

To carry out a program designed to strengthen the pharmacy curriculum at one of its weakest points—deficiency in biological groundwork—there are certain specific needs. The courses required must be adequately given, not by professors of pharmacy, not by instructors in pharmacognosy, not by chemists, but by trained biologists, preferably with an understanding of pharmacy. The courses cannot be given adequately without a sufficient allotment of time for recitation and laboratory. For the two years of biology outlined, three hours of recitation and six hours of laboratory instruction each week are needed. They cannot be given without proper equipment and supplies. A principles course in biology requires more material for proper presentation than does the type-form dissection type, which may be one reason why some have opposed the adoption of the principles method.

To summarize briefly, one of the weakest points in our present pharmacy curriculum is the lack of adequate training in the biological sciences. Much of the rote memory work in certain advanced courses is traceable directly to this deficiency. What a student does not understand he must memorize if he is to pass the course. The remedy consists in the introduction of a year of general biology, preferably of the principles-type, followed by a semester of vertebrate anatomy and histology, and one of plant morphology and physiology. The arguments in favor of a freshman and a sophomore year of biology are of two types, the need of this groundwork for an understanding study of advanced subjects, and the less tangible but no less real cultural gains to be obtained from biology. Until pharmaceutical educators recognize the need for and are ready to introduce substantial work in biology, in many courses the upper-class students will continue to memorize rather than understand, and the curriculum as a whole will have a vital weakness in its foundation.

#### REFERENCE.

- (1) Hiner, L. D., *A. J. Pharm. Ed.*, 1, 132 (1937).

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#### PHARMACY WEEK RADIO TALK.

BY PROF. EDMUND N. GATHERCOAL.\*

Good Evening Folks:

Pharmacy Week has returned again; does it have any meaning to you? Most folks think that a pharmacy is a high-brow drug store; perhaps you are right. But please remember this—every drug store is a pharmacy or contains a pharmacy within it; for a pharmacy is a place where drugs are prepared, sold and dispensed.

As we look at the usual corner drug store we know that much of its stock in trade and of its activities are not those of the pharmacy. We will admit that the soda fountain with its lunch counter must be excluded from the pharmacy. Surely the magazine and newspaper stands, the circulating library, the toy counters, the tobacco cases, the candies—all of these cannot be a part of the pharmacy. Oddly enough, however, quite a few medicines are dispensed over the soda counter. It is not unusual to see persons consuming fizzing headache remedies, doses of castor oil disguised in sarsaparilla soda, and mild laxatives such as citrate of magnesia and Seidlitz powders.

Please remember also that all drug stores do not have soda fountains. For example, there are listed in the 1930 national census some 1600 drug stores in Chicago, but 381 of these do not have soda fountains.

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\* President of the AMERICAN PHARMACEUTICAL ASSOCIATION, over WEAf and network, Monday, October 18, 6:15 to 6:30 P.M. E.S.T.

In the national Pure Food and Drug Law discussed by the present Congress, the definition states that all substances, preparations and devices intended for use in the cure, mitigation, treatment, diagnosis or prevention of disease in man or other animals are drugs. Notice how broad this definition is. It includes not only the medicines taken by mouth, but the pastes and salves applied to the skin; the sprays and jellies applied to the mucus membrane; the solutions injected beneath the skin; the cottons, bandages and gauzes used in connection with wounds; disinfectants of all types; surgical instruments, crutches and wheel chairs; and all kinds of articles used in the sick room.

You will note, therefore, that all drugs are not contained in bottles on the pharmacist's shelves. Many folks are quite surprised at this broad legal definition of a drug. The next time that you look about in the drug store, just bear in mind that many of the items you may look upon as ordinary merchandise are in reality essential for the sick room and are defined as drugs.

It is interesting to note also that many articles of food and other articles that occupy an important place in our economic life also serve as drugs. For instance, iron is a very valuable and extensively used drug. I will admit, however, that its use as a drug is infinitesimal compared with its economic use. Rubber is an important item in many sick-room supplies, in the production of plasters and bandages, etc.; but its use in medicine, while very important, is small in comparison with its use in automobile tires. Sugar is a very important item in many medicines. Alcohol has a wide use in medicine, and yet we certainly would not include the sale of wines, beers and liquors for beverage purposes in the province of the pharmacy.

Your druggist is a highly trained professional man, with a great responsibility to the sick.

In nearly all of the states of our country, he is required by law not only to complete his high school education with a high standing, but to complete four years of college training in the sciences pertaining to pharmacy. These colleges of pharmacy are found widely scattered over the United States, some sixty in all, and are listed as institutions of higher learning. In the west and middle west they are mostly an integral part of their state universities; in the east they may be connected with endowed universities or they may be independent schools of pharmacy. Many students in pharmacy continue their education until they obtain the highest university degrees.

In addition to his college education, the future pharmacist must also take from one to three years of technical training in the drug store. In years gone by, before the extensive college education was required, this training was carefully supervised by the senior pharmacist in the store. In the present day this apprentice training has lost some of its earlier significance.

After completing the educational and training requirements, if the young man or woman be a citizen of the United States, and of good moral character, he is admitted to the licensing examination. This examination covers such subjects as chemistry, physics, botany, zoölogy, bacteriology, physiology, pharmacology, *materia medica*, and most important of all, prescription compounding and practical pharmacy. If he is successful in the examination, he is registered and licensed to practice. This license is transferable to most of the other states of the union. In most states it must be renewed annually. It is revocable for gross immorality, criminality or criminal carelessness in the practice of pharmacy.

The pharmacist is required by law in many of the states to keep his pharmacy in a clean and orderly condition, properly equipped and stocked for the dispensing of medicine, and with a suitable library. His pharmacy is subject to inspection at any time during business hours.

The responsibility of the pharmacist to the public is very great. The pharmacist only is permitted to dispense poisonous, dangerous or narcotic drugs and he must assume full responsibility therefore. He is responsible for the doses of all medicines that he dispenses and if the physician wishes to prescribe unusual doses he must so state on the prescription. Most medicines are poisons when consumed in excessive doses. It has been said, "A dose is enough, a poison is too much."

The pharmacist is also responsible for the identity and the purity of the medicines that he dispenses. Likewise, he must be accurate in his dispensing. A five-grain capsule of quinine must contain just five grains of the drug. Four and one-half grains will not do, neither will five and one-half grains. The law, as representing the public, is constantly checking and inspecting the pharmacist in all of his activities.

We have given considerable attention to the qualifications and responsibilities of the pharmacist and his pharmacy that you might know that when you present your prescription or place your order for medicines you are dealing with a highly professional man in keeping with the

professional man who writes the prescription. With most pharmacists the professional training is predominant, though the commercial side is also evident; occasionally there is one where the commercial side is predominant.

Pharmacy is as old as the human race. It has occupied an important place in history and has been of great public value since the 16th century before Christ, about the time of Moses. As a profession, pharmacy far outdates medicine.

Plants and animals yielded the first medicines. Some of these, used thousands of years ago, are still considered valuable medicines and are extensively used. Myrrh, cinnamon, calamus and olive oil go back to the earliest Scriptures; the use as drugs of opium, aloes, gum agar, marsh-mallow, bitter almonds, anise, licorice, pepper, chinese rhubarb, wormseed and many other items dates back to the earliest historical writings.

The use of minerals and chemicals in medicine is of much later origin. The alchemists of Arabia and Europe from the tenth to the sixteenth centuries A.D., slowly introduced chemicals that have become useful drugs. The herbalists and the alchemists of an earlier date were the forerunners of the modern pharmacists.

As pharmacy plays such an important part in human affairs and as the pharmacist comes daily into the most intimate contact with the public, he witnesses a cross section of humanity, perhaps in better manner than one from any other group of individuals.

A community without a drug store is about as useful as a cart without a horse. Many communities throughout our country have been built up around a daring pioneer who braved want and privation by setting up a drug store at a crossroads where the circuit-riding physician could replenish his bag or send a scurrying messenger in time of need. The drug store is an important factor of every progressive community.

The advancement of a community can be materially measured by the commercial progress and the professional standing of its drug stores. The profession of pharmacy is ever advancing further into the old scientific fields and also into many new scientific fields. This is reflected in the present-day pharmacy.

The highly professional type of pharmacy, free from the commercial lines, and serving the physician and the public exclusively from the pharmaceutical standpoint, has been customary throughout Europe for centuries. In America this type of store is not so common, because of the pioneering nature of the druggist. When he goes into a small community the volume of drug business is so small that the store cannot be maintained unless the volume of business be much increased, hence, the many commercial lines in the drug store. Furthermore, the small community is very glad to have the druggist carry these many different articles, in order that they may be obtained in the community.

In the larger cities and towns of to-day, however, the professional type of pharmacy is rapidly making its appearance. The physicians are pleased because of the highly professional services rendered. The public is pleased because of absolute assurance regarding the compounding of prescriptions in the most perfect manner and with fresh, pure, proper drugs. As our nation becomes more settled and our communities older and better established, this type of pharmacy will become more widely extended.

America is well served by its pharmacists; better, perhaps, than any country in the world. Every village of a few hundred inhabitants has its pharmacist. When the village becomes a small city of a thousand or so, there are two drug stores, so that competition leads to better service. Sixty thousand drug stores serve America, one for about each two thousand population; one for about each three physicians and a little more than one for each dentist.

Referring back to the definition for a drug, we find that the pharmacist is concerned in the prevention of disease as well as in the treatment, mitigation and cure of disease. The whole medical group, including physician, dentist and pharmacist, has produced most remarkable results in America by their efforts to *prevent* disease rather than wait until treatment was necessary. A century ago the average length of life in this country was less than thirty years; to-day it almost reaches sixty years. This remarkable change has been largely accomplished by the wonderful development of sanitation, by pure food and milk regulations, by the development and use of vaccines and antitoxins and by numerous other means for preventing disease. It has been estimated by some, that this great medical group devotes at least as much of its time, energy and ability to the prevention of disease as it does to the cure of disease.

Pharmacy has played its full part in these great accomplishments. It has been active in the development of vaccines, toxins and antitoxins. It has entered into the discoveries as to the valuable properties of the vitamins and has standardized these in cod liver oil and in other substances. It has taken a part in the discovery of the hormones from the animal glands; in their separation, purification and preparation into suitable medicines. It certainly has played a large part in the development of disinfectants and antiseptics and in their standardization. Even this year pharmacy has developed a new prophylactic (an agent that prevents disease) for syphilis which may play an important part in the elimination of this dread disease from America.

In the midst of this Pharmacy Week, please give thoughtful attention to the professional service rendered to you personally, to your community and to your state and nation by your pharmacist. Encourage him to develop the professional side of his business. He is entitled to the same respect as the other professional men who touch your life.

Good-bye until Pharmacy Week next year.

### REMINGTON MEDAL AWARD FOR 1937.

The award of the Remington Medal for 1937 was made on October 25th, at Pennsylvania Hotel, New York City, at a testimonial dinner, honoring Dr. J. Leon Lascoff. The interesting program was carried out at a special meeting of the New York Branch of the A. Ph. A.; President F. C. A. Schaefer of the New York Branch presided as toastmaster.

Dr. Harlan H. Horner, Associate Commissioner for Higher Education, University of State of New York, spoke on "Lascoff, the State Board Member;" Dr. Robert L. Swain, past-president of the A. Ph. A., on "Lascoff, the Association Man;" and Dr. Cary Eggleston, Cornell University Medical School, on "Lascoff and the Medical Profession."

A first copy of the Pharmaceutical Recipe Book, Second Edition, was presented to Dr. Lascoff, as a memento of his splendid work on this publication, by Secretary E. F. Kelly, of the A. Ph. A. On behalf of a large number of his friends from all over the country, Mr. Jerry McQuade presented Dr. Lascoff with a handsomely bound volume containing messages of congratulations and best wishes from these friends. In addition a number of letters and telegrams were read by President Schaefer.

#### J. LEON LASCOFF—THE 17TH REMINGTON MEDALIST.



J. Leon Lascoff, Remington Medalist.



Inscription on Remington Medal.



Joseph P. Remington—Face of Medal.

The Remington Medal was formally presented to Dr. Lascoff by Dr. Curt P. Wimmer, past-president of the New York Branch, and the recipient responded in an address, reviewing his experiences as a practicing pharmacist and expressing the conviction that professional pharmacy has a brighter future than heretofore for those practitioners who serve it as a public health profession and in real cooperation with the other branches of medicine. Publication of the addresses will have to be deferred.

About four hundred and fifty members and friends participated in the delightful function.