—and countless other ills. They may also be an important factor in the cause of so-called rheumatic pains, high blood pressure, and many serious maladies. Thus it is imperative that your system be free of these poisons, and internal bathing is an effective means. In fifteen minutes it flushes the intestinal tract of impurities—quick hygienic action. And each treatment tends to strengthen the intestinal muscles so the passage of waste is hastened.

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Taken just before retiring you will sleep like a child. You will rise with a vigor that is bubbling over. Your whole attitude toward life will be changed. All clouds will be laden with silver, you will feel rejuvenated—remade. That is the experience of thousands of men and women who faithfully practice the wonderful inner cleanliness. Just one internal bath a week to regain and hold glorious, vibrant health! To toss off the mantle of age, nervousness, and dull care! To fortify you against epidemics, colds, etc.

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Man's Sex Life enters the sanctuary of the most secret phases of your inner life. It grips you with suggestions that are personal and confidential. It furnishes definite and practical information on vital subjects, pure in themselves, which are frequently surrounded with vulgar mystery.

The problems of man frequently assume tremendous importance. They thus become a source of worries that ultimately assume a tragical nature. And the need for the answer to the query, "what shall I do?" often grips the victim with terrifying intensity.

In Man's Sex Life you will find the answers to the many questions that have long perplexed you. For this book solves some of the most vital problems that confront the manhood of today. Whether married or single you will find this book packed solid with information that is needed every day of your life.

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Now the whole unsuppressed truth regarding the much blurred subject of woman's sex life is available to you. And, thankfully, never again will knowledge pertaining to sexual relations be hidden behind the smirking mask of priggishness. For in Woman's Sex Life, Bernarr Macfadden ruthlessly tears aside the veil of ignorance and reveals intimate sex facts in the clean, glaring white light of truth.

Practically all the devastating sorrows and heart rending matrimonial mistakes are due to ignorance of the laws of sex behavior. For the really vital problems of marriage revolve around its sex-life. To make a success of marriage—to make a success of life—you must know how to interpret sex in terms of lasting happiness. Now this can be done through the help of the greatest of all books on the subject—Woman's Sex Life.

For years sex was a closed book. Our only knowledge of the subject was gleaned from hearsay. And at all times there was an evil air of mystery surrounding the subject. Sex was called obscene. It is little wonder that we never knew the facts—that so many of us stumbled blindly into trouble of unfathomable depths.

But now it is possible for women to get all the intimate aspects of their sex lives in Bernarr Macfadden's helpful book on the subject. A glance at the table of contents will give you an idea how thoroughly this book covers the subject of sex and marriage.

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Woman's
SEX LIFE

Fall in for the 1939 Health Walk

(Continued from page 37)

this country that such a large number of people had undertaken to cover such a distance for health, for sport, and for putting over a big idea by the sheer force of example.

But nobody took it very seriously. Nobody remembered the proverb about how great oaks from little acorns grow.

A year later, 1936, seventy-four persons started the hike, and fifty-two of them stayed with it to the finish over a three-hundred-and-fifty-eight-mile route that was covered in fourteen days. This time the Associated Press, the United Press, and Trans-Radio News covered the event. And ditto for 1937, with fifty-four in at the finish.

Then came the great hike of 1938; and Mr. Macfadden shifted up to second gear. This time one hundred and fourteen started, and one hundred and one finished. The route covered two hundred and sixty-five miles and it reached this time from Cleveland, Ohio, to Dansville—the reason for that being that the Middle West was getting jealous. "Where do we come in?" they demanded. "What's all this stuff about starting from New York?" So Mr. Macfadden started from Cleveland.

BUT in three years what a change!

The fame of the Macfadden Health Walk had spread. Everybody knew about it. A lot of people were still chuckling over it, but when the word got around that the original group of thirty-nine hikers had jumped to an enlistment of one hundred and fourteen of whom one hundred and one were sticking, a good many of the laughers began to look thoughtful.

These hikers came from fifteen states and from Canada and Nova Scotia. One man had come clear from South Africa to have a hand in it—or was it a foot in it? Three came from California. Something, evidently, was happening to Mr. Macfadden's idea—something akin to what happens to a snowball when it goes rolling down a mountainside.

But the chief reason why something was happening to Mr. Macfadden's idea was that something was happening to the people who took up with it. Most of them started soft, out of condition, in doubtful health, vaguely hoping that this might do something for them. The thirteen who couldn't stick it out, fell by the wayside within the first day or two. The one hundred and one elect found by the time they had been on the road three days that an astounding thing was beginning to happen to them—something they would not have believed possible if they were not actually experiencing it. And when that happened, when they actually began, almost at the very beginning of the hike, to reap the rich rewards of it, they would not have given it up at any price. They knew now that two weeks of this magic would do things to them that would make this hike something more than a mere lark, and would transform it into one of the deep and vital experiences of their lives.

It wasn't all child's play. Some of them had to set their jaws and hang on. But as the days went by, it became easier instead of harder. And there dawned on them all a new conception

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of health—as a positive thing, quite different from the mere absence of pain and discomfort which many of them had formerly considered “good health.”

This was different. It was more like the overflowing exuberance and energy that makes a kitten chase its tail or a lively child run his elders ragged. They got to what would formerly have seemed to them the incredible state where after a day of walking that covered perhaps twenty or twenty-five miles, they could rest a bit after dinner and then go for a walk in the evening—or go dancing, or swimming, or roller skating, or whatever other sports and diversions might be available in the towns where they stopped. And they all went, from the boy of seventeen to the man of sixty-nine, who were respectively the youngest and the oldest members of the group.

ONE man lost twenty pounds, dropping from two hundred and twelve to one hundred and ninety-two. A woman lost thirteen and one-half pounds—one hundred and forty-six and one-half down to one hundred and thirty-three. On the other hand some gained. One man jumped from one hundred and seventy-nine to one hundred and eighty-six; one woman from ninety-three and one-half to ninety-seven. One man gained one and three-quarters inches in chest girth; one woman gained one and one-quarter inches.

One of the most spectacular things that happened during the hike was the psychological change it produced in certain ailing, sickly, complaining members of the group. They became, to all intents and purposes, different personalities from what they had been at the start. One of these was a woman who, at the beginning of the hike, had been a thorn in the flesh of those who had things in charge. She objected to the food; she became a source of discord among various hikers and set them at odds with each other; she aroused and spread discontent among other neurotics of her kind who couldn't take it. And at the end of the first day's walk she freely expressed her disgust with the whole undertaking; and, by implication, with the people in it; and then telephoned to her children, by long distance, to come and get her with the family car.

But after that she had a good night's sleep; and the second day she got along somewhat better. And when her relatives arrived she changed her mind and thought she'd try it one more day. She dimly sensed that here was something she needed. At the end of the third day her mind was made up. She was going through with it. Already she was luxuriating in her quieted nerves, in the sound sleep she was getting at night, and in an unexpected sweetness of disposition and temper that seemed to result from all that.

Within a week she had become a changed personality—one of the most popular members of the group instead of a pain in the neck to everybody around her. And her satisfaction was in no way diminished when her pleased fellow hikers—with their usual candor—congratulated her on the change.

Such congratulations, indeed, were in order all along the line. People who started by being more or less cadgey toward each other mellowed into warm friends.

One evidence of what the hike meant to the people who took it was that more than half of this 1938 group were persons who had taken the 1937 hike.

They had come back for more. It is a safe bet that the same will be even more true of the coming 1939 hike.

The hikers represented all sorts and conditions and occupations. One curiously, was a postman out for a holiday and ringing twice on this one, so to speak. One was a police inspector. There were a couple of doctors, one a woman, who came up from Florida to be in the hike. There were law clerks, business men, stenographers, housewives, and so on.

While most of the hiking was done at a leisurely pace, good for around twenty miles a day in about six hours of walking, individuals in the group set out now and then to show the others. One young man from Cleveland and a girl from Miami Beach made the twenty-five miles from East Aurora, New York, to Warsaw, New York, in five hours and ten minutes.

Feet naturally made the most trouble. Blisters were the chief problem. But a skilled man from the Physical Culture Hotel staff was along just to look after that sort of thing. Constant bathing, massaging, and proper care resulted in a steady diminution of foot trouble. Some of the hikers cut away the front part of their shoes so that they were wearing something very much like a sandal. Many of the women wore riding breeches, light sweaters and anklets. The men mostly wore their ordinary clothes.

The route, of course, had previously been gone over in detail by Mr. Joe Wiegner, who had charge of the arrangements. Hotel accommodations had been engaged in advance, and everything was made ready. In the course of the two weeks, there were six or seven evenings of specially arranged entertainment, often with dancing. Also a special trip was made to Niagara Falls. Since that was off the route of the hike, the hikers went to the Falls in chartered buses—not because they couldn't have made it on foot, or were tired or anything like that, but merely to save time and stay within their fourteen-day schedule to Dansville.

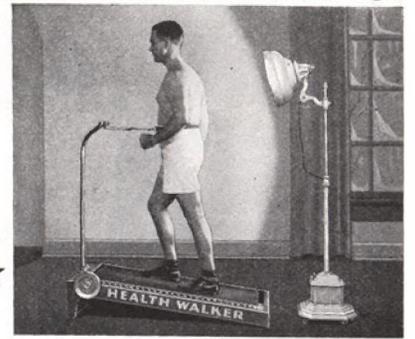
THE routine of the hike went about like this: There was a combination commissary and baggage truck that carried, besides the driver, a chef, with food and kitchen equipment. When the hikers started out in the morning, usually about seven-thirty, or sometimes as early as six, the truck would go on ahead with the baggage to the town where the hikers would make their next stop for the night. It would distribute the baggage at the hotels and rooming houses the hikers had been assigned to, and then return, meeting the hikers at a half-way point, about noon. By then the chef would have prepared the cracked wheat and fruit juices which were Mr. Macfadden's contribution to their bill of fare. Whatever else they ate they picked up for themselves along the way at lunch counters, in restaurants, and at soda-fountains.

The hikers also paid for their own rooms. The prices ranged from seventy-five cents to a dollar and a quarter. The total average cost for the fourteen days per hiker was about thirty-five dollars—which included food, rooms, and incidentals.

Since it was often necessary for the hikers to stop in small towns where it was impossible to get accommodations for a hundred persons at one time, the plan was adopted of dividing up into

(Continued on page 69)

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Fate Forced Her to Choose Between Happiness and Duty

Lorna Ryerson sat in the Texas shack which sheltered her invalid husband and wondered why Fate had played her false.

When she and Felix had gone through that marriage ceremony in Manhattan a few brief months before, they considered themselves New Yorkers for life. With careers established, with success even then partially claimed, the future seemed definitely charted.

Yet here she was, nursing a man who was husband in name only, a shattered career behind her and only drabness ahead—unless—

For she could not dismiss Gideon Hartman from her mind. He was on the way down again to offer her love, security, great luxury, the chance to rebuild her work, help in becoming one of the famous women of America.

Was any girl ever faced with a more soul-trying temptation? Was the decision forming in her mind the right one? Would she be tempting disaster even further or would the future and her conscience justify her choice?

* * * * *

Suddenly she saw, as if by revelation, what this business of living was all about, but that revelation did not come until her decision was forced by an amazing series of events that solved not only her own desperate problem but deeply affected the lives of many other people. If life interests you, if you find help in solving your own problems by understanding the experiences of others, you will read every word of Lorna Ryerson's absorbing story as she, herself, reveals it. "What I Wanted From Life" is the title in the new January True Story Magazine. Be sure to get your copy today and check Tuesday night to enjoy the adventures of True Story's Mary and Bob who are back on the air triumphantly. NBC Blue Network. 9 P.M., E.S.T.—8 P.M., C.S.T.



(Continued from page 67)

two groups of about fifty each, one of the groups traveling a day behind the other.

There were two hike leaders, Ben Garner, physical culture instructor at the Physical Culture Hotel in Dansville, and Marion Pearson, an amateur hiker from Grand Rapids, Michigan, who volunteered for the service and proved to be a natural for the job.

During the first few days of the hike, especially, a great deal depended on these two leaders. The hikers were not yet used to the grind. Singing, games when they stopped to rest along the road, entertainments on some village green—all these expedients helped to buoy their spirits and to make them forget the sore feet and aching muscles that were not yet fully up to the job.

THEY were all equipped with rain-coats; and when the rains came, as they certainly did, sometimes for a full day at a time, they kept right on, sloshing through it, singing as they went. They weren't sure, in fact, that they didn't like rainy weather better than any other kind. Anyhow, they liked it. That was the mood they were in. Any kind of weather was all right with them in this best of all possible worlds.

Sometimes they would make a start at six, hit a fast non-stop clip that would carry them twenty-five miles by two in the afternoon—and then have some cracked wheat and call it a day. With the afternoon to loaf in, they would then start out in small groups for side hikes to local points of interest. Then would come dinner, and maybe some dancing in the evening—and so they'd occupy themselves till bed-time. Nobody thought of being tired.

One pleasing thing about starting the hike from the Middle West and working East with it, was that the West responded with enthusiasm, and gave Mr. Macfadden and his Vitality Walkers the keys of the city wherever they went. Mayor Harold K. Burton of Cleveland saw them off at the start, after a banquet at the Cleveland Athletic Club. And a coast to coast hook-up over the Mutual Broadcasting System told any of the hundred and thirty million people in the U.S.A. who happened to be listening in, that a hundred of them were starting something, and that the rest of them had better come in on it. Mr. Macfadden talked into a portable microphone with the broadcasting truck traveling alongside of him through the first five miles out of Cleveland.

The route lay through the grape-growing country along Lake Erie, and one of the events of the hike was the welcome by the president of the Welch's Grape Juice Company at Westfield, New York—with grape juice on tap for all who wanted it—and all they wanted of it.

One rather spectacular thing that happened was that after the first day Mr. Macfadden had to fly his plane to Birmingham, Alabama, and flew back, through a storm, determined to join the hikers at the first possible moment. In the three days he had been away they had covered forty-eight miles on foot. He joined them at Erie, and stayed with them the rest of the hike, shuttling back and forth impartially between the two groups. There was a lot of good-natured rivalry between them to hang onto him—and, incidentally, to keep up with him. Keeping up with him always took a lot of doing—since, if he chose to step out, he could have walked the legs off most of them.

That eventful hike of 1938 is a promise of the bigger and better hike that is undoubtedly on the way this spring. The turning point came with that jump to one hundred and one hikers. And if Mr. Macfadden now carries through this tentative plan of pushing that gain up to 200 or 300 this year that will be the biggest piece of boosting for the new trend toward Pedestrianism in America that could well be imagined.

It is not just a picturesque bit of Americana any more. It is an important social development. It fits in with the present agitation for paths alongside the great automobile highways so that horseback riders, bicyclists, and pedestrians will have a chance to come and go without having to risk their lives in the attempt.

The great distance walker, Edward Payson Weston, who predicted in his old age that he would be "knocked off the road by the automobile" was in fact knocked off the road by one when he was eighty-seven; and he died of his injuries three years later. From Weston's hands Mr. Macfadden has caught up the torch, and is carrying it forward. His Health Walk of 1935 was the first step toward a revival of Pedestrianism in auto-ridden America. And this spring, four years later, we shall see what we shall see.

IF THE proposed Pittsburgh-to-New York hike by way of Dansville be undertaken, and on such a scale, the problem of providing accommodations for so many persons along the way will be no small one. But if Mr. Macfadden decides that that is the way it is to be done, the hikers from every part of the United States and Canada may well prick up their ears; and Mr. Macfadden is likely to find himself leading, not two or three hundred cracked-wheat eaters and fruit juicers, but a small army of them.

And he'd better think twice about that, because he may be starting something he can't stop. However, having already founded the Physical Culture movement, he is probably used to that!



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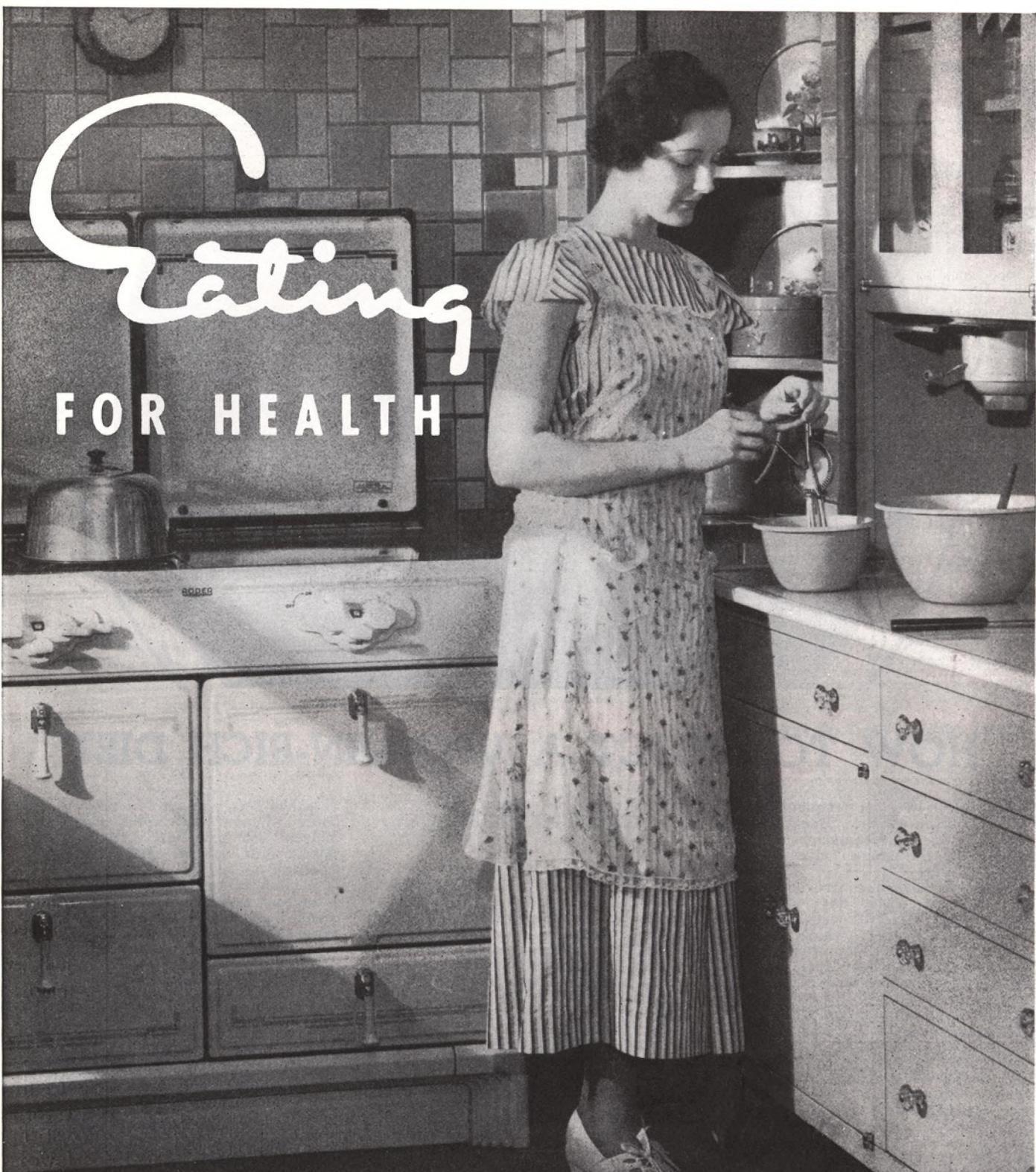
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Photograph of Alice Everett, Burbank, California, by "Dick" Whittington

HOW TO SELECT A VITAMIN-RICH DIET

By Milo Hastings

THE question most frequently asked about vitamins is: "Does one need to take special vitamin preparations, or can we get enough vitamins from ordinary foods?"

That has been a controversial question since the early days of vitamin discoveries. Vitamins were first found in natural products which were exceptionally rich in them, such as cod-liver oil, yeast, wheat germ and rice polish, and the juices of citrus fruits. These products were quite logically exploited as sources of the health-preserving vitamins.

Further developments of vitamin research went in two directions. One was the testing of common foods for the various vitamins. The results showed that vitamins were not confined to a few products but were widely distributed in natural foods. Only a few artificially refined foods, such as white flour, sugar and lard, were found to be wholly devoid of vitamins.

The other phase of vitamin research consisted of a wider search among rarer products for those especially rich in vitamins. This led to efforts to artificially concentrate the vitamin strengths of certain products, or to devise ways to make vitamins by laboratory processes.

Efforts in this field have, after many years of expensive research, proven to be quite successful. There are now available many highly concentrated vitamin products, and even chemically synthesized pure vitamins. These are taken in medicine-like doses, or they may, instead, be added to foods to give them greater vitamin strengths than

is possessed by the natural product.

As a result of these two phases of vitamin research there has developed somewhat conflicting ideas as to the proper methods for supplying our needs for vitamins.

Those whose mental reactions tend to resist new ideas were at first inclined to consider the whole vitamin idea a passing fad. But evidence continued to accumulate showing not only that vitamins were essential to all animal life but that an increasing number of diseases, the causes of which had long been a mystery, were but various expressions of vitamin deficiencies.

The conservatives were thus obliged to admit the importance of vitamins. But, pointing to the tables that showed the presence of vitamins in the majority of common foods, these folks insisted that when anyone ate a mixed diet he would get all the vitamins he needed without taking any special products for that purpose.

Those of the opposite school of thought, who are inclined to make the largest possible use of any new ideas, began experimenting with the vitamin-plus idea. This view holds that the use of extra vitamins, added to the amounts found in the usual run of foods, should lead to a correspondingly greater degree of health.

Research based upon this conception has been carried out both in the biological laboratories and in medical clinics. A considerable degree of suc-

cess has been achieved in proving that more abundant vitamins can be a source not only of recovery from specific ills but of achieving "super-health."

Such a concept of super-health implies that what has been generally considered as normal health has actually been sub-normal. We have not recognized it as such because it has been the best health with which we have been familiar.

That idea becomes clearer if we would consider the viewpoint of men in the Middle Ages, or for that matter in modern India, when the average length of life was about half of what we now know. Then what was considered as normal health would correspond to what we would call very poor health today. The future race may look back at our present health levels in a corresponding fashion.

A fuller understanding of, and utilization of, vitamins is certainly one of the most promising methods for the attainment of further improvement in health and longevity.

The idea that "vitamins are all right but common foods contain them" rests upon the supposed evidence of a sufficient supply of vitamins in common foods. In the past it has been difficult to prove or disprove that argument because there have been divergent views as to how much vitamins we required, and because the actual amount of vitamins in foods has been but vaguely indicated.

The familiar published tables of vitamin values of foods have not been

(Continued on page 74)

Here's A HEALTH Cook Book

A Book Which Enables You to Derive the Maximum of Health from Food and the Maximum of Real Pleasure from Eating

HERE is a new kind of cook book—a health cook book. A cook book which gives you essential food and diet information, in addition to hundreds upon hundreds of new recipes and a wide range of special menus. All the recipes given in this modern cook book have been selected and tested under the immediate supervision of the authors—Bernarr Macfadden and Milo Hastings—by a staff skilled in modern scientific cookery.

Three Books in One

This big, giant size cook book is really three books in one. It gives you all the real essential food and diet information which every family should have—in clear, understandable terms. It brings you a new guide to economy and health. It revolutionizes all the old, unhealthful methods of cooking. Here is a cook book which proves that real, health-building foods can be tasty and delightful. Every dish recommended in this great book is not only scientifically sound, but is also delicious as well. For a food to be really beneficial must certainly please the palate.

Better Meals at Less Cost

Careful consideration has also been given to the money cost of food and the time cost of its preparation. There are hundreds upon hundreds of specific recipes, each of which has been carefully worked out and tested, with full instructions for selecting, combining, cooking and serving.

Menus to Serve Your Every Purpose

Perhaps the greatest feature of this book is the ideal arrangement of menus in well-defined groups. For instance, there are ten different types of physical culture menus—ideal menus for families with growing children. Special menus for the manual laborer—or if yours is a problem of losing weight—this book offers you ideal food combinations for this purpose. If you want to gain weight—you will delight in its effective food suggestions for this purpose. Of especial value are those menus specifically designed to prevent constipation. Indeed here is one book that will solve all your food and diet problems—in a most pleasing and delightful way. Remember—this is a brand new, up-to-the-minute food and cook book. And not an ordinary one by any means. A real introduction to new, tasty cookery. The whole book is based upon sound ideas. Healthfulness and scientific preparation of foods are not enough—every dish is indeed delightfully inviting—a real adventure in culinary excellence. Here is a book you should possess.

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This Great Book On Sale In All Health Food Stores Listed on Page 83.

Macfadden Book Company, Inc.
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Send me your Physical Culture Cook Book. I will pay the postman \$2.00 plus postage when the book is delivered to me.

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street

City

State

If you send \$2.00 with order, we will pay the carrying charges. Canadian and foreign orders cash in advance.

TABLE OF VITAMIN VALUES

The figures give the vitamin in one pound of the food, expressed in a unit system in which 1.00 is the estimated daily human need. (The accompanying article gives further explanation).

VITAMIN A

- 100.00 Cod-liver oil. (and over)
- 30.00 Parsley.
- 25.00 Grass, alfalfa.
- 20.00 Kale, spinach and other greens.
- 12.00 Chard.
- 10.00 Alfalfa meal.
- 6.00 Liver.
- 5.00 Dried apricots.
- 4.00 Red peppers, mature carrots, yellow sweet potatoes.
- 3.00 Dried yellow peaches, young carrots, green lettuce.
- 2.50 Butter from cows on pasture, egg yolks from hens on green feed.
- 2.00 Cheese, fish roe, dried prunes.
- 1.50 Average butter, yellow squash.
- 1.00 Average eggs, butter from cows on dry feed, fresh yellow peaches, ripe tomatoes.
- .75 String beans, green celery, green peas, green peppers, green tomatoes.
- .50 Green asparagus, avocados, yellow corn meal, cream, akra, cherries, bananas, kidney.
- .25 Globe artichoke, Brussels sprouts, cantaloupes, cowpeas, milk from cows on pasture, oysters, olives.
- .10 Milk from cows on dry feed, (or less) white lettuce, cabbage and celery, apples, beef, cottage cheese, cauliflower, dates, figs, grapes, oranges, pineapple, raisins, watermelon, whole wheat.

VITAMIN B

- 20.00 Brewer's yeast.
- 10.00 Baker's yeast, wheat germ.
- 5.00 Rice polishings, peanuts.
- 4.00 Soy-beans.
- 3.00 Cottonseed flour.
- 2.00 Walnuts, dried beans.
- 1.50 Hazelnuts, dried peas, bran.
- 1.00 Whole grains of all kinds, egg yolk, fish roe, oysters, dried milk.
- .75 Almonds, pecans, chestnuts.
- .50 Beef, broccoli, cabbage, carrots, collards, eggs, kale, onion, oranges, parsnips, spinach, sweet potatoes, turnip greens, water cress.
- .25 Apples, bananas, dates, figs, lettuce, pears, potatoes, tomatoes, turnips.
- .15 Cantaloupes, grapes, milk, watermelon.

VITAMIN C

- 7.00 Red peppers, pimientos.
- 6.00 Green peppers.
- 4.00 Parsley.
- 3.00 Kale, collards, turnip greens, water cress.
- 2.50 Spinach.
- 2.00 Citrus fruits.
- 1.50 Brussels sprouts, cabbage, cauliflower, gooseberries, radish, strawberries.
- 1.25 Asparagus, green peas, turnips.
- 1.00 Cantaloupes, raspberries, tomatoes.
- .75 Cranberries, cucumbers, pineapple, string beans.
- .50 Apples, avocados, bananas, cherries, onions, potatoes, prunes, pumpkin, sweet corn, sweet potatoes, watermelon.
- .25 Apricots, carrots, celery, lettuce, peaches, pears.
- .10 Milk from cows on pasture.
- .03 Milk from cows on dry feed.

VITAMIN D

(For fish-liver oils and commercial vitamin D products, see ratings on labels. In this table 1.00 corresponds to 750 International Units.)

- 5.00 Egg yolks from hens fed 2% cod-liver oil, butter from cows fed irradiated yeast.
- 2.00 Egg yolks from hens fed 1/2% cod-liver oil.
- 1.00 Egg yolks from hens on ordinary feed.
- .50 Butter from cows on ordinary feed, milk from cows fed irradiated yeast.
- .05 Milk from cows on ordinary feed, oysters.

(No vegetable foods contain appreciable vitamin D unless it has been artificially added.)

VITAMIN G

- 10.00 Yeast.
- 7.00 Beef liver or kidney, soy-beans.
- 5.00 Powdered skim milk.
- 4.00 Powdered whole milk.
- 2.00 Wheat germ, beef heart, broccoli, beet tops, prunes.
- 1.50 Kale, peanuts, cheese, red peppers.
- 1.25 Cottonseed flour, egg yolks.
- 1.00 Cowpeas, beef, veal, lean pork, dried peas and beans, spinach, milk from cows on pasture.
- .75 Collards, eggs, whole wheat.
- .50 Beets, cabbage, carrots, bran, fresh peas.
- .25 Bananas, figs, grapefruit, oranges, milk from cows on dry feed, lettuce, potatoes, sweet potatoes.

(Continued from page 72)

numerical quantitative statements. The differences were indicated by a one-two-three star system, which was the scientist's method of admitting that his knowledge was inadequate.

Today we have a much better, though still none too accurate, knowledge of the amounts of vitamins in foods. In the light of our present knowledge I have gone back and checked over the older forms of vitamin tables. Taking the most authoritative text book of ten years ago I find that these old tables listed foods with one star, meaning "contains the vitamin," which when checked now show that even a pound a day of some of these foods would supply only two to three per cent of our estimated needs.

IN LIEU of any information to the contrary one might naturally think the one-two-three star markings indicated a single, double and triple strength in the vitamins. Instead I find, even without including such things as yeast, wheat germ and cod-liver oil, that the actual variations in vitamins between the lower one-star indications and the higher three-star foods shows ranges as great as from 1 to 70 for vitamin B, 1 to 100 for C and 1 to 1,000 for vitamin A.

These facts are reviewed to show the deceptiveness of this former system of indicating that foods contained the vitamins. Furthermore, fruits and vegetables as a class are often called "vitamin foods." But on looking over the quantitative data, as now available, it is easy to see how one might have a diet made up entirely of even raw fresh fruits and vegetables and yet fall far below the requisite levels of vitamin sufficiency.

Those who think along the lines of

nature's perfection may feel such statements to be inconsistent with the obvious fact that primitive man, with no knowledge of vitamins, still managed to get his supply from foods as he found them.

That is sound enough logic but there are several reasons why primitive man is not comparable with civilized man in this matter of vitamin supply.

First, as for vitamin D, primitive man made his supply in his own sun-tanned skin. Clothing and indoor living have wholly upset nature's plan for our supply of this vitamin.

Second, primitive man was of necessity physically active. That meant a larger food consumption for fuel purposes, and, incidental to that, a larger vitamin intake. The inactive civilized man with his reduced energy needs must eat less total food, and thus cuts his vitamin supply.

Third, and most significant, industrial processes of food refining have removed the natural vitamin content from a number of staple foods that bulk very large in the total food intake of civilized man. The storage of food and the cooking of food also both result in impairing the available vitamin content which is found in the fresh raw food.

All these factors combine to make for vitamin deficiencies in the diet of civilized man. A vitamin content comparable to that of the primitive man's diet can now only be attained, either by selecting an unusual proportion of our foods from those having more than average vitamin content, or by making use of the specialized vitamin products developed by modern science.

The task of determining the vitamin content of foods has presented difficulties to the scientists which the lay-

man can hardly appreciate. But those very difficulties have stimulated research work in this field and an enormous amount of it has been done. Until recently this has all been by the tedious method of feeding tests.

Various scientists have worked out different tests with laboratory animals, for the purpose of measuring vitamins in "units." To illustrate, the Sherman Unit for vitamin C is defined as follows: "That amount of the vitamin C (minimum protective dose) which when fed daily will protect a 300 gram guinea pig from scurvy for a period of ninety days."

In such tests many animals must be provided to overcome the variation due to individuality of the animals. There must also be several lots of the animals in order to try the food under the test in various quantities, hoping to hit upon the approximately correct one. Sometimes the test has to be repeated several times before the amount of food is gaged so that one quantity is found that will prevent the scurvy and a slightly less quantity is found that will cause the scurvy. Until this nice balance is worked out, the unit strength has not been found.

THE vitamin strength of foods, like other properties, varies with the locality, season of growth, and particular variety of the plant. Therefore, even when the laboratory technique is perfect, different investigators will get a variety of results. All this serves to make the assaying of vitamins by the feeding test methods tedious and expensive, and none too reliable.

More recently much progress has been made in the chemical knowledge of vitamins, and chemical methods of analysis for vitamins are coming into

Underwood & Underwood



use. Thus the International Unit for vitamin C is defined as .05 milligrams of l-ascorbic acid. But the chemical methods also are complicated and under dispute, and to date there is not much agreement as to how to translate the units as determined by feeding tests into the chemical test units.

If any of my readers would like to attempt to study up on all these recent vitamin developments, including page-long chemical formulas, Uncle Sam will sell them a 180-page book for 15 cents. Send the cash, not stamps, to the Superintendent of Documents, Washington, D. C., and ask for Department of Agriculture special publication No. 275, "Vitamin Content of Foods."

This highly technical bulletin gives the latest theories as to the exact chemical composition of the various vitamins, explains the various vitamin units now in use, and gives the latest ideas as to the daily requirements of man for each of the vitamins. It also gives a vast compilation of the findings of vitamin values in different foods, expressed in various units, as gathered from the published results of scientists all over the world.

THE Health Organization of the League of Nations is the sponsor of the system of International Vitamin Units, which will probably come into general use. These are newer units having definite chemical bases, but most of the tests made in the past have been done in America and with the use of units worked out, chiefly by Professor Sherman, for feeding experiments.

To make matters still more confusing there is no consistent relation of the size of any of these units to the matter of human needs. Some are big units and some are little ones. Applying them is like making a dress out of fabrics, some of which are measured by the inch and some by the yard.

The poor layman, looking at the table, sees that green peppers are credited with 950 units of vitamin A and 200 units of vitamin C. So he decides green peppers would be a fine source of vitamin A but that he should look for something else to get his vitamin C. And he would have it exactly wrong, which recalls Mutt and Jeff's war-time hamburger, fifty-fifty horse and rabbit meat, made of one horse and one rabbit.

After wrestling for some time with this problem of how to convey quantitative measurements of vitamins to my readers I decided that the best method would be to re-figure these various unit ratings into terms of the human daily requirement.

Taking one pound as the unit of food, I have expressed the vitamin values upon a scale in which, for each vitamin, 1.00 represents the daily human requirement. To illustrate, for vitamin B one pound of any of the whole grains will just about supply a man's daily needs. Therefore the rating for the whole grains is 1.00.

When you look at the table you will find that peanuts are rated at 5.00. That means they are five times as rich in vitamin B as are the grains, and that only a fifth of a pound of peanuts would be needed to supply a man's daily requirement. On the same scale you will find milk rated at .15. That means that nearly seven pints of milk would be needed to supply the daily requirement for vitamin B, if milk were the only source of it.

This method of expressing vitamin values comes nearer putting them on a usable basis than any I have seen pub-

lished. However, I take no credit for brilliance in using it. The idea is obvious enough, and the reason it has not been used by the vitamin specialists is probably because no one cared to set himself up as an authority to say what was the actual human requirement for each of the vitamins.

I dodge that responsibility by "passing the buck" back to the Department of Agriculture, whose vitamin experts in the Bureau of Home Economics have attempted to compute the vitamin ratings for adequate menus. To do that they had to decide upon some standard of human requirements for each vitamin. These values I have appropriated for the basis of my calculations.

For readers familiar with vitamin units, these daily requirements are: Vitamin A, 6,000 Sherman units; vitamin B, 600 Sherman units; vitamin C, 150 Sherman units; vitamin D, 750 International units; vitamin G, 600 Sherman-Bourquin units. All these apply to adults except vitamin D. That applies to growing children whose need for vitamin D is better established and is probably greater than the adult need.

There is no claim here made that values assigned in this new form of table are particularly accurate—though at least these figures represent a definite advance over the one-two-three star system which was very inaccurate and misleading. To simplify the tables, as well as to avoid the suggestion of greater accuracy than the data justifies, I have kept the figures in round numbers, and grouped the foods.

As for the basis of human requirements used for the computations, these are liberal, being from two to three times as great as the borderline amounts, or minimum requirements, at which levels definite evidences of deficiency symptoms have been noted.

LIBERAL estimates are justified for two reasons. One is that these values are for raw foods and must allow for vitamin losses in cooking. The other reason is our general evidence that more than the minimum requirement of vitamins is needed for really good health.

The pound unit is the most familiar weight to Americans. Not considering liquid foods, a typical daily food intake is about two pounds. On that basis those foods showing ratings of .50 may be considered as supplying their own vitamin quota.

But about half the average diet consists of foods carrying practically no vitamins. So, to carry that burden, the other half of the diet must come from foods averaging vitamin ratings of 1.00. The few foods higher than that become really protective foods, smaller quantities of which are significant in raising the vitamin level of the whole diet.

In many current discussions of foods you will find it assumed that all fruits and vegetables are "vitamin foods." In menus built around meat and potatoes, white flour, sugar and fats, a raw salad will be added to supply vitamins. Such a salad might be compounded of blanched white lettuce, cabbage or celery and apples or grapes. As such it would furnish about enough vitamin C for a guinea pig, enough vitamin B for a rabbit and enough vitamin A for a mouse. It would do very well for Alice, after she had reduced herself to go down the rabbit hole.

However, not all of this newer data

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on vitamins shows that vitamin values have been overestimated. By contrast, a goodly number of products show up with the newer data giving vitamin resources higher than what has been the general impression.

In the vitamin A list, products which stand out in this fashion are the green leafy vegetables. But that means not merely a green exterior color, but the green substance in quantity. Extraction as vegetable juice reveals the density of this green. You could adulterate spinach, kale or parsley juice with ten times its bulk of water and it would still be greener than lettuce juice. Green pods and stems have comparatively little vitamin A values. The blanching of leaves, as in lettuce, cabbage and endive, almost completely devitaminizes these products, as for vitamin A.

DIED peppers, which includes the mild pimiento, apricots, yellow fleshed peaches and prunes, are vitamin A products which have not been appreciated. With this dried fruit we get the unusual effect of the dried product showing more vitamin than the fresh. That is not true of the dried green leaves in which the drying destroys much of the vitamin. The fruit preserves it, and it appears to increase because the table is on a pound basis and the product is concentrated by removing water.

In the vitamin A lists, milk products have in the past been relatively overrated. Butterfat was the substance in which vitamin A was discovered. The high content of vitamin A in red peppers and apricots is comparatively recent knowledge.

Oddly enough I found no data on vitamin A for either soy-beans or yellow turnips, but presume both would show up well. Omission of any product from the table is not proof of absence of the vitamin, but may be merely a case of absence of data.

Turning to vitamin B, I would first note that the figures on yeast are from general observations, and most of the data is old. Some of the brands of yeast that have been developed and marketed as a source of vitamins are richer than this data would indicate.

The high B ratings of peanuts and soy-beans, as compared with whole

grains, will be new to many. Unfortunately in the case of peanuts, and peanut butter, the habit of roasting them destroys much of this vitamin. The unroasted raw peanut butter and the soy-bean products carried by health food stores, and also wheat germ, are all very fine sources of vitamin B.

Vitamin B is distinctly a seed vitamin, yet in moderate quantities it is widely distributed in meat, fruits and vegetables. On a fully natural diet we would get plenty of vitamin B, but our white flour, sugar and fats are fuel foods without it, and the need for vitamin B is in proportion to the expenditure of muscular energy. Hence, we take this vitamin away from the very kinds of food with which it is most needed. But that deficiency can be made up readily enough, once you have the needed information.

In the vitamin C list many will be surprised not to find citrus fruits and tomatoes heading the list. However, these products which have been so popularized to supply vitamin C are the most practical products to use for that purpose. None of the others combine the availability, tastiness and suitability for use uncooked—though cabbage slaw is quite practicable.

On checking these vitamin quantities, and realizing that most of our foods, from their nature and our cooking are very poor in vitamin C, you will see that vitamin C products are needed and in goodly quantities.

On the other hand there is excellent evidence that the vitamin requirement chosen is not too high as seen from the good results obtained from an orange juice diet. Dentists have reported excellent results when patients with gum trouble use a quart of orange juice a day, or four times the amount of vitamin C selected as our standard.

The study of the vitamin C table will also show some products, such as lettuce, celery and a number of the fruits, that have been popularly overrated for vitamin C.

Vitamin D is not a normal element of human food because nature's plan provided for man creating it by the action of sunlight on his own skin. Without sun-bathing vitamin D must be supplied through special products in-

cluding the various fish-liver oils, irradiated substances, et cetera. No attempt has been made to evaluate those here, as the strengths and dosages are given on the labels.

Our presentation of the vitamin D is given rather to show how rare the vitamin is in any substances used as regular foods. Feeding the vitamin into eggs and milk is an interesting application of nutritional science.

The table of vitamin G ratings is less complete than for the other vitamins. Vitamin G was formerly confused with vitamin B, and many of the earlier tests included the effects of both. In most vegetable products the two vitamins are closely associated. In animal protein products the G shows up much better. It is the only vitamin of which meats are really very good sources.

In this article I have made no attempt to rate the special vitamin preparations and concentrates now coming into the market. The scientific basis for the making of these has developed rapidly and some optimists predict that the world's vitamin supply will soon be made in laboratories.

I DO not adhere to that view, if for no other reason than that the natural high vitamin foods are also generally excellent in other nutritional properties as well, for instance the soy-bean. But, on the other hand, I am not opposed to the introduction and use of the vitamin concentrates as supplemental to foods. Probably many people will get their needed extra vitamins in this way who would not go to the trouble to get them by proper food selection.

Lastly, there is considerable evidence that points to the belief that even a well selected diet may be further improved by a still further increase of vitamins. The fact that man frequently errs by flouting nature does not prove that he cannot beat nature at her own game by stealing her thunder and making it louder. Much of human progress has been achieved in that fashion. We have recently taken all the air speed records away from the birds, who, when I was a boy, were considered pretty good fliers.

WE WANT YOUR RECIPES FOR VEGETABLE JUICES

AS SET forth in this department last month, the growing use of raw vegetable juices is an outstanding feature of present-day health food developments.

The especial health-giving qualities of raw vegetable juices are generally conceded. These vegetable juices are unquestionably great food-medicine. But right there is the trouble—they not only do what medicine is supposed to do, but some of them taste too much like medicine!

No doubt part of the objection to the taste of raw vegetable juices is due to the fact that the tastes are unfamiliar. People have a remarkable ability to acquire or cultivate a taste for flavors which at first trial seem objectionable. But the acquiring of such new tastes would certainly be easier if the tastes were more agreeable without any cultivation.

The preparation and use of raw vegetable juices is a new art. The making and using of other forms of food and drink has through long experience of trial and error resulted in the devising and selection of means for making, mix-

ing, blending and flavoring to secure more pleasing flavors.

No such accumulated experience has yet resulted in any well-worked-out art of making tasty beverages with raw vegetable juices. A comparatively few demonstrations, as reported last month, indicate that great improvement in taste can be achieved by blending various raw vegetable juices. Other taste improvements should be easily discovered by mixing other forms of liquid foods with the raw vegetable juices. Nor is there any objection to the adding of any wholesome food flavoring.

Such mixing, diluting and flavoring of the raw vegetable juices should not ordinarily impair the health values of the amount of raw vegetable juice actually consumed. If it is diluted (as by adding plain water), but thereby becomes more palatable so that correspondingly more is consumed, no practical benefit will be lost. For example, lemonade.

The art of making all sorts of tasty drinks from fruit juices and from milk, with various additions, has been well

worked out and numerous recipes for such beverages are available. No such selection of recipes is yet available for beverages based upon the vegetable juices. Nevertheless these are needed because the straight vegetable juices are exceedingly rich in health values.

So let us have your best discoveries and recipes for making more tasty food drinks of which the predominating ingredient is some kind of raw vegetable juice, or juices.

For the best recipe sent in before February 1st, 1939, this department will pay \$10.00. For the five next best recipes we will pay \$5.00. The recipes will be judged primarily for tastiness. Healthfulness, originality and availability for ordinary household use will also be considered in making the selections. All recipes submitted will become the property of Macfadden Publications, Inc. No entries will be returned.

YOUR FOOD QUESTIONS ANSWERED



H. Armstrong Roberts

DO BAKING TEMPERATURES AFFECT FOOD VALUES?

ONE OF our readers has pointed out what seems to him to be a marked inconsistency between two popular statements about the effect of cooking.

He says that the statement is made that the high temperatures of cooking are destructive of food values, but that baked foods, especially baked potatoes, are considered more healthful than the same foods when boiled. This, he insists, does not make sense because the temperatures in an oven are much higher, in some cases twice as high as the temperature of boiling.

It is true that the oven temperatures commonly used in baking range from 350 to as much as 450 degrees, whereas the temperature of boiling is only 212 degrees. But our reader's misunderstanding of the problem is in his assumption that the food in the oven reaches the temperature of the air in the oven, which it never does as long as the food is moist.

What happens is made clear if you assume that a vessel of water, containing foods prepared for boiling, is placed in the oven at the usual baking temperatures. In this case the water in the vessel would be heated to the boiling point and no higher, and the food would be cooked at a temperature of 212, the same as if boiled on top of the stove.

A loaf of bread, a potato or a piece of meat, when baking in the oven, is being cooled by the evaporation of water on its outer surface. The moist interior cannot rise to any higher temperature than the boiling point. In fact it takes a long time to reach that temperature, and the interior of any baked food is cooked at temperatures distinctly below the boiling point, no

matter what the oven thermometer registers.

Only the outside surface that has completely dried out actually rises above the boiling temperature. That is what causes the browned crust of bread and the browned exterior of a roast, a fowl or the baked potato skin.

That exterior browning, especially in the case of meats, has a lot to do with developing flavor in baking or roasting. But it applies to a relatively small amount of the ordinary baked dish. In this actual browned crust, food values, especially vitamins, are lost—a case of sacrificing food values for flavor.

To the extent that it is browned throughout, toast has lost some food value, but this browning or dextrinizing of the starch seems to render it more readily digestible. The idea that toast is more healthful than bread, is in the main erroneous.

As for the baked potato, so commonly found in the "invalid" diet, that is largely a matter of avoiding grease-soaked fried potatoes, on the one hand, and leached-out boiled potatoes on the other. The baked potato does retain the maximum amount of its values in a most appetizing form.

Does the Food Value of the Tangerine Differ from that of the Orange?

We are asked if the tangerine is to be considered, dietetically, as an orange, and if its nutritive properties differ in any way from those of the more common types of oranges.

Botanically, tangerines are classed in the same species with the orange,

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but considered a distinct sub-species or distinct varieties of oranges, so the group to which the tangerine belongs has several different types and there is some confusion as to the names. This name list includes the mandarin, the satsuma, the King of Siam, and also the terms Japanese orange and kid-glove orange.

These different forms vary in size, as to seeds, and as to roughness of the skin. But all fruits of the tangerine group are characterized by a reddish orange color and by the very loose and easily removed skins. The last distinction adds greatly to the popularity of the tangerine, making it the most convenient to eat "without tools" of the citrus fruits.

As to dietetic properties all citrus fruit, including oranges, tangerines, grapefruit, lemons and limes are valued most for the high vitamin C content. This is essentially the same in all of these citrus fruits.

Oddly enough, the mineral content seems to show more variation. Recent analyses of tangerines indicate that they contain about fifty per cent more calcium than oranges. In making this investigation samples of tangerines and oranges were taken from nearby groves so that the two varieties of fruit were grown from similar soil. This would indicate that the higher calcium content found in the tangerine is a peculiarity of that fruit and is not due to an accidentally higher lime content in the soil.

Feeding Pigment Into the Hair

A friend in Cleveland has sent in an interesting clipping written by a college professor who has a reputation for sen-

sationalizing and distorting scientific matters.

In this article the professor announced, without citing his authority, that it had recently been discovered that gray hair could be restored to a black color by consuming foods that contained the pigment melanin. The only food that he mentioned as being especially rich in melanin was oysters.

Melanin is a real substance all right, for it is the pigment that gives the black color to the Negro's skin and the black color to black-haired people of all races.

We do not know whether or not there is any real basis for the professor's announcement, but some of his arguments in support of his theory were certainly fantastic.

He stated that the black haired Japanese rarely turn gray and this was because "Japanese as well as other Oriental peoples consume large amounts of oysters." If we mistake not, the Chinese, Mongols and Hindus, not to mention the American Indians, are just as black haired and as free from gray as are the Japanese. It must take a lot of oysters to supply them all! And a lot of trouble to ship oysters into the interior of Asia!

Further, says the professor, the Negro does turn gray, and that is because he hasn't enough melanin in his diet. But what about his skin, which is also made black by this same pigment? Surely some of the black men in the interior of Africa must have a lot of trouble getting enough oysters to keep them from turning white!

If any of our readers in Maryland have noted that eighty-year-old oyster-men all have black hair we wish they would report it.

What Is the Tamarind?

The tamarind is the fruit of a large tree native of East Africa but now cultivated in many tropical countries. The fruit is in the form of a long flat pod with an outer shell that is easily cracked off. The pod contains seeds, which are not eaten, but which are surrounded by thick brown pulp.

This pulp is very tart and sweet and without further concentration resembles a fruit conserve or preserve in consistency and flavor. In packing it for market some further sugar is added.

The tamarind pulp is eaten as a preserve or marmalade, but it is also used as a syrup which, when diluted with considerable water, makes a very tasty tart beverage. The tamarind is a real food luxury much appreciated by epicures.

Why Candy Sweet Potatoes?

We certainly would not recommend the "candyng" of sweet potatoes as the preferred method of serving this excellent root vegetable.

The sweet potato already has enough sugar, but is wholly lacking in fat. Hence it is certainly more logical to serve it with butter than it is to add more sugar.

Even if eaten plain, without adding either butter or sugar, the sweet potato would hardly be chosen for a reducing diet. It has the highest calorie content of any fresh (moist) vegetable, rating 545 calories to the pound as against 370 for white potatoes.

As a substantial energy food for workers and for winter diet, the sweet potato is a real staple. Baked and buttered, it is hard to beat as a good filling food for a hungry man.

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FIRST: Pure air and sunlight whenever obtainable; thorough ventilation of living rooms.

SECOND: Wholesome diet of vital foods, well masticated, eaten only at the dictates of a normal appetite; frequent fasting of a day or two if needed.

THIRD: Reasonable regular use of the muscular system throughout the entire body in work, in the gymnasium, on the athletic field, or otherwise.

SEVENTH: Right mental attitude; thinking is a powerful factor in maintaining vital health and can be constructive or destructive. The mind can build you up or tear you down.

FOURTH: Thorough cleanliness, which requires frequent baths—cold baths for a tonic, hot baths for cleanliness—though dry friction with the open hands, brush or towel is also valuable.

FIFTH: Internal cleanliness, which is a matter of regular and thorough elimination.

SIXTH: Abundant sleep, measured in depth or quality as well as duration; this power of deep sleep being dependent upon sufficient exercise and healthful habits.

WHAT'S GOOD FOR YOU IS ALSO GOOD TO EAT

Offering Attractive and Practical Suggestions for Introducing Health Foods into the Conventional Menu



By Jane Randolph

IT IS perfectly possible to keep a family well and growing on a properly arranged diet of the most common, every-day foods.

But those who are seriously concerned with improved ways of living have come to recognize that there are certain psychological factors that are important to the proper assimilation of food. Variety is necessary. Monotony becomes a calamity if boredom with certain foods reaches such a stage of irritation that it results in loss of appetite or incomplete digestion.

Luckily there are enough good, wholesome foods in any average market today to provide a great variety in a well-balanced diet. But even so, any family welcomes something new that is good to eat, and if it is not only extra good, but extra wholesome to boot, so much the better.

The live housewife is constantly on the lookout for new, especially good and extra wholesome foods. She may well take a look at the health food stores. If there is no such store in your town, why not send to the nearest one for a catalogue? The health food stores are now so widely scattered over the country that almost anyone can find one in a parcel-post zone near enough to make the cost of mailing supplies reasonable.

Some of the health foods duplicate in kind many of the foods in common use, but they are prepared and packed under ideally wholesome conditions and made from first quality materials only. Others are prepared from materials not in common use in this country, but which rank above the average in nutritional value, such as the soy-bean and all its products. Or they may be

common foods prepared in some particularly valuable way not generally available in the regular groceries, such as the fresh vegetable juices, or the meat substitutes made of vegetables and nuts.

Some of the foods are especially desirable because they have been prepared without harmful, artificial flavorings, preservatives or colorings, the unsulphured fruits, for instance, and the pure vegetable catsups and chillis, the candies made with nuts, coconut and honey. Others are more valuable nutritionally than the average product because none of their vital elements have been extracted during the refining process. Among these are such "natural" foods as yellow cornmeal (made from the whole grain), whole, brown rice, and whole-grain rye meal. Still others are made up of a combination of exceptionally valuable natural foods that offer new and interesting flavors, as for example the cereals that combine a number of different whole grains, each of which has a particular nutritive value. Then there are some food substitutes made of natural, specially wholesome materials, such as the vegetable gelatins, Irish moss and agar for making desserts.

The supplies for the menus this month can be bought in any good market. All of them are wholesome and well balanced. But for the benefit of those who are interested and willing to do some scouting, I am also suggesting some alternates. You may have to turn to the health food stores to find them. Most of the health foods that need home preparation carry directions on the package.

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EATING FOR HEALTH

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WHOLESOME MEALS

BREAKFAST
Baked Apple with Half and Half
(½ Milk and ½ Cream)
Graham Muffins
Cocoa or Milk

LUNCHEON
Mushroom Soup
Melba Toast
Romaine and Cream Cheese Salad

DINNER
Tomato Juice Cocktail
Chopped Beefsteak Broiled
With Onion Rings
Frenched String Beans
Parsley Potatoes
Lettuce, Canned Pear and Peach Salad
Whipped Cream Mayonnaise

BREAKFAST
California Orange
Oatmeal with Half and Half
Hot Chocolate

LUNCHEON
Cheese and Bacon Grill on Toast
Lettuce, Tomato and Green
Pepper Salad
Salty, Whole-Wheat Crackers

DINNER
Corned Beef with
Onions, Potatoes, Carrots, Turnips,
Cabbage, Beets and Tomatoes
Deep-dish Apple Pie
Thin Slice Snappy Cheese

BREAKFAST
Grapefruit with Honey in Center
Scrambled Eggs
Whole-Wheat Toast

LUNCHEON
Apple, Celery and Nut Salad
Whole-Wheat Bread
Maple Syrup
Hot Chocolate

DINNER
Creamed Salmon in Pastry Shells
Sweet Potatoes Candied with Apples
Endive, Red and Green Sweet Pepper
Salad
French Dressing
Canned Peach Halves Broiled with
Marshmallows

BREAKFAST
Prunes and Apricots with
Half and Half
Hot Milk Toast of Whole-Wheat Bread

LUNCHEON
Baked, Dried Lima Beans
Sliced Lemon Garnish
Lettuce Hearts
Thousand Island Dressing
Rye Bread

DINNER
Tomato Bouillon
Prime Rib Roast
Baked Potatoes
Yellow, Crooked-Neck Squash
Celery and Carrot Sticks
Chocolate Souffle with Creamy Sauce

BREAKFAST
Figs Stewed with Lemon Slices
with Half and Half
Dropped Egg on Toast
Cocoa made with Whole Milk

LUNCHEON
Macaroni with Cheese and
Tomato Sauce
White Grape, Apple and Celery Salad
on Lettuce

ALTERNATES Including Some Special Health Foods

BREAKFAST
Make the muffins of mixed, whole-grain cereal. Use a nourishing breakfast drink made from oats and cocoa.

LUNCHEON
Make the soup of dried, mixed, non-starchy vegetables. Use whole-wheat, whole-rye or soy-flour bread for Melba toast.

DINNER
Make the cocktail of unsweetened, canned carrot and pineapple juice with lemon to taste. Substitute soy-bean casserole for beefsteak. Use natural brown rice in place of the parsley potatoes.

BREAKFAST
Use a cereal of shredded whole grain, ready cooked, with sliced bananas. Prepared hot drink of vegetables and malt.

LUNCHEON
Instead of the cheese and bacon grill: serve a vegetable omelet with the salad. Add a cup of herb tea.

DINNER
Omit the corned beef and make a casserole of the vegetables and serve with a ready prepared nut and vegetable loaf, which can be bought in any health food store.

BREAKFAST
Omit the eggs and use cracked wheat with date nuggets and half and half. Make date nuggets by cutting dates the size of a pea, or they can be bought already cut.

LUNCHEON
Try the new combination of soy, malt and fresh milk for a nourishing hot drink. Use the Barbados unsulphured molasses or honey in place of maple syrup.

DINNER
Omit the salmon and serve a canned vegetable stew with mushrooms. Use genuine sea salt in the French dressing and flavor it with granulated kelp. The kelp looks and acts like celery salt.

BREAKFAST
Begin with a combination vegetable juice cocktail; serve glasses of milk with muffins made of whole-grain yellow corn-meal.

LUNCHEON
Make dressing with fresh or canned tomato chilli sauce and soy-bean oil mayonnaise. Top off the lunch with a cup of peppermint flavored alfafa tea. Use whole, rye, unleavened bread.

DINNER
Begin the dinner with parsley, green pepper and garlic juice cocktail, and for dessert serve fruited dextrose or vegetable gelatin with lemon custard and a dash of whipped cream.

BREAKFAST
Use black mission figs uncooked and mix with first quality dried pears and dates. Serve hot drink of banana and malt.

LUNCHEON
Use soy-bean flour macaroni, spaghetti or noodles, in any of the usual recipes.

WHOLESOME MEALS

DINNER

- Split Pea Soup
- Baked Fish with Cucumber Sauce
- Quick-cooked, Cut Cabbage and Red, Sweet Peppers
- Corn Bread
- Date, Pineapple and Lettuce Salad

BREAKFAST

- Orange Juice
- Cracked Wheat with Raisins with Half and Half
- Hot Milk Flavored with Honey

LUNCHEON

- Cream Cheese and Tart Jelly Sandwiches
- Cold Slaw
- Milk or Buttermilk

DINNER

- Romaine with Tart French Dressing
- Celery and Radishes
- Chicken Roasted or Fricasseed
- Steamed Rice
- Baked Onions
- Raspberry Ice
- Salty Wafer and Camembert Cheese

HEALTH FOOD RECIPES

Vegetable Omelet

- For the vegetable mixture:
- 2 tablespoons chopped onions
- 2 tablespoons green sweet peppers
- 2 tablespoons shredded carrots
- 1 tomato cut fine
- 1 teaspoon lemon juice
- 1/2 teaspoon sea salt
- For the omelet:
- 6 eggs
- 3/4 cup whole milk
- sprinkle of salt
- butter to grease skillet

Steam all the vegetables for ten minutes in just enough salted water to prevent burning in tightly covered, heavy saucepan. Add lemon juice last. Beat egg yolks and whites separately, then beat together, add milk and beat. Melt 2 teaspoons butter in hot skillet and pour in the omelet. Turn fire to medium and as the edges of the omelet congeal, lift them with a cake turner, if necessary cut them and tilt the skillet a little to let the uncooked mixture run in next to the skillet to brown. Keep lifting, cutting, tilting and browning until all is congealed, then sprinkle with salt and pour half the hot vegetables over the omelet. Fold the omelet over and turn out on a hot platter. Garnish with the remainder of the hot vegetables.

Mixed Dried Vegetables

These come packed in cellophane and can be cooked in a small amount of water to use in the place of the chopped, fresh vegetables for the omelet. Or they can be cooked according to directions on wrapper, one tablespoon of vegetables to one cup of cold water, and served as soup. They may also be combined in soups wherever mixed vegetables are used, and used in stews, casseroles or goulashes. One of the handiest things in my pantry.

Whole-Grain Melba Toast

Cut whole-wheat, whole-rye, or soy-flour bread in paper-thin slices, lay on a rack in oven with very low heat. Allow to dry out, rather than cook, until nicely brown. Can be stored in airtight tin for use when convenient.

ALTERNATES
Including Some Special Health Foods

DINNER

Begin with lentil soup. Use whole yellow corn-meal for bread. Add a steaming cup of herb and vegetable tea with a snack of sharp cheese.

BREAKFAST

Use any of the fruit juices canned without sugar, combined according to preference. Or they may be combined with some of the canned, sugarless vegetable juices.

LUNCHEON

In place of the cream cheese and jelly sandwiches, serve sandwiches made of soy-bean cheese, with a slice of tomato and dash of lemon juice.

DINNER

Wild rice is particularly rich in minerals, and your family will enjoy its flavor. Use wheat-germ crackers or omit the cheese and use small cakes or macaroons made from whole grain flour.

Herb and Vegetable Sauce

- 1 1/2 cups thick, brown sauce
- 1 onion
- 1 carrot
- 1 sweet pepper
- 1 canned tomato with juice enough to fill a cup
- 4 sprigs parsley
- 1 stalk celery
- 1/4 teaspoon sweet marjoram
- 1 bay leaf
- 1/2 teaspoon salt

Chop vegetables and all herbs except the bay leaf. Leave it whole and lift it out before making sauce. Simmer together for ten minutes. Add brown sauce and the salt and bring to the boiling point. If thicker than preferred, thin with a little tomato juice.

Soy-Bean Casserole

- 1 medium can soy-beans
 - 1 cup diced celery
 - 1/2 cup chopped onions
 - 1/2 cup grated carrots
 - 3 tablespoons soy oil
 - 1 tablespoon vegetable extract
- Pour soy-beans into a bowl, adding the vegetables gradually. Mix thoroughly, and then add the vegetable extract. Grease pan with soy oil and pour in all ingredients, topping it off with soy bread crumbs and dotting with butter. Add vegeated salt to taste. Bake in a moderate oven for ten to fifteen minutes.

This recipe reprinted by permission from *Brownies Broadcast*.

Gelatin With Lemon Custard

- Prepare fruit and dextrose or vegetable gelatin according to directions on package. Lemon custard as follows:
 - 2 egg yolks
 - 1/4 cup honey
 - 1 cup milk
 - 1 teaspoon lemon juice
 - 1/2 teaspoon grated lemon rind
- Beat the egg yolks, add the honey and a little of the milk and beat again. Then cook in double boiler until mixture coats spoon, stirring constantly. Add lemon juice and rind and chill. Pour the custard over the gelatin, top with whipped cream, and put small bits of the gelatin on top for decoration unless you use cherries.

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TURN TO PAGE 82

Turn to page 82 and learn how you can get an informative, helpful, attractively bound book entitled "The Physical Culture Food Directory" FREE, by simply writing us a letter.

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YOURS FOR THE ASKING!

Turn to page 71 of this issue for the new Nutrition Department. Then write us a brief letter as outlined below, and in return for your cooperation we will send you personal copy of The Physical Culture Food Directory, an informative, attractively bound book to be prized and referred to continually. Tell us in not more than 200 words:

1. Which article in this issue of Physical Culture is the most helpful and interesting and why?
2. Is the new Physical Culture Directory of Health Foods Dealers helpful to you and why?
3. Is the name and address of a Health Food dealer in your town listed? If not, do you want to know of one?
4. Give us your constructive ideas on how to make Physical Culture Magazine even more helpful to you in obtaining Good Health—the greatest asset of all. Address your letter to January Constructive Reader Bureau, Physical Culture Magazine, 122 East 42nd Street, New York, N. Y.

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Food Combination to a Safe Diet

(Continued from page 16)

A breakfast given the same man was orange juice, ripe bananas with cream and one other fruit. This made him a little uneasy, so we changed matters and had him drink his orange juice when he first arose in the morning, so he could take his breakfast of ripe bananas with cream and another fruit an hour later. Then all went well.

All of which proves that one must feed the sick according to their needs.

But why deal with the sick in a health magazine? Because statistics show that we have millions of citizens on the sick roster every day in these United States. We also have other millions who are able to be up and about but who are suffering with chronic disease. The problem of the sick is a pressing one, for among other things it causes heavy taxation of those who are well to support the ill.

The starch-protein controversy is quite interesting. Those blessed with good health can disregard it, but for millions of human beings—the sick millions—it is an important problem.

IT IS impossible for a person to live on any ordinary mixed diet without partaking of both starch and protein in the same meal, for the vegetables contain both starch and protein, the former in varying quantities and the latter in small amounts. The general rule is that the root vegetables contain a generous amount of starch, while the leafy greens, like spinach and beet tops, are low in this compound. Among the vegetables, the legumes are rather rich in protein, especially where the seeds have already formed in the pod.

But it is actually not the starch and protein in the vegetables we are discussing; it is starch and protein in greater concentration. Potatoes and all grains are richly endowed with starch, but it is well to note that potatoes are alkalizing if correctly cooked. All grain foods are acidulating, including bread, toast and all other foods made of flour, as well as those proprietaries we call breakfast cereals.

Eggs, cheese and milk when taken in quantities, and all flesh foods, whether from sea or land, are rich in proteins. So the question is whether it is best for health seekers and health maintainers to combine in the same meal concentrated starches and concentrated proteins.

From long experience and much observation we feel that those having robust health and splendid digestion can take such combinations with impunity, if they eat enough of the alkalizing or protective foods to maintain the alkaline balance of the blood. Unfortunately, those who eat meat, bread, potatoes and pie generally fail to balance their meals with a sufficient amount of fruits and vegetables. They develop a liking for the concentrated staple foods and are often apt to look upon vegetables as cow fodder, an attitude that leads to disaster when the alkaline balance is lowered to the point which we call hyperacidity. This is the danger encountered in taking concentrated starches and concentrated proteins in the same meal, over a long period of time.

To those who desire to retain their health and still wish to continue combining in this way we would say: Be sure to eat an abundance of fresh fruits, fresh vegetables and a reason-

able amount of milk to maintain the alkaline reserve, remembering to ingest over fifty per cent of the whole food intake of these protective foods.

When it comes to those having poor health, our advice is not to eat cereal foods in the same meal with meat, fish, eggs and cheese. Why? They are sick already, which means that they are almost surely autointoxicated. For them the combination of cereal starches and the acidulating proteins just mentioned means more autointoxication, which in turn leads to more disease. In reading this article, it must be remembered that "cereal" is a general term which includes all grain foods, such as rolls, biscuits, muffins, bread, toast, cake, pie and breakfast foods.

Those who are ill, when they find it expedient or necessary to combine concentrated starches and concentrated proteins, should use as their starches white potatoes, sweet potatoes or yams. It is easy enough for them to take their grain starches at noon with plenty of vegetables; then they can have another starchy meal in the evening by taking potatoes and proteins. For breakfast they can generally have one of the best meals in the world, fruit and milk.

Please do not think when fruit and milk are advised that such a meal lacks nutriment because that need not be true. Ripe bananas, raisins, figs, dates and prunes are very nourishing. A meal containing milk, baked apples and all the raisins desired is not only tasty but contains an abundance of calories.

The sick are not the only ones who have to be careful about combining their foods. For many years an insurance executive consulted me regularly for the purpose of remaining in health, a far more intelligent way than going to the physician only when ill. During nineteen years he remained well and he was not in any sense a sickly man at any time, but he was a highly sensitive one.

HE WAS fond of a breakfast of a large glass of orange juice, two slices of buttered whole-wheat toast and a dish of stewed fruit, but every time he ate such a meal he was uncomfortable for hours, having a little indigestion. He could take bananas and toast with impunity, but he lacked the ability fully to digest cereal starch taken with a highly acid fruit. This is not an isolated experience. Hundreds of such instances have come to my attention during the past thirty years, many of them being patients. Eating is a rather individual matter because all human beings have peculiarities. It is impossible to give detailed rules that will fit everybody.

If you should encounter the extreme statement that proteins and starches cannot digest together, please remember that it has no scientific backing. In the upper part of the small intestine, starches, proteins, fats and sugars digest together, for the small intestine has been provided with digestive ferments, coming from the intestinal walls and the pancreas, which take care of the food compounds just mentioned.

Healthy individuals need not be shackled by the limitations of the sick in their meals, but those who are ill should remember that the simpler the meals the easier they are to digest.

PHYSICAL CULTURE'S DIRECTORY OF HEALTH FOOD STORES

These merchants are worthy of your trade. They sell Physical Culture Magazine, promote better living, and are loyal to our ideals.



At their store, Health Foods Distributors, 123 East 34th Street, New York City, Henry J. Aitschuler and Hedwig Rollman cater to a clientele drawn from Park Avenue to Long Island. Becoming interested in health foods in Europe more than fifteen years ago, Henry Aitschuler has put all his knowledge and efforts into this store which he took over only last August 5th after Rollman interested him in actively participating in the industry. He is busily engaged in mailing out over 15,000 letters introducing a 112 page catalogue which he feels will be a major factor in increasing sales volume. The shop is stocked with almost every known health food to fill the needs of thousands in New York who have come to recognize health foods as a necessary part of their diet.

Edward Neumann's modern health food store at 25 East Grand River Avenue, Detroit, Michigan, featured below, is the result of 46 years in the field. Since early in 1912 when he opened his first health food shop, Ed Neumann has been one of the leaders of the health foods industry. As an unusual service of his business, he features attractively packed baskets and boxes of food delicacies for those of his clientele who need special foods for "restricted" diets.



Where to Buy Natural Foods

Partial List of Members, National Health Food Association, Additional Names will be included from month to month as dealer members are qualified. Look for the store near you. If no store is listed near enough for you to trade in person, write to some of those nearest you for catalogue and price list. Most health food stores also sell by mail.

<p>ARIZONA Bopp Health Food Store, 55 East Broadway, Tucson CALIFORNIA Burbank Health Store, 144 W. San Fernando Blvd., Burbank Fresno Health Foods, 1219 Van Ness Ave., Fresno Monterey Health Food Center, 146 Bonifacio Place, Monterey House of Better Living, 1207 W. 6th St., Los Angeles Jones Grain Mill, 322 South Hill St., Los Angeles Riverside Health Center, 1655 Riverside Dr., Los Angeles Brunton's Pure Food Store, 151 S. Garey Ave., Pomona Modern Herb Center, 1334 F St., San Diego Rosenberg's Original Health Foods Store, 1120 Market St., San Francisco</p> <p>COLORADO Colorado Sanitarium Food Co., 433-14th St., Denver Nature Way Food Store, 423-15th St., Denver</p> <p>CONNECTICUT Nature Food Centres, Inc., 943 Main St., Bridgeport Nature Food Centres, Inc., 641 Main St., Hartford Nature Food Centres, Inc., 755 Chapel St., New Haven</p> <p>DELAWARE Natural Food Centre, 706 King St., Wilmington</p> <p>DISTRICT OF COLUMBIA Carlin Health Foods, 703 East Capitol St., Washington Good Diet Shop, 1226 H. St., N.W., Washington The Vita Health Food Co., 3040-14th St., N.W., Washington The Vita Health Food Co., Inc., 619-12th St., N.W., Washington The Vita Health Food Co., Inc., 1228 H St., N.W., Washington</p> <p>FLORIDA Chamberlin Natural Foods, 18 East Church St., Orlando Health Food Shop, 240 W. Adams St., Jacksonville Health Food Shop, 12 S. E. First St., Miami Health Food Store, City Market, Tampa Van Dyke Health Products, 125 Seybold Arcade, Miami Vitamin Food Shop, 23 So. Court St., Orlando</p> <p>GEORGIA Health Food Shop, 141-149 Peachtree St., Atlanta Rosendahl's, Auburn & Pryor Sts., Atlanta</p> <p>ILLINOIS Rodgers Cash Grocery, 701 W. Chestnut St., Bloomington Berhalter's Health Food Store, 1423 N. Clark St., Chicago Chicago Health Food Center, Inc., 19 E. Van Buren St., Chicago Chicago Health Food Center, Inc., 30 N. Dearborn St., Chicago Dahl Health Food Products, 4344 N. Western Ave., Chicago The Diet Pantry, 30 E. Randolph St., Chicago Eaton's Health Foods, Inc., 28 E. Van Buren St., Chicago Heinrichsen's Natural Food Store, 4747 N. St. Louis Ave., Chicago Kramer's Health Food Shoppe, 56 E. Randolph St., Chicago Logan Natural Foods, 2205 Milwaukee Ave., Chicago Maxwell Health Food Center, 404 So. Wabash Ave., Chicago Morton's Vital Foods, 19 N. Dearborn St., Chicago Poison's Health Foods, 1106 Leland Ave., Chicago The Health Food Shop, 55 West Van Buren St., Joliet Natural Food Shop, 138 South Madison St., Peoria</p> <p>INDIANA Bealer's Health Foods Stand 106, City Market, Indianapolis Keene Prescription and Health Food Center, Meridian & Ohio Sts., Indianapolis</p> <p>IOWA McCready's Health Food Shop, 308 Second Ave., Cedar Rapids Campbell's Health Foods, 521 Grand Ave., Des Moines Dr. Augusta Queckes Food Centre, 1209 Brady St., Davenport</p>	<p>KANSAS Peerless Health Food Co., 223 McCarty Bldg., Dodge City E. Thayer Ward, Health Food Dept., Wichita Rohrbough-Buck Dry Goods Co., Wichita</p> <p>MARYLAND Dr. Mason's Health Food Center, 202 Clay St., Baltimore Good Diet Shop, 232 Park Ave., Baltimore</p> <p>MASSACHUSETTS Nature Food Centres, Inc., 192 Massachusetts Ave., Boston Nature Food Centres, Inc., 72 Tremont St., Boston Nature's Way Foods, 1516 Hancock St., Boston Health Products Centre, 85 Bedford St., Boston Health Products Centre, 350 Newport Road, Boston Lucy V. Milton, 165 William St., Boston Modern Health Shoppe, 1350 Beacon St., Brookline Nature Food Centres, Inc., 674 Massachusetts Ave., Cambridge The Health Shoppe, 139 Rock St., Fall River Nature Food Centres, Inc., 201 Union St., Lynn Malden Health Shop, 490 Main St., Malden R. Allen Purdy, 5 Exchange St., Malden Tonge's Health Food Store, 1703 Acushnet Ave., New Bedford</p> <p>MASSACHUSETTS Modern Natural Foods, 262 Essex St., Salem Modern Health Shoppe, 4 Court House Place, Springfield Nature Food Centres, Inc., 1231 Main St., Springfield Nature Food Centres, Inc., 365 Main St., Worcester Clare Wall Inc., 184 Newbury St., Boston</p> <p>MICHIGAN Burgess Market, 21611 Fenkell Ave., Detroit Elizabeth Monaghan's Whole Wheat Cottage, 7630-2nd Blvd., Detroit Harwith Health Foods, 4804 Joy Road, Detroit Old Dan's Cafe Madrid, 1953 Michigan Ave., Detroit Edward Neumann, 25 East Grand River, Detroit Peeck's Health Foods, 24 Broadway Market, Detroit Peeck's Health Foods, 9979 Gratiot, Detroit Edwin Slayter, Wholewheat Bakery, 13000 Grand River Ave., Detroit Whole Wheat Cottage, 7630 Second Boulevard, Detroit Frank's Health Shop, 421 Harrison St., Flint Vita Health Food Shop, 16463 Woodward Ave., Highland Park</p> <p>Henry's Pure Food Shop, 249 Michigan Ave., West Jackson</p> <p>MINNESOTA Natural Food Shops, 816 La Salle Ave., Minneapolis Pavo's Foods, 12 So. 8th St., Minneapolis Health Food & Herb Shop, 6 West 6th St. Bldg., St. Paul</p> <p>MISSOURI Natural Food Store, 3623 Main St., Kansas City Natural Food Store, 4 E. 10th St., Kansas City J. E. Conrad Grocer Co., 301 S. Seventh St., St. Louis Krummenacher's Vital Foods, 1115 N. Union Blvd., St. Louis Midwest Health Foods Store, 1925 Cherokee St., St. Louis</p> <p>NEW JERSEY Olive May Co., 13 Washington Place, East Orange Zinn's Health Food Store, 194 Halsey St., Newark Vital Food Service, 72 Prospect St., Paterson</p> <p>NEW MEXICO Rader's Health Food Store, 203 1/2 W. Copper St., Albuquerque</p> <p>NEW YORK Health Food Products, 238 Livingston St., Brooklyn Health Fountain Shop, 112 E. Post Road, White Plains Universal Health Food Centre, 170 Ellery St., Brooklyn Mary B. Ball, 494 Franklin St., Buffalo Brownie's Natural Food Products, 21 E. 16th St., New York Health Food Distributors, 123 E. 34th St., New York Riedel Food Products Co., 847 Amsterdam Ave., New York Yorkville Health Foods, 331 E. 56th St., New York Rebecca C. Rochford, Natural Food for Health, 1118 Temple Bldg., Rochester</p> <p>NORTH CAROLINA Elliott's Health Foods, 317 N. Tryon St., Charlotte</p>	<p>OHIO Schauer's Health Food Center, 220 Third St., N. W., Canton Kelsch Health Centre, 6 East 9th St., Cincinnati Parks-Phillips Health Foods Co., 17 E. 8th St., Cincinnati Parks-Phillips Health Foods Co., 1542 Knowlton St., Cincinnati Spatz Health Foods, Inc., 607-9 Main St., Cincinnati Sanitarium Food Co., 112 The Old Arcade, Cleveland Roland F. Smith, Special Diet & Health Food Shop, 703 Race Street, Cincinnati Vitality Health Food Shops, 51 Old Arcade, Cincinnati Vitality Health Food Shops, 10309 Euclid Ave., Cleveland Vitality Health Food Shops, 318 Superior Ave., N. W., Cleveland Columbus Headquarters for Health Foods, 39-41 W. Long St., Columbus Markham's Health Food Centre, Arcade Market, Dayton Modern Health Food Shop, 11735 Detroit Ave., Lakewood 20th Century Health Food Stores, 423 Jackson Ave., Toledo Your Health Food Store, 324 N. Erie St., Toledo</p> <p>OKLAHOMA Tautcher's Natural Food Store, 1003 N. W. 10th St., Oklahoma City Akin Natural Foods, Inc., 722 So. Boulder St., Tulsa</p> <p>OREGON Brammert's Radiant Health Food Store, 811 S. W. Sixth Ave., Portland</p> <p>PENNSYLVANIA Thomas Martindale & Co., 25 No. 10th St., Philadelphia Oiney Health Food Center, 5537 No. 5th St., Philadelphia Tastee Soy Foods, 254 E. Girard Ave., Philadelphia The Vita Health Food Co., Inc., 22 N. 9th St., Philadelphia Donahoe's, 242 Fifth Ave., Pittsburgh East Liberty Health Food Shop, 5934 Harvard St., Pittsburgh Famous Health Foods, 14 W. North Ave., N. S., Pittsburgh Rothermel & Frey, 1 B. N. Ninth St., Reading Edward Haupt Health Foods, 241 W. Spruce St., Shamokin Natural Food Center of West Chester, 19 So. Church St., West Chester</p> <p>RHODE ISLAND Nature Food Centres, Inc., 211 Main St., Pawtucket Nature Food Centres, Inc., 94-96 Washington St., Providence</p> <p>The Health Shoppe, 96 Dorrance St., Providence</p> <p>SOUTH DAKOTA Health Food Shop, 119 West 3rd St., Huron</p> <p>TENNESSEE Natural Foods National Inc., 306 West Church Ave., Knoxville</p> <p>TEXAS Health Food Emporium, 1011 Fannin St., Houston Sunshine Health Food Store, 3704 Main St., Houston Casteel Health Institute, 110 E. Travis St., San Antonio Famous Health Service, 114 E. Jefferson St., San Antonio Perizon Health Food Shoppe, 1328 Broadway, San Antonio Pure Food & Health Store, Inc., 1225 S. Presa St., San Antonio</p> <p>VIRGINIA Health Food Center, 1012 King St., Alexandria</p> <p>WASHINGTON Merritt's Health Food Shop, 512 W. Champion St., Bellingham Brewster's Health House, 1621 Third Ave., Seattle Dr. McCormick's Natural Foods Co., 1918 Third Ave., Seattle Western Natural Foods Co., 1606 First Ave., Seattle Beem's Natural Food Co., 16 N. 4th St., Yakima</p> <p>WISCONSIN Maxwellian Co-operative Club Inc., 2030 West Wells St., Milwaukee</p> <p>CANADA Health Service, 11 Queen St., East, Toronto Honolulu Health Food Store, 925 Fort St., Honolulu</p> <p>ENGLAND The Midland Health Institute, 8 Elm Ave. & Mansfield Rd., Nottingham</p>
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Physical Culture Magazine now on sale in these stores, and at your regular newsstand.

These six Paramount girls have discovered that one good way to keep that streamlined figure—and, incidentally, to have a lot of fun—is to start a game of bowls. Judging by their smiles, everyone must have made a pretty good score. In action at far left is Gwen Kenyon, and below her Norah Gale sends the ball right at you. The line-up, from left to right, at the bottom of the page: Lola Jensen, Dorothy White, Margaret Randall, Nora Gale, Dorothy Dayton and Gwen Kenyon



Acme Newspictures, Inc.



Do Working Wives Lose Their Husbands?

(Continued from page 41)

made a sale over your quota in three months!" The angry words poured from my lips in a rush.

His face grew dark with resentment. His hands clenched at his sides. He left the house swiftly, banging the front door behind him. But there was a curious look in his blue eyes as he strode from the room. A hurt, puzzled expression. As if he despaired of ever explaining his side of things to me. I wished that I had not said so much.

He did not come home that night. In the morning I met Madge Clark on the way to the station.

"Jim's certainly hitting it up high and handsome!" she laughed. I asked her to explain. She admitted seeing Jim with Betty last night. The Warrens' house was across the street from hers. He was apparently quite drunk. The Warrens were away and Betty was alone in the house. There had been a party until all hours of the morning. As soon as I reached town I called Jim at his office.

"Mr. Meredith will not be in today," the switchboard operator informed me.

HE DID not come home that night or the following. His office did not know where he was. I lived through five frantic days and nights. My anxiety grew stronger than my pride. I finally called the Warren's house. Betty seemed surprised. She had not seen him since the night of the party.

Then on Monday night I came home to find him in bed, dead drunk! The children seemed frightened. They had never seen him like this before. I felt panicky. Had he been drunk all week, I wondered? It was so unlike him. He had never done anything like this before. Was this another phase of his revolt about my going to work? I suspected that it was. When he awakened, I spoke plainly.

"Jim Meredith, don't you ever dare do this again! Do you understand? Making a spectacle of yourself before the children! Worrying the life out of me all these days and nights! I was about to call all the New York hospitals to locate you. I've been nearly frantic!"

He mumbled something about having an awful head. He looked terribly. He was haggard, unshaved, his eyes bloodshot and sunken. I felt secretly worried about him. He did not have the constitution to stand a spree of this kind! He would be sick for a week.

"Would you like something to eat? Some broth? Orange juice?" I asked, more mildly. I knew he was utterly miserable.

"No, thanks, Ann." He sounded very meek and humble.

I brought him a pitcher of cold tomato juice and an ice bag. He drank the juice gratefully. I tied the ice bag around his head and propped his pillows under him.

"I'm sorry, Ann," he said after a moment. "I'm afraid I acted like a prize fool." He kissed me good-night.

Things went more smoothly after that. Betty left to visit her uncle's dude ranch in Wyoming for an indefinite period. The Warrens had settled her infatuation for Jim in their own way!

Jim and I never discussed his spree. I knew he was secretly appalled by the gaping hole in our joint checking

account. He had spent money like water while he was drunk. Also, he had lost a lot of business while he was away. He was behind in his quota for not only the week that he had been drunk, but the following one. He had been quite ill after the spree, and unable to work. But we were reasonably happy together again. He gradually became reconciled to my holding a job.

Then in March Tom and Jack came home from school with a thick batch of circulars for summer camps. They were nine and ten respectively and big for their ages.

"I'm going to Camp Wassumsic, Mom," Tom announced.

"No, you're not. You're coming with me to Camp Wyomissig," Jack corrected.

They were taking it for granted that they were going to camp this year! Jim's glance met mine across the dinner table. We had promised them last summer. It had been unbearably hot. The boys hung around by themselves, apathetic, miserable. There was nothing to do. All of their friends had gone away.

"We'll have to think about it, boys," I temporized.

"But Mom, you promised—" Tom exclaimed in shocked surprise that there was any question about their going this year. "You said—"

"Never mind what I said now. Eat your dinner." I could see Jim's mouth tightening in a grim line. It would cost about sixty dollars a month apiece to send them to camp. Then there were all the camp extras, the cost of their railroad tickets, and all of their uniforms and equipment to buy; blankets, duffle bags, ponchos, etc. Jim and I had thrashed it all out the year before. It would cost about two hundred and fifty dollars before we were through.

"IT IS out of the question, Ann," Jim announced firmly after the children had gone to bed.

"Jim, we promised them! We can't let them down!"

"Well, I haven't got the money. I don't see it in sight. Business is almost at a standstill."

I was familiar with that refrain. I had heard it almost daily for three years. Yet, I could not help reflecting bitterly, if he had not gone off on that inane drunken spree we might have been able to manage it! But I said nothing. It would only lead to a painful scene. I resolved to go and see Mr. Lewis and ask him if there was any way in which I could make some extra money.

I explained my problem to him frankly.

"Do you think you could handle the Junior Miss department?" he asked after a long silence. "Miss Michaels, the buyer, needs some help. We're letting her assistant go."

I assured him that I could. My senses reeled at the thought of the extra work it would entail. It was one of the busiest departments in the store. But he had promised me forty dollars a week. I mentally did some arithmetic. If I could save sixty dollars a month for the next three months, and Jim could raise the rest—but suppose he refused? I knew he might. He was finding it a struggle to take care of his life insurance premiums and the last payments on the car.

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"Mr. Lewis gave me a raise," I began after dinner when we were alone. "I'm in charge of a new department now."

"Oh," Jim flushed painfully.

I was surprised by his reaction. Why should he mind my getting a raise? He was silent and motionless for a long moment.

"You didn't think I'd be able to get the money to send the boys to camp, did you?" He spoke slowly and with effort, his face averted.

"But you said—"

"So you went to Lewis with a tale of woe," he concluded.

WHEN he put it bluntly like that, I felt mortified. I had not intended to belittle him.

"Darling, you don't understand," I cried and ran to him.

He did not respond to my embrace. "I'm afraid I understand only too well, Ann," he said softly.

He went to the hall and put his hat on and went out. I wondered if he would get drunk again. But he didn't. He came back after a little while, read the paper, and then came up to bed. He seemed rather limp and quiet. I tried to explain. He wouldn't listen. During the next few weeks I noticed a sharp change in him. He slumped down in a lot of things. He grew careless about shaving. If I didn't watch him I found that he would wear the same soiled shirt day after day. He wore his suits until they were soiled and mussy and he wouldn't bother having his shoes shined. I suspected that he was letting his work slide, too. At the end of the month he was evasive about whether he had made his quota or not. I knew then that he hadn't.

At this time he developed stomach trouble. He was always dosing himself with something. His eating habits nearly drove me to distraction. He would come home nibbling peanuts before dinner.

Then he wouldn't feel hungry and would barely touch the food on his plate. He would fill up on bread and jam instead. In an hour he would be back in the kitchen looking for bicarbonate of soda. Then he would be up two or three times in the night with cramps in his stomach. Of course in the morning he would wake up tired and irritable, and totally unfit for work. He would lose his job if he didn't pull himself together soon!

Then in April a new family moved into the house next door. They were Southerners. Mrs. Barnes was rather attractive, slender, with delicate features and pale honey-colored hair. She wore soft filmy things that enhanced her femininity, gay frilly house dresses at home, a ribbon in her hair. When I met her on the street she was always immaculately groomed and smiling. I liked her very much.

Her son, Ted, was the same age as Jack, and the boys became inseparable. Hugh Barnes traveled for a silk firm and was away a good deal. Before I knew it all three of my children were practically living at her house.

"Just shoo them out when they get under-foot," I urged her.

"Oh, I love to have them around," she laughed. "Down South our house was always running over with children. Our cousins' children, their friends, and the neighbor's children. I've missed them."

She had the Southerner's gift for real hospitality and friendliness. She

thoroughly enjoyed having lots of people in the house, and she was neighborly and loved visiting. She would come over to the back door when I was washing the dishes after supper, gather up a towel and help me dry them before I could say a word.

"Now if there is any errand I can do for you tomorrow—" she would say. She seemed to sense the strain I was under and the endless demands upon my time at home. "You might as well let me have the boys' socks while I'm mending Ted's. I haven't a thing to do this afternoon." I appreciated her thoughtfulness. She fed Jack and Tom crackers and milk in the afternoon when they came home from school. Once when Tom had to have a tooth pulled, she took him to the dentist for me and put him to bed in Ted's room where she could keep an eye on him.

"Julia makes the grandest chocolate cake," Jim remarked one night at supper time. "I wish you would get the recipe from her."

I was startled. How did he happen to know her first name? I repressed a momentary feeling of uneasiness.

A FEW days later I came home earlier than usual. I had slipped and twisted my ankle during the hectic noon rush hour in the store cafeteria. It had swollen. Miss Michaels thought I ought to go home. The stillness and coolness of the house seemed blissful after the store. It had been so hot all day. And Miss Michaels had behaved like a maniac all morning because a shipment of dresses had not come in.

I stretched out on the bed and rested. As I lay there, I could hear the children's voices at the back of the house.



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Then there was a deeper voice. That was Jim! He must have come home early. I limped to the boys' window at the back of the house.

There, under a big elm the lawn adjoining ours, sat Jim, reclining in a comfortable wicker chair, Julia Barnes beside him, our children playing Monopoly on the grass at their feet. Jim was wearing a crisp white linen suit! He must have changed his clothes since he had come home. His dark hair was smoothly brushed back and gleaming. There was a low wicker table between them covered with a white cloth. On it were glasses, a large chocolate cake, and a glass pitcher of milk. Julia looked more fragile and lovely than ever. She was wearing a thin summer dress of pale blue and her silky honey-colored hair was tied with a blue ribbon, school girl fashion. There were sewing things in her lap. She was hemming lace on a child's party dress. She looked the picture of tranquil femininity. Jim seemed to be basking in her presence.

THE scene gave me a start. Had Jim been making a habit of coming home early in the afternoons lately? How well he looked! It was an age since I had seen him like that, relaxed, happy, at ease. I limped to my dressing table intending to fix my hair and join them. My reflection made me thoughtful. My face was so thin and taut! I was still wearing my black store dress. The white pique collar was crumpled and soiled. My hair was stringy and hung in wisps around my ears. I peered into the glass. My skin had grown sallow and rough, and there were sharp lines around my mouth. My eyes looked pinched and tired. I gave up the idea of joining them.

A few nights later Julia invited us both to dinner. The day proved scorching with the temperature around ninety. The crowds at the store were maddening. The heavy foul air made my head swim. A stock girl placed a dress that had been sold on the floor racks, and it was sold again. It was the only one left. I missed the six-seventeen train. The next train was at six-fifty. I was exhausted by the time I arrived home. Jim was furious about my being late. We were keeping the Barnes' dinner waiting.

"You might at least come home early when you know we are going out for dinner!" he stormed.

I made a hurried toilet. My face was still hot and streaked with perspiration from hurrying when we arrived at the Barnes house. I felt breathless, irritable. My feet and legs ached like a toothache from standing all day. Julia met us at the door. She looked entrancing in a pale chiffon dinner gown, a cool crisp spray of gardenias at her waist. I was aware that Jim's eyes glowed at the sight of her. Her gown was inexpensive, but she was immaculate, her fair hair shining and beautifully arranged, her skin clear and fresh looking, her gray eyes sparkling and alive. I couldn't help reflecting that it wasn't difficult to achieve a glamorous appearance if one had all afternoon in which to lie around cold creaming one's face and resting! But she was so gracious and charming I brushed aside the feeling of resentment.

"You must be tired, my dear," she said quietly, her eyes searching mine. She drew me down into a comfortable chair and sent Hugh in search of a drink for me. The rest of the party was huddled in groups in earnest conversation.

"Do rest. We can have dinner any time," Julia urged.

The atmosphere was so relaxed and pleasant I sank back in my chair and let my aching body rest. It was wonderful to just sit still and not have to hurry for a little while. My eyes roamed over the room. The furnishings were inexpensive, but selected with such good judgment and taste that the room had a cool luxurious tone. It invited you to rest and be at ease. Hugh Barnes brought me a cool drink and settled beside me. He was a plain man, but he had a dry wit that was delightful. The evening passed quickly. When we returned home a little after midnight I was aware that I felt more refreshed and rested than I had in months. Julia had a knack of making people feel at ease. Perhaps, because she was so tranquil herself. And why not? Hugh did all the worrying for both of them about finances and making a living. She could rely on him.

"Why don't we throw a big party next Sunday?" Jim suggested exuberantly at breakfast in the morning. "We haven't had the crowd in the house in an age. We ought to introduce Julia and Hugh to everybody."

I knew we should. But the very thought of all the preparations for a party such as Jim had in mind, made me feel limp. Glasses to be hauled down from the top shelf of the kitchen closet and washed, silver to polish, table linen to be washed and ironed, sandwiches and appetizers to be made, flowers to buy and arrange in bowls, and the entire first and second floors overhauled and made shining clean! Man-like he hadn't the faintest idea of the amount of work even a simple little affair would mean.

"Oh, I couldn't, Jim."

"Why not?" he asked, crestfallen.

"I'll have to work late Saturday night. We are taking inventory. I'll be a wreck on Sunday. I'm planning to spend the whole day in bed."

"Oh, lord!" he exclaimed impatiently.

"Why don't you move down to the store? Why bother to come home at all?"

I CHECKED the words that came to my lips. We would only have a scene.

"Perhaps we can the following week, Jim," I suggested mildly. But the moment I had spoken I wished I hadn't. The contrast between our house and Julia's was so sharp. The whole place looked so bleak, neglected. The hallway was cluttered with the boys' tennis rackets, baseball bats, mits, school books. For the first time I noticed how faded and dusty the living room curtains had become. There was a gaping hole in the upholstery on the divan. Jim's reading lamp had been knocked over and the frame was broken. Pearl had forgotten to water the big fern in the front window and its leaves were yellowed and forlorn looking. We needed new rugs. A feeling of dejection came over me. How would I ever find time to go shopping for curtains, rugs, and all the little things that had worn out and needed replacing?

I lived with a chronic feeling of being hurried. I had to work on a rigid schedule to get everything done. I rushed through the preparations for breakfast, ran for my train, shoved my way through the crowds in New York to reach the store, strained every nerve to get the stock ready before the store opened, and once the crowds poured in, I had to keep alert and watchful all day. I discovered that the



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reason why Mr. Lewis gave me such a generous raise in salary was because I was taking over the work that had been done by two people previously!

I was barely able to keep up with the demands upon me all day. At night I hurried to catch the 6.17 in order to get dinner on the table by seven-thirty. Jim and the children resented a later dinner. After dinner I had to make every minute count. There were so many little chores to do before I could go to bed! An evening at the theatre or even at the movies meant that the chores accumulated and had to be done the following night. Jim couldn't understand this.

"We never go out any more!" he complained. "Let Pearl do them," he would suggest. He didn't realize that there were a good many things one couldn't trust to a part-time girl.

One night a week later I came home to find the children wild with excitement.

"We're going to the circus!" Tom announced jubilantly.

"It's Ted's birthday. Dad is taking the whole crowd of us on Saturday, Mom," Jack explained. "Fifteen all together!"

I tried to sound enthusiastic. I wondered, however, where Jim was going to get the money to take fifteen youngsters to lunch and the circus. He had been letting the bills slide. The milk bill was two months overdue.

"Gee, Mom, can't you come?" Tom queried, his brown little face scrawled up in a momentary anxiety.

"No, dear, I'm afraid not."

"Mrs. Barnes is coming. She promised. Can't you come this once?" he insisted.

I WONDERED how one explained to a nine-year-old that one couldn't leave one's job to go to the circus. Saturday was always the busiest day at the store. A hurt, unhappy look came over his face. I could see that he simply thought I didn't want to go.

"Mrs. Barnes is going to wear her best dress, just to please us!" Tom explained, pleading. "Won't you dress up and come, too?"

I managed to say "no" again, but I felt like crying. I couldn't possibly take Saturday off. There would be two new sales girls to break in and train. They would have to be watched every minute.

As the weeks passed I found the children's blind adoration of Julia Barnes, hard to take. They quoted her opinions at the dinner table, recited in detail her methods of keeping house, exulted over her cake and cookies, and gulped down the last mouthfuls of their dinner in order to rush back to her house and finish the game they had been playing with Ted.

I realized that their devotion was natural. She was always there ready to answer their questions, amuse them, and satisfy their wants. She enjoyed having them around. They knew it. She often took Mary on shopping expeditions on Saturdays in New York. One afternoon she kept Mary at home from school because she was coming down with a cold. She diverted her by showing her different ways of dressing her hair. Mary had a thirteen-year-old's preoccupation with movie stars, their clothes, coiffures, and private lives. She was beginning to feel conscious about her own appearance, and spent hours talking to Julia about clothes.

I felt grateful to Julia for giving Mary this attention. There was always

so much to do when I came home at night that I had to forego the luxury of long rambling talks with Mary about the current fashions, her school friends, and newest interests. But I found the children's silent criticism of me painful. They didn't understand! And there seemed no way of making them understand.

I was aware that Jim had become Julia's abject slave, too. She entertained a good deal for she had any number of sisters, brothers, and cousins from the South living in or near New York. She loved to give parties for them. Every Sunday afternoon she held open house. Jim offered his services as general handy man on these occasions. Sometimes Hugh was home, and often he was not. He was away a good deal. Jim acted as host during his absences. When I went over to join the party I invariably found Jim in the kitchen, a white apron tied around his middle, mixing drinks.

One afternoon I arrived in time to see him beating the white of an egg for a cake icing for Julia. He seemed to be enjoying himself hugely. On Saturdays he drove Julia and the children to the beach for picnic and swimming. Sometimes Lillian Markoe and her husband and children joined them and they made an all day party of it.

"YOU should see the way Jack can dive, now!" Jim exclaimed one night at dinner. He and the children were rosy and glowing from their outing. "Julia thinks he has the makings of a champion."

I wished that I had seen Jack diving. I wished that I had spent the afternoon lying around the beach with the children, resting, and enjoying the sunshine and salt air, instead of rushing madly all afternoon in a hot, badly ventilated room crammed with perspiring women who all wanted attention at once and who expected nothing less than servile acquiescence to their wants.

I was aware of a growing inner conflict about the situation. I was sick to death of hearing Jim and the children chant Julia's praises. The very sound of her name made me feel irritable. I was tired of hearing about her talents as a housekeeper, her virtues as a wife, her patience and wisdom as a mother. I felt the wrath that every business woman feels about being compared as a mother and housekeeper with a wife who stays home. It wasn't fair. My job drained my energies. It was a desperate struggle to keep up with the housekeeping and the demands of the children upon me much less attend to these things with the shining perfection of a wife who stays home.

Yet, I felt a very warm gratitude to Julia for all the things she did for the children. I knew that the attentions that Pearl gave them during my absence every day did not suffice. Children do not respect a servant. But I resented working to the point of exhaustion day after day, trying to earn the extra money to give the children advantages, only to have them and Jim hold Julia up to me as a model of perfection at the dinner table every night.

In July the boys renewed their pleas about going to camp. I knew it was useless to discuss it with Jim. He had been behind in his quota of sales for months. The chronic stomach trouble he had had earlier in the spring had depleted his energies. He had not been equal to the struggle for extra business. Lately, he had simply been taking things easy. I finally borrowed the

money from a loan company and enrolled Jack and Tom at Camp Wasumpsic. Jim reacted as I expected.

"Oh, that's great! Loading us up with a debt that will take six months to pay off!" he exploded bitterly. "What do you suppose kids used to do all summer before camps were invented?"

"But all the children in the neighborhood—"

"Are spoiled brats," he finished for me. "Just because a lot of people around here act like fools about their children is no reason why we should go nuts, too!"

"But Jim," I began again. "Julia isn't sending Ted to camp. She has some sense!" he interrupted.

He got no further. Before I knew what I was doing I went over to him quickly and slapped his face.

"Don't you dare mention her name to me again! I'm sick of it, you hear? Julia this! Julia that! Morning, noon, and night. Julia has some sense! Remarkable! You seem to be forgetting that Julia Barnes does not run this house. Nor help you pay the bills!" I flung at him.

He seemed startled. He flushed painfully.

"And in case you've forgotten it, she is not your wife nor the mother of your children!"

I felt so furiously angry, the words rushed from my lips. For months I had steeled myself against saying these things, trying to be patient and reasonable for the children's sake. But his oblique criticism released them.

Jim was silent. Then he wheeled around suddenly, his back toward me. "I only wish to heaven she were!" he said hoarsely.

I felt stunned. There was a haze before my eyes. I reached for the table to steady myself. He was just angry, I assured myself. He was just talking. He couldn't mean that! He only wanted to hurt me. I ran from the room.

We avoided each other after that. Outwardly things went on as if nothing had happened. The children played with Ted Barnes as usual. Hugh and I took the same train in the morning occasionally. I saw Julia from the distance once or twice but evaded seeing her face to face. Jim played bridge with them now and then. I pleaded fatigue.

BUT in the back of my mind I knew we should move away in the fall when our lease ran out. Jim's feelings might become serious toward her. But how could I uproot the children? Jack was a member of the student council. Mary had been made a feature writer on the school paper. Her teachers thought she had talent for writing. Their school activities meant everything to them! Perhaps I could find another place in Hamilton?

I made inquiries at the real estate office on my way home one night. I finally located a small place on the other side of the town. The rent was the same as the amount we were paying. But we would be farther away from the station. That meant I would have to get up earlier in the morning in order to get the 8.03. The extra ten minute walk would be a trial on cold winter mornings. And how would I ever find the energy to pack and unpack everything in the house and get settled in a new place while holding my job? I abandoned the idea of moving.

Then one night I had to work late. When I came home I found the house deserted. I went to the window of the



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living room that looked out on the Barnes' house. I listened for the sound of the children's voices. It was an extremely hot night and very still. I didn't hear them. I glanced at my watch. It was ten minutes past eleven! They ought to be in bed. Julia probably knew where they were. There was a light in her living room.

I started across the lawn wearily, wondering why in the world Jim could not get them to bed when I had to work late. Then I stood stock still. There were voices on the side porch. Jim was speaking.

"Oh, my darling. I can't stand this any longer. I love you so!" His voice was warm, husky, tense.

There was a sudden movement on the porch. Then silence. His words were like a swift blow between my eyes. A sick tattoo began in the pit of my stomach. There was a curious singing sensation in my ears. I felt rigid and taut from head to toe. I stood listening to the silence, helpless, unable to move. The night was filled with the faint humming sound of crickets and

thousands of tiny insects in the garden beyond. The street light made glimmering patches of light through the trees. A twig crackled under my foot. It was like a pistol shot in my brain. I turned and fled.

With trembling, panicky fingers I groped in the dark for the knob of the kitchen door. Inside, I pressed my hands tightly against my face. Dear God, he was in love with her! He meant what he said the other night! What could I do? But I must do something! Perhaps, if we moved away! Perhaps, if we could make a fresh start!

But how could we move away? The children would never forgive me. Tommy expected to make the football team next fall. Mary was in love with Bill Dennett, the banker's son. He had been hanging around every evening lately. But how could I live through another winter of hearing, "Julia says—" "Julia does it this way." "Julia thinks—"? How could I face living with Jim, seeing his face across the dinner table every night, knowing that he was hopelessly in love with her?

Has Ann's brave fight to save her husband from bankruptcy only helped her lose him to another woman? Does Jim finally turn to the lovely Julia Barnes for the love and companionship which he has always had from Ann? The climax of Ann's story—which might be the story of any working wife—will appear in the February issue of PHYSICAL CULTURE, on sale everywhere January 5th.

My Victory Over Infantile Paralysis

(Continued from page 39)

to bear by Hazel. For example I would sit up and try to lift my arms from the shoulder. At first Hazel had to do the lifting, then I made myself do the work. I soon found that when my will caused a muscle to contract, even though it might be ever so slightly, the cells in that muscle responded more quickly than when the motion made was passive.

"Let me do it; don't touch me; don't help!"

Oh, I could talk on forever concerning the step-by-step return of my powers. I was eighteen months in bed. Some physicians had told me I would be there for the rest of my life.

Stay in bed when my faithful wife was giving her all for me? Stay in bed when I knew, though *she* would not admit it, that our savings were nearing the vanishing point and our children were going without the privileges we had planned to give them? Stay in bed!

Hazel, Howard, Jean and—the car! Four reasons for complete recovery! I lay in the tub of warm water and exercised daily, rejoicing as I saw life returning to muscles which had seemed to be dead. I eagerly looked forward to the massage which each morning and every night set the blood tingling as it flowed more quickly through my stricken body. I bent my knees, lifted my arms, and at long last wiggled my fingers and my toes.

Every month my muscles were examined by the doctor to see what progress they had made. Sponge baths, alcohol rubs, hydro-therapeutic treatments, exercises, massages, oils rubbed into muscles, heat, and will power: They were accomplishing wonders.

But my doctor grew a little discouraged. "You will never walk," he one day declared.

"My check book, please, Hazel," I cried. "Pay the doctor what we owe him. He is through!"

Could I sign a check? No, not then. I could not grasp a pen nor hold a pencil. But I could use the stiff, spread fingers of my left hand for typing. Oh, the joy of typing letters with your left hand after eighteen months of inability to express one's self on paper! Slow work it was. A few taps, then a long rest. But the portable attached to a board across my wheel-chair was a comfort and a constant inspiration.

I wrote to other victims of my dread disease. Men, women, youths and children in all parts of the country heard from me. Hospital superintendents sent me the names of these patients and requested that I give them some encouragement, some goal toward which to work.

It was a joy. Many were quite unable to answer but I understood and continued to write just the same. Those who could reply begged for more frequent letters and for some extra ray of hope.

"NEVER give up!" I told them. "Refuse to resign yourself to chronic invalidism. Make an effort to exercise when the doctor permits you do so, and bring your muscles back to health."

The doctors told me that I would never get out of my wheel-chair. I said, "I will stand, I will hold crutches, I will walk!" And I did! Two and a half years after I was stricken I got out of my wheel-chair and began to walk.

To be sure it seemed hopeless at first. Hazel and the children, with the doctor's help, put one crutch under one arm, then adjusted the other. Said I, "If I could only swing this foot, I could make a go of it. I have mastered my hands; now I must master my feet! I must and I shall walk!"

It was a breathless moment. I was standing with my back against the wall, clutching my crutches.

"Stand back!" I said in a determined voice. "Stand back, and do not touch me. I am going to take a step."

Now muscles have two important functions; that of creating movement and that of giving support. In standing or walking the function of support predominates. It requires a great deal of strength in the muscles of a leg to support the body while the other foot is in motion.

I perhaps failed to realize this. Anyway, as I started to take a step, my support completely failed and I fell forward headlong. I struck the edge of a table and was knocked out cold by the fall.

When I came to I was lying on my bed to which I had been lifted. Hazel, white faced, the children terrified, the doctor anxious, were bending over me.

I raised myself up. "Give me back those crutches. I am going to try again."

"Oh, no!" said the doctor. "It is useless. You never can do it."

"John is right!" Hazel cried. "If he gives up now he will never have the courage to try again." (Hazel had read my thought).

HOW did I master my hands so as to grasp the crutches? Let me tell you. When the doctor suggested knitting to exercise my fingers I went him one better. Sit in a wheel-chair on the front porch, knitting? After all I was still a man.

So I said to Hazel: "Will you get me some very soft ply wood, a knife and a coping saw, please?"

"Why, of course I will," she said with a bright smile, which I later learned was not a natural one. For the day I made this request the family exchequer showed a balance of exactly twenty dollars. Twenty dollars left out of savings which had been several thousands in the fall of 1931.

A teapot stood on the table. On the tray of my wheel-chair was the soft ply wood and the saw. I had never carved nor whittled in my life. I was no artist. But I tried to make a teapot of that board.

Did I succeed? I must have succeeded, since today, in thousands of homes of this and other countries, my little wooden teapots adorn walls and serve as things of usefulness and beauty.

But again I get ahead of my story. One afternoon my children chanced to bring me some pine cones which they had picked up.

"See, Dad," said my daughter, "when you hold the cone cross-ways, like this, it looks like a bird with ruffed feathers!"

"So it does, Jean," I agreed. "It looks like a pheasant. Go get me a stick! We'll give him a leg to stand on."

Jean ran off and brought me a long, round, slender piece of wood which I cut down to a point. I mounted the pine cone on it, cross-ways, whittled out a head and tail of wood, and fastened them to appropriate parts of the cone.

"Stick it down into the ground, Jean, near the flower bed where I can see it."

Into the yard went the pheasant, and that same day three more pine cone pheasants. The children seemed to like them.

Two days later a lady stopped and came up to the porch where I was sitting.

"I hope you will pardon me," she said, "but would you please tell me

where you buy those cute little birds? I want to get some for my garden."

I sold her the four for one dollar. That was the beginning. I sold all I could make, and was soon able to raise the price on them. It became noised about that I also made kitchen gadgets. Gaily colored wooden teapots with hooks on which to hang pot handle pads, and shelves for salt and pepper shakers.

I shall never forget the thrill when one day I actually sawed out twenty teapots! It was slow, tedious work since every few moments of action had to be made up for by many moments of rest.

My son and my daughter became my traveling salesmen. They took samples around to the guests of the summer colony where my family and I were staying. They took orders for my hand-made, hand-painted novelties. They walked miles and miles every day.

I remember so clearly one day when Howard, then fifteen years old, ran all the way home to tell me with joy of the placement of a "wholesale order." A florist wanted twenty of my birds!

A department store bought the first real wholesale lot. Its choice was the teapot. Every one of these I sawed out by hand. I had to work hard to meet the growing demand.

And still, perhaps oddly enough, I looked upon my work as a tide over until such a time as I could go back to my former business. It took me a year to realize that opportunity had opened a new door.

My gadgets grew in variety and number. Containers for salt boxes, cleansing agents, soap chips, matches, and used razor blades were suggested, requested, and made. Flower pot racks for the wall and flower pot holders for tables, the pot and container gaily painted in matching or contrasting colors, quickly became "best sellers." Then followed tea trays with places for dishes and glasses, coaster racks, fitted with twelve bright coasters to protect polished tables, recipe boxes, wall plaques, and bird houses.

I AM often asked "What is the real secret of your phenomenal success?" This question is prompted by the fact that I have a factory running full time, I have salesmen on the road, I am making a comfortable income and my gadgets are selling throughout the entire world. New Zealand, the Hudson Bay Company in Canada, Fairbanks, Alaska, the Panama Railroad all along the canal, and Holland across the seas sell souvenirs which bear on their backs the stamp "Made by Pine Pheasant Novelties, Chicago, Illinois." Do you recognize the "Pine Pheasant" part?

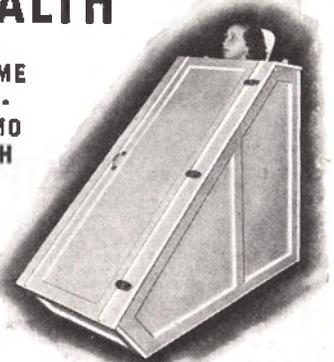
What would I offer as the secret of my success? Just this: "Get into a business of your own, no matter how small it may be, and stick with it until you succeed. Don't go after the big things; take the little things and make them big."

I am frequently told that it is an indefinable something—a certain personalization—that makes my products different. Well, they are original through force of circumstance. I used to say, "If I only could get out and see what others are doing!" But I couldn't. I had to stay home and originate—never copy.

My business may owe its growth in part to the fact that the personal touch does not end with me. My wife, who in such a very great measure is responsible for my success in overcom-

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TURN TO PAGE 83

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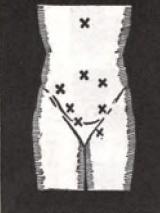


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My daughter, Jean, after finishing high school at sixteen, took two years' college work preparing herself to take over the keeping of the books and the secretarial work of the "firm." To her I dictate scores of letters daily in reply to those which come to me from the ends of the earth. Their contents run from clear, concise orders for "so many hundreds" of this or that product to pleas from paralysis victims for some words of encouragement and hope.

And I always have a message for them. It is this: "Here am I who have been to the absolute depths—who struck the bottom of the pit some call despair—but I have managed to climb back again.

"The doctors told me I would never leave my bed. I spent twelve months in a wheel-chair. They said I would certainly never move my lower limbs. I walk now without crutches. I waited six and a half years to drive my car. Now I cross the continent acting as my own chauffeur.

"Refuse to give up! Never lose courage! Hitch your wagon of faith to the radiant star of good health and keep your eyes on the goal of its attainment.

"You can have health again if you will but tap your hidden resources of God-given strength and vigor.

"Fight on to victory!"

Give Your Lungs Breathing Space

(Continued from page 43)

have proved this statement beyond a doubt.

Some people are endowed with splendid chests and lungs from birth. Even without any effort at cultivation, these fortunate individuals take the leadership in play, sports, athletics and public affairs. They are the builders, promoters and untiring progressives. Others may be brainier, content to represent the quiet, passive, student type—and constantly dismayed that they occupy a minor niche in life—while the big vital fellows buy their brains and use them as stepping-stones to their own successes.

JUST how far can one go towards building lung power and chest development, comparable to the naturally inherited type? Is it possible for self cultivation to surpass the physical qualities that are inherited?

The answer to this is yes and no! Ambiguous? Well, we'll try to explain. Good seed planted in an impoverished soil will not thrive as well as inferior seed planted in a fertile medium. If a person has inherited a body with sufficient glandular and organic strength to respond to external cultivation, then the possibilities of self-improvement are well nigh unbounded. If however, we have a shattered glandular equipment, and various handicaps that were caused by the sins of our fathers, then we will have to hurdle the obstacles with greater tenacity. Our best efforts for self improvement may then simply result in keeping ourselves in fair condition—or they may produce the super-attainments that may be called *miracles of self-cultivation!*

Some of you who read this will remember back to the automobiles that had to be cranked by hand. The cars of today have self starters and in every way facilitate luxury and comfort. The makers pander to the laziness of modern humans. Some people are self-starters, others have to be constantly cranked! Yet some of the self-starters are easy stoppers, and fail to persevere, whereas those harder to start may keep doggedly at a desire until results are achieved. Thousands of men and women start in each year to improve their physiques, but only a few have the tenacity to stay with it until their goal is realized.

How many lungs have you? "Why—two, I guess." In a way you're right,

then in another you're wrong. It is true that we have a pair of lungs, consisting of three lobes on the right side and two on the left. It is not so far fetched, however, to say that all the myriad cells of our bodies are equipped with invisible lungs.

These microscopic lungs depend upon our big lungs for their oxygen just as new-born creatures are dependent upon their parents for body-building sustenance. The usage of our lungs therefore must be considered as indispensable to cellular vigor. True, the nourishment we swallow supplies our cells with reconstructing elements, but those elements are null and void without the act of respiration.

All the blood in your body, from five to seven quarts, passes in and out of your lungs in a couple of minutes to unload carbonic acid gas and to receive oxygen. Can you imagine the puny rate of exchange that takes place in the constricted lungs of some of the two-by-four depressed chests you see?

A young man once wrote me that he was greatly interested in breathing and lung culture, but he was fearful lest he develop such a huge chest that he would appear ridiculous! It is amazing the impressions that some novices have with regard to physical development. I have also known men who have natural greyhound types of physiques but who confidently expect to pass through a physical metamorphosis and emerge an English bull dog type!

DO NOT forget that some of the very heavily muscled men, whose developments you have sought to emulate, were naturally intended to be bulky. Training systematically simply sculptured their physiques into masterpieces of muscular symmetry. If you are an adult with a small chest, slender arms and a generally slender makeup, you can cultivate a handsome physique, but it will be on the order of the stature of that famous discus thrower, Discobolus. You should not foolishly seek the stature of Hercules—and then lose heart when you fail.

It is doubtful that any person is capable of developing his chest to an unsightly degree. The writer has personally seen several men with forty-six to fifty-inch chests and waists of thirty-two to thirty-five inches, and yet their tapering torsos were magnificent.

Ordinarily it will be found that a most pleasing symmetry results from possessing a chest eight to ten inches larger than the waist. A man with a forty-inch chest and a well muscled waist of thirty-two inches looks very well indeed. A forty-two or even a forty-four chest with the same thirty-two waist will be even more striking. The waist measurement should increase about one inch for every two inches of chest girth in excess of forty-two inches.

In developing greater lung power and chest girth, don't start out with any perturbation about developing a chest that will make you look like some creature from Mars! Personally, I am naturally of the slender type, I have been doing lung and chest developing work consistently for over three decades, and a forty-three-inch chest over a thirty-two waist is my best attainment.

WHAT would my chest have been uncultivated? Judging from my brother, who has never attempted physical cultivation and whose frame is very similar to mine, thirty-six inches would have been my chest girth. By diligent cultivation I have given my lungs seven more inches of room in which to breath.

As you doubtless know, the lungs are capable of stretching well beyond the greatest chest capacity. Therefore greater lung capacity means that one must stretch the cartilage that holds the ends of the ribs and thereby produce a greater depth and width to the rib box.

Simply building more muscle around one's chest, without improving the flexibility and normal capacity of the lung housing, is of comparative little benefit. In fact, hard chest muscles, developed without attention to lung culture, might actually impede the respiratory action.

Some of our breathing specialists would have you believe that breathing simply sustains bare existence, and that to get a definite beneficial result from breathing, you must practise a glorified respiration while performing certain semi-passive movements in perfect harmony.

A lungful of good, sweet, pure air is always welcome to an oxygen-hungry blood-stream, whether you get it standing, sitting, lying, hanging by your teeth or your toes, and either with or without inspirational thoughts. Your blood simply must get rid of just so much carbonic acid gas and receive in return a new cargo of oxygen. Any part of your body that is undergoing an extra muscular exertion, demands and should receive a proportionately greater amount of blood and oxygen.

With regard to a special technique in breathing, we encounter the advocates of breathing diaphragmatically as opposed to costal breathing. The diaphragm, as you know, is the muscular partition that separates the upper and lower parts of the body. The heart and lungs are above, and the stomach, intestines, liver, etc., are below.

The nerves that control breathing cause this diaphragm to make rhythmic excursions downward. This causes a vacuum, which brings about inspiration or lung filling. The relaxation of the respiratory muscles, following inhalation, produces the exhalation. When we exert ourselves, the increased oxidation steps up the flow of blood; the heart-beat quickens, and automatically our "bellows" start supply-

ing the increased oxygenation which keeps the fires burning. If said "bellows" are inadequate to the increased demands, then our endurance is short and our strength quickly wanes. You can thus see that big "bellows", and room for them to work in, must be a fundamental requisite for superior bodily functioning.

It was forcibly brought home to me how any restriction of normal breathing affects endurance. I was camping in the woods where it was necessary to carry water from a fairly distant spring. The carry was partly up a fairly steep hill. Two large pails were used, each weighing about thirty pounds when full. My untrained companions, inveterate smokers, found the effort much greater than I, and would stop for a rest half way up.

While I needed no rest, I was amazed at the discomfort in breathing I felt toward the end of each trip. I finally analyzed the matter in this manner: The load felt very light to me. There was no strain on legs, arms or hands, so why should it make breathing difficult? It must be that the pull downward on my arms and shoulders made my chest inflexible, thereby retarding lung expansion. To satisfy myself, I made a yoke that would enable me to carry the pails suspended from the shoulders in such a way that the lung restriction was removed.

What a difference! Just to prove matters, I made several trips up and down with the pails full, and without stopping, and then stood around conversing while still holding the load. There was no breathing discomfort, and I was not even slightly tired from the effort.

This was but another simple experiment that helped to reinforce my staunch belief in the value of cultivating lung capacity through greater chest flexibility and a bigger rib box.

Lung capacity tables gauge the cubic inches by a person's height. Usually this is a fair rule to follow. There are some exceptions. A tall person whose legs and neck are long, may have a short torso. This would mean less room for lung expansion. Some short men have extremely short legs and very long torsos. They, therefore, might be expected to have a natural lung capacity that surpasses that of their taller brothers.

THE sitting height would, in my estimation, be a more accurate method of measurement. Forgetting the tables for average men entirely, and compiling an ideal one for a physical culturist, I would say that well developed men should have a lung capacity about as follows; starting with five feet in height and a three hundred cubic inch capacity, add eleven cubic inches for each additional inch in height. This is way above the average—but why not? The average in physical gradings sets too low a standard for an earnest physical culturist.

Costal breathing, which was advocated so staunchly by Edwin Checkley, champion of the so-called natural method of physical training, calls for special effort to fill the lungs in the upper regions. One was told to think of lifting the chest upward and forward at a forty-five degree angle during each inhalation. The abdomen was expected to be held in a comfortably contracted state, during breathing exercises, while walking and as habitually as possible. This attention to abdominal control was claimed to foster

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the costal breathing and combat gravity, thereby checkmating a flaccid, protruding abdomen.

Exponents of diaphragmatic breathing were strong in their denunciation of the costal method. Personally, I have blended the two, starting my breathing by expanding at the diaphragm first and then following through with the forty-five degree complete costal inhalation.

Several deep thinking physical culturists have expressed the belief that forced breathing, without automatic demand from increased activity, is unavailing. The premise was that the blood was not demanding increased oxygen, therefore it would not absorb more. I subscribed to this belief for years, and advocated special attention to breathing only while exercising.

LATER experiences caused a revision of my attitude regarding this. First there was the feeling of uplift and stimulation that always followed a few moments of forced deep breathing, while the body was passive. Second, there loomed the fact that most people had created a physical condition that fostered such constant shallow breathing as to make oxygenation inadequate for the vital processes in even a passive physical state. Third, I personally took blood pressure tests of several athletes before and after ten, lung-packing breaths, and found that in every case, there was an increase of from twelve to twenty millimeters in the reading.

The last point rather conclusively proves that deep breathing creates a beneficial circle. It causes a stepping up of circulation and internal activities, which in turn creates a demand for the increased oxygen that is being supplied. All things considered, it seems very wise for a physical culturist to establish a confirmed, subconscious habit of constant deeper breathing.

The acquisition of such a habit will require dogged determination for awhile. Then gradually it grows on one, until it is well nigh impossible to fall back into slipshod, blood-cheating, suboxidizing breathing.

When one goes in for conscious respiration for purposes of lung and chest development, anything but pure, sweet-smelling air becomes abhorrent to him. Ill ventilated theatres, working quarters and living rooms will be as taboo as possible. However, it is well nigh impossible to avoid spending some time in crowds where poisoning exhalations pollute your inhalations.

There are times when one is compelled to defile every cell in his being, owing to vile atmosphere. Naturally this is regrettable, but all we can do under the circumstances is to reverse our habits for the nonce, and purposely become shallow breathers! When a chance comes to reach good air, compensate all you can with a period of blood and cell-purging forced respiration.

Most people do not think of what they breathe, nor how. Just the other day I saw a man working vigorously, digging around a boulder, preparatory to having a truck drag it away. The back of the truck was close to the rock.

The exhaust pipe was only a couple of feet from his nose, and the engine was running!

The man was working strenuously. The sweat was pouring from his face. His lungs were bursting for oxygen. He was inhaling engine exhaust without a thought. When I asked him if he were trying to commit suicide, he showed great surprise, until an explanation was made. He reluctantly shut off the motor. "You see, the battery was weak!" So was his head!

Breathe deeply in good air and shallowly in bad. Force the breathing to extraordinary completeness several times daily. Carry yourself well, so that your lungs have ample room. Try to add to the ampleness of your chest capacity by gradual stages, through systematic exercises, plus breathing control. Be "balmy" about fresh air! It is a tribute to your reasoning powers to be dubbed a "fresh air fiend."

If you live near a mountain, you are fortunate. There is no lung and chest capacity-builder like it. When climbing a mountain, there are time when you wish your lungs had twice as much room to satisfy the insistent demand of your racing blood: Oxygen! Oxygen! More oxygen!

It is said that the Alpine guides have marvelous lungs and chests. Indeed they must have. Their work certainly demands this requisite. The vitality and power of these men is described as close to super-natural. I have read that the lung capacity of the Alpine guides will average around five hundred cubic inches! This is almost twice that of the average men. No wonder they are vibrantly fit!

Holding the breath uncomfortably long should be avoided. Swimming under water should not be carried to the point of even slight distress. I once knew a young woman who did stunts under water in a glass tank on the stage. She nearly died from a "complete breakdown." One of her exhibitions required her to hold her breath about three minutes. Don't go in for breathing stunts when you are building bigger and better lungs.

ALSO, it is not good to blow against a severe resistance. Proper spirometers offer no lung resistance. When breathing hard after or during strenuous exercise, it is well to expell forcibly all the air possible, so that every bit of air inhaled is oxygen-laden. Even forcibly emptied lungs retain about a quart or more of air, but to empty them well rids the retained air of an excess of carbon dioxide.

Don't let some theorist tell you that it is dangerous to develop your lungs in excess of your requirements. Nothing has ever proven this to be true. A person's life expectation is considered greater when that person is deep chested and registers a generous lung capacity. Practical experience and observation favor lung and chest cultivation for ebullient fitness, extraordinary endurance and admirable appearance. The baby's first breath starts independent life; the adult's last breath ends it. How and what we breathe in between those extremes may determine the kinds of lives we have.

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ARE YOU STARVING YOUR TEETH?

In next month's issue, Dr. William Cutler Paulson, who has spent the last ten years of a thirty-year dental practise in studying the effect of diet on teeth, reveals the nutritional deficiencies which account for ninety-five per cent of the dental decay in children and adults.

A New Step in Cancer Diagnosis

(Continued from page 42)

thinks it stimulates a natural defense mechanism against infection. It is thought that the large pectin molecule may envelop or starve bacteria. Another possible factor is that it has huge powers of absorption—up to twenty times its own weight.

A New Test For Gastric Ulcer—Gastric and duodenal ulcers, and other lesions of the stomach and intestines, such as those from carcinoma, are often notoriously hard to diagnose. X-ray evidence may not be conclusive. Often it is hard for the diagnostician to distinguish between functional and organic disease. He may not, for instance, be able to say for sure whether the thing he sees in the X-ray picture is a healed lesion with scar formation. And he may have trouble identifying deformities due to a spastic duodenum.

This knotty problem now bids fair to being at least partially solved by the discovery of a simple chemical test which has recently been developed by Dr. Edward Woldman of St. Lukes Hospital, Cleveland. Dr. Woldman describes it in the June, 1938 issue of the *American Journal of Digestive Diseases*.

The test consists of administering to the patient a small amount of phenolphthalein, a cathartic drug. Normally this substance is not absorbed through the mucous membrane of the digestive tract. If there is a break in that membrane, however, a certain amount of the phenolphthalein will enter the circulation, and will eventually be excreted in the urine.

There its presence can be readily detected, even in dilutions as high as one to ten million, by means of a chemical test. An alkali (sodium hydroxide) is added to the specimen of urine; and a pink or red color results if any phenolphthalein is present. The phenolphthalein can be detected from forty-eight to seventy-two hours after taking. If there be no color change, the test is considered negative, and it means that the mucous membrane is intact.

Orange Juice and Gastric Acidity—There are a few doctors who tell their gastric ulcer patients that they must avoid orange juice—on the theory that orange juice increases the acidity of the stomach and so aggravates the condition. The result of this advice by such occasional medical ignoramuses is that many patients on a strict ulcer diet lacking in sufficient amount of Vitamin C become victims of incipient scurvy.

It is of importance, therefore, that no less authority than the Mayo Clinic of Rochester, Minnesota, is on record through two members of its staff, Charles Dimmler, Jr., and Marschelle H. Power, Ph.D., with the finding that orange juice not only does not increase gastric acidity, but that if anything it tends to lessen it. And the reason for that is that orange juice is considerably less acid even than normal gastric juice. It is therefore a very valuable addition to the diet of ulcer patients who may be fed little more than milk, and whose diet therefore needs whatever reinforcement it can get.

In the experiments by which this was determined, fresh orange juice, whose acidity had been determined, was

mixed with gastric juice in a proportion of one to four. Twenty-seven such tests showed that the orange juice lowered high gastric acidity and raised low gastric acidity. Similar tests were made on two normal subjects, and the orange juice was found to have no tendency to increase gastric acidity.

Transfusion Gets New Blood—One of the most startling of current medical miracles is the collecting of fetal blood in maternity hospitals for use in blood transfusions. This blood is obtained from the placenta at the time the baby is born. It is considered superior in quality to blood obtained from adult blood donors, and when stored at a temperature between thirty-three and thirty-eight degrees Fahrenheit, it can be used for transfusion purposes any time within sixty days. It must, of course, be collected with proper precautions and typed, and subjected to the Wasserman test; and it must come from a healthy woman.

This preserved fetal blood is superior to other blood, first because it contains twenty to thirty-five per cent more coagulation power than adult blood—probably nature's precaution to keep the new born from bleeding to death; and second, because any unsplit proteins in the fetal blood are autodigested by the time the blood has been preserved for forty-eight hours. This prevents the allergic reactions which may result from the presence of such undigested proteins in transfused blood.

The blood is allowed, under aseptic conditions, to run from the placenta into a flask at the time the cord is severed.

This plan of preserving fetal blood, which hitherto had been allowed to go to waste, is in use at St. Mary's Hospital, Montreal, Quebec, where it originated with Drs. J. R. Goodall, F. O. Anderson, and G. T. Altimas, who give an account of their technique in *Surgery, Gynecology and Obstetrics* for February 1, 1938. They state that the maternity section of a general hospital can provide more than enough blood for the whole institution's transfusion needs, and can even be made an added source of revenue to the hospital.

Honey Child—Honey is the best carbohydrate for use in infant feeding, according to a report in the *Journal of Pediatrics* for June, 1938. The report is based on extensive blood sugar studies made by Drs. F. W. Schlutz, J. L. Gedgoud, and I. Loewenstamm, and also by E. M. Knott, Ph.D.—all of Chicago.

The sugars studied were dextrose and levulose, sucrose (cane sugar) and lactose (milk sugar); and also corn syrup and honey. With the exception of dextrose, state the investigators, honey, which is composed of dextrose and levulose, was absorbed most quickly of all the sugars that were tested during the first fifteen minutes after ingestion, and it did not flood the blood stream with exogenous (foreign) sugar.

Honey also maintained a steady and slow decrease in blood sugar till the fasting level was again reached. It is pointed out that honey is so easily obtainable, and is so palatable and digestible, that it should be more widely used in infant feeding than it is.

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Looking Through a Telescope Fish—When your gall bladder gets stopped up with a gall-stone or a mucus plug, the doctor may first dose you with calomel, rhubarb, mandrake, or jalap to see if he can't get some action that way. And if nothing happens, the chances are he will want to operate. It is the general opinion of the medical profession, in fact, that surgery is the only remedy for gall-stones.

But perhaps that opinion is now on the point of getting turned out of doors. At least that is the hope of Dr. Arno Viehoever, a Philadelphia pharmacologist, who discovered that the transparent water flea, *Daphnia*, made a good laboratory in which to study the effects of drugs.

Dr. Viehoever wanted another transparent creature which would be a lot bigger than any flea, and which would be nearer to man in structure. And he found there was one—the transparent telescope fish, so called because it has pop-eyes. This fish is so transparent that its gall-bladder, heart, intestine, and the big vein in its tail, are all easily visible.

One of the first things Dr. Viehoever found was if he injected a very small amount of the hormones, secretin and cholecystokin into the telescope fish's tail, the gall bladder contracted and forced its contents into the intestine. So now Dr. Viehoever is studying the effects of these and other substances in stimulating the gall bladder to function. Maybe he'll work out a technique that will make most gall bladder surgery needless. At least he hopes so.

Babies Born To Order—How amazing is the chemistry that goes on in living tissue, and how almost incredibly potent and all but magical are some of the substances elaborated by the living cell, is dramatically shown in the bizarre experiment recently carried through by Dr. Dietrich Bodenstern of Stanford University in California.

Dr. Bodenstern produced a winged insect that was half a mature butterfly and half immature pupa. This monster was produced in the course of Dr. Bodenstern's search for the agency that causes the metamorphosis from the pupa to the adult insect. He found that substance to be an unknown something manufactured in the head. It reaches the tissues through the skin. It may be an enzyme or some sort of nerve stimulant, or even a hormone—though no hormones have hitherto been found in insects.

At all events, Dr. Bodenstern managed to cut off the circulation of the growth substance back of the pupa's head. This resulted in the head and shoulders of the insect metamorphosing normally. The mouth was transformed into a nectar sucking proboscis, and the wings sprouted from the shoulders. But the rest of the pupal body remained as it was.

Do these probings of science foreshadow the day when human parents will be able to order just the baby they want, built to specifications? Can they order a blue-eyed, wavy-haired blonde girl baby, for instance, with five hundred volts of "It" combined with 1,000 kilowatts of Discretion, and made irresistible by streamlined curves and the ability to look well in anything?

Can they order a boy who will be sure-fire for anything they choose, from President of the United States to a dead ringer for Charlie McCarthy? These questions are not so frivolous as they sound, for that's what the human race seems to be today—half butterfly,

half pupa! Give it time! Give it time!

No More Baths for the New Born—From time immemorial it has been the custom to give the new-born infant a bath, and often a coat of oil after the washing. The theory of it seemed to be that a new-born baby would naturally need a bath. It didn't seem to occur to anybody that naturally he wouldn't—and that nature, if allowed to run things without interference, would take care of the youngster.

As it is, the prevention of skin infections and skin irritations of new-born babies has always been a difficult problem, particularly in the obstetrical departments of large hospitals, in spite of many sorts of treatments, including the use of antiseptic oils.

Several years ago Dr. W. F. Patrick of Portland, Oregon, decided that it would be horse sense to give up the bothersome and—as he believed—needless practise of bathing and oiling the

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new born. Dr. Patrick's idea was adopted at the Multnomah County Hospital, Portland, a little later, and according to Dr. L. Howard Smith, of Portland, in the *American Journal of Pediatrics*, (May, 1938) a total of 1,734 un bathed infants in two years have shown only two cases of "even suspicious" skin infection.

It seems nature protects the new-born skin admirably with the *vernix caseosa*, which means, literally, "a cheesy varnish." It is really a fatty covering of considerable tenacity and protective power, that is left intact during the child's ten- or fourteen-day stay at the hospital. The child's buttocks are cleansed with water following a stool, and its clothing is changed daily. Sometimes a little bathing is needed around the groin. But that's all. The vernix soon disappears and within twelve hours after birth the child's skin appears clean.

Brain Food?—The notion that there are certain foods, such as fish, which are specially nourishing to the brain, is an old one; and it is still held by a good many persons who, probably, believe in phrenology as well.

A few years ago I had an interview with a food quack, an energetic lady who was sure her ideas on nutrition would revolutionize the world, and who wanted this magazine to become her John the Baptist.

She informed me that she could

double my nervous and mental energy if I would only let her tell me what to eat.

"I would prescribe a special nerve food for you," she said. "Mostly it would be raw, scraped beef sandwiches. You see it is necessary to know which foods nourish which organs of the body."

It now appears, however, that these naive doctrines about brain foods and such may not be wholly lacking in truth.

Dr. A. Geiger, of the physiological laboratory, Hebrew University, Jerusalem, reports in *Nature*, a British scientific weekly, that the brain cells contain enzyme or ferment which splits sugar with special effectiveness; and that he has succeeded in isolating this substance.

By combining it with suitable activators, co-enzymes, "the activity of the extract may be increased up to two or three times that of intact brain cells."

The interesting question now is shall we presently be adding to daily doses of vitamin pills, a daily shot of brain enzyme; and if so, will that send the pressure up to the point of bursting the boiler? Maybe the popular song of tomorrow will be "Gosh, How I Need Those Enzymes." Don't we all?

Well, here's a thought. Don't wait till somebody puts them on the market in a bottle. Just make your own. Here's how you do it; Eat right, exercise plenty, hold the pace of your brain down to forty miles an hour, like your fellow man instead of hating him, try to get some pleasure and zest out of your daily stint of work instead of mere boredom—in short, do your best to make an art of living; and your brain will be just dripping with enzymes.

And Now a Vitamin Meter—When you take cod-liver oil or halibut-liver oil or some other fish oil so that you may stock up on Vitamin A and be able to say to that threatening cold, "Shoo!" instead of, "A-choo," or whatever it is you say when you sneeze, you naturally want to know that there's plenty of Vitamin A present in that oil.

Well, all that is now taken care of. A big drug company that wants to be able to guarantee its Vitamin A has devised a way to measure the vitamin with the photo-electric cell—the "electric eye."

It's very simple when you once get the hang of it. You divide a beam of ultra-violet light coming from a sodium lamp. One division of the beam you pass through a cell that contains Vitamin A. The other you pass through a slit. And then you narrow down the slit till both divisions of the beam measure the same in their effect on a photo-electric cell.

Now, the cell containing Vitamin A absorbs a certain amount of ultra-violet light from the beam as it passes through; and the amount of absorption will depend on the amount of Vitamin A that is present.

The greater the absorption the more it will be necessary to narrow the slit through which the other beam passes, in order to make the two beams register equally on the photo-electric cells.

Thus the size of the slit becomes a measure for calculating the amount of Vitamin A present. The test can be made in two minutes, and it is said to be accurate to within one per cent.

The invention was recently reported in a paper read before the American Chemical Society by Dr. R. L. McFarlan and J. W. Reddie, the inventors.

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