

EDITORIAL

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ECONOMY IN MEDICATION.

UNDER the heading above, Dr. Bernard Fantus discusses the subject as an important question in all hospitals and particularly in large institutions as Cook County Hospital, where the saving resulting from coöperation between prescribing physicians and dispensing pharmacists runs into a huge sum. It will be understood that the saving is not to be brought about by inferiority in material or production but by determining that which has been found best by test.

In the article prepared by the *Journal A. M. A.* the discussion was largely devoted to hypnotics. Reference is made to "Grabfield's Observations on Efficiency of Commonly Used Hypnotics." A number of references are taken from E. N. Gathercoal's "Prescription Ingredient Survey." Questions such as these are given as valuable subjects for discussion with physicians who have hospital connection and for information in their practice.

FOOD AND DRUG BILL HAS BEEN DELAYED.

WHILE other reasons obtain for delay in passing the Food and Drug Bill it is probable that the unfortunate deaths resulted from uncontrolled products. The preparations have shown conditions which need correction. It seems that in one case, perhaps more, a product was allowed to stand for several days before being sterilized. If tetanus organism was present in the product it would have had two days in which to develop the toxin. These possibilities are suggestive and not confirmed, but deaths have resulted from some cause.

It has brought to the minds of legislators the dangers which should be provided against in laws of this kind and may result in unreasonable provisions. The AMERICAN PHARMACEUTICAL ASSOCIATION by resolution regretted delay in such important enactments.

PUBLIC HEALTH SERVICE.

THE PUBLIC and industry have taken an active part in promoting better health conditions. In "Charters Report"—"Basic Curriculum Material," pharmacists find advice relative to duties and while there is some lack of observance, it is gratifying that pharmacists, as a class, accept as a general principle that they should neither diagnose nor prescribe for disease and their professional regard and understanding makes them ready to support efforts to correct the dangers of habits, of practices and misuse of habit-forming drugs.

The late Governor Albert C. Ritchie, of Maryland, emphasized the importance of Pharmacy in Public Health Service and valued it as an essential activity in the Service.

The pharmacist has always been deeply interested in drugs of definite standards and purity; in fact, the establishment of the AMERICAN PHARMACEUTICAL ASSOCIATION resulted, because of the purpose to bring about legislation to that end and Pharmacy has for its primary object the service which it can render to the public in safeguarding the handling, sale, compounding and dispensing of medicinal substances.

CURB OF VENEREAL DISEASES.

DR. THOMAS PARRAN, Surgeon General U. S. Public Health Service, and his co-workers are making progress in the fight against venereal diseases. One point in the progress is to discover infections, steps in treatment and prevention. The helpfulness of pharmacists is of importance and gratifying, because it has contributed to the efforts of those who are waging the war. The duty of the latter is to treat the disease and prevent the spread. Pharmacists have a part in conveying knowledge of the dangers that result from those who have become infected and failed to secure adequate medical treatment, not only to relieve the suffering of the afflicted but the dangers of the affliction to others. The question is a serious one in large establishments and society at large; it brings up questions of employment and unemployment as there may be disease carriers in both classes.

Theodore Rosenthal, M.D., Assistant Director, Bureau of Social Hygiene, in charge of Education and Epidemiology, New York City Department of Health in an address said, in part, "The members of the pharmaceutical profession, in common with the other members of the allied medical professions, have a great interest and responsibility in combating syphilis, not only as citizens and taxpayers, but because of their professional obligations and qualifications."

The history of medical progress shows that the combined efforts for public health have been successful and points out the way for like endeavor.

THE AMERICAN PHARMACEUTICAL ASSOCIATION was represented by Secretary E. F. Kelly at the recent annual meeting of the American Documentation Institute, 2101 Constitution Avenue, Washington, D. C., when it was announced to the nominees of the fifty national learned societies which constitute its membership that the Institute is now operating the non-profit Bibliofilm service in the Library of Congress, the Army Medical Library and the Library of the Department of Agriculture. Scholars and Libraries may have printed or manuscript material copied upon 35-millimeter photographic negative film or in the form of a legible photoprint made by enlargement from the negative at a cost of one cent per page of film or ten cents per page for photoprints, plus a fixed charge on twenty cents per item. It is expected that this service will have an increasingly wide application.

REPORT ON LIVER PRODUCTS BY THE UNITED STATES
PHARMACOPŒIA ANTI-ANEMIA PREPARATIONS ADVISORY BOARD.

The standardization of products for the treatment of pernicious anemia is defined for the first time by the Eleventh Revision of the United States Pharmacopœia as follows: "Liver, stomach and other preparations used for this purpose, to be recognized as meeting the specifications of this Pharmacopœia, must be approved by the 'U. S. P. Anti-Anemia Preparations Advisory Board.' Approved products must have complied with the following specifications: 1. There shall have been submitted from time to time, as requested by the Board, satisfactory clinical data from treatment, with the product in question, of cases of Addisonian pernicious anemia. 2. The clinical data submitted shall satisfy the U. S. P. Anti-Anemia Preparations Advisory Board that the administration of the material in question, as prepared from liver or stomach can produce a satisfactory result in the dose given."

In accordance with this requirement, the U. S. P. Anti-Anemia Preparations Advisory Board has considered data submitted by various pharmaceutical companies. In each case the response of the patient to the liver extract in question was studied particularly with respect to the reticulocyte and red blood cell production resulting from the daily administration of a uniform amount of each preparation. The nature of the preparations submitted has been either dry liver extract (*Extractum hepatis*), liquid extract of liver (*Liquor hepatis*) or parenteral solution of liver (*Liquor hepatis purificatus*), as defined in the Pharmacopœia of the United States, Eleventh Revision.

Because of the variation in the efficiency of different processes of manufacture, the therapeutic activity of the final product does not necessarily correspond to the amount of liver from which it is derived. It is therefore necessary to define the therapeutic activity of the final product in other terms. Accordingly, the Board has assigned to each acceptable preparation a value in terms of units. The amount of material constituting a "Unit" is considered to be that amount of material which, when given daily to patients with pernicious anemia, has produced a satisfactory hematopoietic response. Since in the average case material derived from about thirty times as much liver must be given by mouth to produce the same response as when given by injection, it has been necessary to define the "Unit" either as an "oral" unit or as an "injectable" unit, according to the intended method of administration of each preparation.

Accordingly, it is understood that on labels, bottles or cartons, or in advertising circulars, the manufacturer whose products have been assigned unitage by the Board shall no longer state the number of grams of liver employed in making the preparation, but merely either the number of cubic centimeters or grams of material constituting a unit. Depending on the method to be used in the administration of the preparation, the unit will be defined as either an "oral" unit or an "injectable" unit. Definition of the number of units in a preparation for "oral" administration in terms of "injectable" units or vice versa is not permitted. It is further understood that if any dosage is suggested by the manufacturer, the dosage recommended should not be less than one unit a day, whether given daily or at longer

intervals. The wording on the label or in the package literature concerning the unitage will give the following information:

“The daily $\left\{ \begin{array}{l} \text{oral} \\ \text{intramuscular administration of . . . (no.)} \end{array} \right\} \left\{ \begin{array}{l} \text{grams} \\ \text{cc.} \end{array} \right\}$ (capsules, teaspoons, etc.)
of material prepared by the method employed in producing the contents of this $\left\{ \begin{array}{l} \text{bottle} \\ \text{vial has been} \\ \text{package} \end{array} \right\}$
demonstrated to produce a satisfactory hematopoietic response in pernicious anemia, and constitutes a unit according to the United States Pharmacopœia Anti-Anemia Preparations Advisory Board.”

In general it is recommended that, without good evidence that no harm will result, the amount of material administered should probably not be less than one unit a day, whether given daily or in multiple amounts at longer intervals. In many instances it is probable that the clinical indications will render it advisable to give the patient much more than a dosage averaging a unit a day. It must be recognized that the amount of material constituting a unit is determined largely on the basis of the hematopoietic response and does not imply that such an amount is necessarily effective in the control of gastrointestinal or neural manifestations. Furthermore, there is some evidence that the effectiveness of different types of preparations, although similar when defined in terms of units with respect to blood formation, may differ in their effectiveness upon the gastrointestinal or neural manifestations. A full discussion of the indications for the administration of liver preparations is obviously outside the scope of this announcement; and through the coöperation of the American Medical Association and the Committee of Revision of the United States Pharmacopœia, a special article on this subject has been published: “The Use of Drugs in the Treatment of Anemia,” *J. A. M. A.*, 107, 1633-1636 (November 14, 1936).

The Board will, as occasion arises, re-evaluate products based on new clinical data or assign unitage to new products submitted by manufacturers and accepted by the Board.

UNITED STATES PHARMACOPŒIA ANTI-ANEMIA
PREPARATIONS ADVISORY BOARD.

February 14, 1938.

The Advisory Board has designated below the unitage of the acceptable liver products of the following manufacturers and distributors.

ABBOTT LABORATORIES, North Chicago, Illinois.

1. Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

- (a) 0.1 cc. equals 1 unit (injectable)
- (b) 0.2 cc. equals 1 unit (injectable).

2. Extractum Hepatis. Dry Liver Extract.

Powder in capsules. 50 capsules (25 Gm.) equal 1 unit (oral).

ARMOUR AND COMPANY, Chicago, Illinois.

1. **Liquor Hepatis. Liquid Extract of Liver.**

45 cc. equals 1 unit (oral).

2. **Extractum Hepatis. Dry Liver Extract.**

9 capsules (4.5 Gm.) equal 1 unit (oral).

BASIC ENDOCRINES, INC., San Francisco, California.

Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

GEORGE A. BREON AND COMPANY, INC., Kansas City, Missouri.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.2 cc. equals 1 unit (injectable)

(c) 0.3 cc. equals 1 unit (injectable)

(d) 0.4 cc. equals 1 unit (injectable).

BUFFALO PHARMACAL Co., Buffalo, New York.

1. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

0.2 cc. equals 1 unit (injectable).

2. **Extractum Hepatis. Dry Liver Extract.**

50 capsules (25 Gm.) equal 1 unit (oral).

CARROLL DUNHAM SMITH PHARMACAL Co., Orange, New Jersey.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.2 cc. equals 1 unit (injectable).

CHAPPEL LABORATORIES, Rockford, Illinois.

1. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

2.5 cc. equals 1 unit (injectable).

2. **Liquor Hepatis. Liquid Extract of Liver.**

60 cc. equals 1 unit (oral).

CHEMICAL WORKS OF GEDRON RICHTER, INC., Budapest, Hungary.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

2 cc. equals 1 unit (injectable).

CHEPLIN BIOLOGICAL LABORATORIES, Syracuse, New York.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.4 cc. equals 1 unit (injectable).

THE COLUMBUS PHARMACAL CO., Columbus, Ohio.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

- (a) 0.1 cc. equals 1 unit (injectable)
- (b) 0.2 cc. equals 1 unit (injectable).

DIRECT SALES COMPANY, INC., Buffalo, New York.

Extractum Hepatis. Dry Liver Extract.

- (a) 5 vials (25 Gm.) equal 1 unit (oral)
- (b) 50 capsules (25 Gm.) equal 1 unit (oral).

THE DRUG PRODUCTS CO., INC., Long Island, New York.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

0.1 cc. equals 1 unit (injectable).

ETHKO CHEMICAL PRODUCTS CO., New York.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

0.4 cc. equals 1 unit (injectable).

FLINT EATON AND COMPANY, Decatur, Illinois.

1. Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

2. Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

- (a) 0.1 cc. equals 1 unit (injectable)
- (b) 0.2 cc. equals 1 unit (injectable).

C. E. JAMIESON AND COMPANY, Detroit, Michigan.

Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

JENSEN-SALSBERY LABORATORIES, INC., Kansas City, Missouri.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

0.4 cc. equals 1 unit (injectable).

KREMERS-URBAN COMPANY, Milwaukee, Wisconsin.

Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

THE LAKESIDE LABORATORIES, Milwaukee, Wisconsin.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

- (a) 0.1 cc. equals 1 unit (injectable)
- (b) 0.2 cc. equals 1 unit (injectable).

LEDERLE LABORATORIES, Pearl River, New York.

1. **Liquor Hepatis. Liquid Extract of Liver.**

60 cc. equals 1 unit (oral).

2. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

(a) 0.066 cc. equals 1 unit (injectable)

(b) 0.3 cc. equals 1 unit (injectable).

ELI LILLY AND COMPANY, Indianapolis, Indiana.

Extractum Hepatis. Dry Liver Extract.

3 vials (12.75 Gm.) equal 1 unit (oral).

THE MALTBIE CHEMICAL CO., Newark, New Jersey.

Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

THE S. E. MASSEGILL CO., Bristol, Tennessee.

1. **Extractum Hepatis. Dry Liver Extract.**

50 capsules (25 Gm.) equal 1 unit (oral).

2. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.2 cc. equals 1 unit (injectable)

(c) 0.4 cc. equals 1 unit (injectable).

MCNEIL LABORATORIES, INC., Philadelphia, Pennsylvania.

1. **Extractum Hepatis. Dry Liver Extract.**

50 capsules (25 Gm.) equal 1 unit (oral).

2. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

0.2 cc. equals 1 unit (injectable).

THE WILLIAM S. MERRELL COMPANY, Cincinnati, Ohio.

Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

METROPOLITAN LABORATORIES, New York City, New York.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.4 cc. equals 1 unit (injectable).

MONTGOMERY WARD AND CO., Chicago, Illinois.

Extractum Hepatis. Dry Liver Extract.

75 capsules (25 Gm.) equal 1 unit (oral).

THE NATIONAL DRUG COMPANY, Philadelphia, Pa.

1. **Extractum Hepatis. Dry Liver Extract.**

50 capsules (25 Gm.) equal 1 unit (oral).

2. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.2 cc. equals 1 unit (injectable)

(c) 1.0 cc. equals 1 unit (injectable).

PARKE, DAVIS AND COMPANY, Detroit, Michigan.

1. **Extractum Hepatis. Dry Liver Extract.**

6 vials (24 Gm.) equal 1 unit (oral).

2. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

2.0 cc. equals 1 unit (injectable).

PITMAN-MOORE COMPANY, Indianapolis, Indiana.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.2 cc. equals 1 unit (injectable).

PREMO PHARMACEUTICAL LABORATORIES, INC., New York, N. Y.

Extractum Hepatis. Dry Liver Extract.

(a) 50 capsules (25 Gm.) equal 1 unit (oral)

(b) 5 vials (25 Gm.) equal 1 unit (oral).

RAYMER PHARMACAL Co., Philadelphia, Pa.

Liquor Hepatis Purificatus. Parenteral Solution of Liver

0.1 cc. equals 1 unit (injectable).

WILLIAM H. RORER, INC., Philadelphia, Pa.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

0.2 cc. equals 1 unit (injectable).

LEONARD A. SELTZER COMPANY, Detroit, Michigan.

1. **Extractum Hepatis. Dry Liver Extract.**

50 capsules (25 Gm.) equal 1 unit (oral).

2. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

0.1 cc. equals 1 unit (injectable).

SHARP AND DOHME, INC., Philadelphia, Pennsylvania.

Extractum Hepatis. Dry Liver Extract.

(a) 50 capsules (25 Gm.) equal 1 unit (oral)

(b) 5 vials (25 Gm.) equal 1 unit (oral).

G. H. SHERMAN, M.D., INC., Detroit, Michigan.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

0.2 cc. equals 1 unit (injectable).

THE SMITH-DORSEY COMPANY, Lincoln, Nebraska.

1. Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

2. Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.2 cc. equals 1 unit (injectable).

UNITED DRUG CO., Boston, Massachusetts.

Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

U. S. STANDARD PRODUCTS COMPANY, Woodworth, Wisconsin.

1. Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

2. Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.2 cc. equals 1 unit (injectable).

THE UPJOHN COMPANY, Kalamazoo, Michigan.

1. Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

2. Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

(a) 0.1 cc. equals 1 unit (injectable)

(b) 0.2 cc. equals 1 unit (injectable).

VALENTINE MEAT JUICE COMPANY, Richmond, Virginia.

1. Liquor Hepatis. Liquid Extract of Liver.

45 cc. equals 1 unit (oral).

2. Liquor Hepatis Purificatus. Parenteral Solution of Liver.

In the following dilutions:

(a) 1.0 cc. equals 1 unit (injectable)

(b) 1.5 cc. equals 1 unit (injectable).

THE WARREN-TWEED PRODUCTS COMPANY, Columbus, Ohio.

Extractum Hepatis. Dry Liver Extract.

50 capsules (25 Gm.) equal 1 unit (oral).

WESTERN RESEARCH LABORATORIES, Denver, Colorado.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

0.4 cc. equals 1 unit (injectable).

THE WILSON LABORATORIES, Chicago, Illinois.

1. **Extractum Hepatis. Dry Liver Extract.**

- (a) 50 capsules (25 Gm.) equal 1 unit (oral)
 (b) 5 vials (25 Gm.) equal 1 unit (oral).

2. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

In the following dilutions:

- (a) 0.1 cc. equals 1 unit (injectable)
 (b) 0.2 cc. equals 1 unit (injectable)
 (c) 0.3 cc. equals 1 unit (injectable)
 (d) 0.4 cc. equals 1 unit (injectable).

WINTHROP CHEMICAL COMPANY, New York, N. Y.

Liquor Hepatis Purificatus. Parenteral Solution of Liver.

1.0 cc. equals 1 unit (injectable).

THE ZEMMER COMPANY, Pittsburgh, Pennsylvania.

1. **Liquor Hepatis. Liquid Extract of Liver.**

45 cc. equals 1 unit (oral).

2. **Extractum Hepatis. Dry Liver Extract.**

75 capsules (25 Gm.) equal 1 unit (oral).

3. **Liquor Hepatis Purificatus. Parenteral Solution of Liver.**

In the following dilutions:

- (a) 0.4 cc. equals 1 unit (injectable)
 (b) 0.1 cc. equals 1 unit (injectable).

The Advisory Board will, as occasion arises, issue supplementary announcements either as a revaluation of the above products based upon new clinical data or to make a report upon new products which are submitted.

U. S. P. ANTI-ANEMIA PREPARATIONS ADVISORY BOARD.

February 14, 1938.

U. S. CIVIL SERVICE EXAMINATIONS FOR SENIOR CHEMIST.

Civil Service Examinations will be held for Senior Chemist in any specialized branch at \$3800 to \$4600 a year and Associate Chemist at \$3200 a year. Application must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than the following dates.

- (a) May 2, 1938, if received from states other than those named in (b).
 (b) May 5, 1938, if received from the following states: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

The salaries named above are subject to a deduction of $3\frac{1}{2}\%$ toward a retirement annuity. The duties are to plan, conduct or assist in conducting investigations or research in the special branch of chemistry in which the appointment is made. The degree of responsibility and importance of the duties vary in accordance with the grade.

THE BASIS OF RATINGS.

Competitors will not be required to report for examination at any place but will be rated on the extent and quality of their education and experience which are relevant to the duties of the position applied for on a scale of 100. The candidates must be citizens of the United States and the applications are for positions in the apportioned service at Washington, D. C. They must show legal voting residence in the state or territory claimed for at least one year next preceding the closing date for receipt of applications.

Announcement of further information regarding the examinations can be had from U. S. Civil Service District Office.

Junior Chemist, \$2000 a year; Assistant Chemist, \$2600; Form No. 40 can be obtained from any of the U. S. Civil Service Commission Officers.