It is well known that multiple hemorrhages occur in the majority of the cases of pulmonary tuberculosis, in which hemoptysis is among the clinical features. A strong tendency to recurrence is shown by my collective inquiries. Thus, in a totality of 3,142 cases of tuberculosis, recurring outbursts took place in 1,928, or 51.5 per cent. In 314, out of a totality of 3,092 cases of pulmonary tuberculosis, a single hemorrhage occurred. Mere bloody or blood-streaked expectoration was recorded in 879, or 16.5 per cent., in the total number (3,092). In 1,192 cases, or 24.4 per cent., out of the totality of 3,092 cases, the case records mentioned the fact that no blood-spitting took place. With regard to the stage of the tuberculous process, at which bleedings are most prone to arise, my figures indicate that in 1,439 out of 2,084 (in which the period of disease was given), or 69 per cent. of the instances, hemoptysis appeared in the first and early part of the second stage, or that of softening (ulceration). These results are in accord with those of my previous investigations, and they likewise support the views expressed above concerning the pathogenesis of the condition.

In my opinion, the questions raised by the present studies must find practical solution in similar collective investigations at the hands of physicians of the present and the future. It is quite possible, at all events, to amass data in this manner to permit of a reliable statistical demonstration of the facts. Obviously, the great importance of hemoptysis as a diagnostic feature of tuberculosis renders further observations along the line pursued in this paper extremely desirable.

Clinical Notes

A NEW FOOD SCALE

AN AID IN THE ADMINISTRATION OF QUANTITATIVE
DIETS

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The importance of the exact measurement of the quantity of drugs administered to our patients has been recognized for many years. It is comparatively recently, however, that the value of the exact measurement of food has become generally accepted. Practically all careful physicians now realize the value of the food prescription, which indicates not only the quality, but also the quantity of food. This is particularly the case in those diseases in which metabolic disorders are prominent.

The great difficulty in practice has not been the giving of directions to the patient but the difficulty of having those directions properly executed. For drugs the teaspoonful, the tumblerful, the pill, the powder, the tablet, and the capsule, with the cooperation of the apothecary are simple and convenient means of furnishing fairly exact dosage. Every one, however, who has tried to prescribe food in definite quantities by weight realizes how difficult it is to obtain from the patient an intelligent cooperation, and I know of a number of physicians who, after some effort in this direction, have simply thrown up the undertaking and announce frankly that it is useless to attempt to prescribe a quantitative diet.

The obstacles from the patient's standpoint are not inconsiderable. In the first place they have been accustomed to eat in accordance with their fancy an amount large or small, and it takes no small amount of persuasion and education by the physician to convince them of the importance of uprooting the habits of a lifetime to conform to the new conditions. Secondly, the weighing of foods is not a small annoyance. A majority of our patients for whom it is desirable to prescribe a weighed diet are not ill enough to be housed in a sanitarium for any considerable period, neither can they afford, nor will they submit to the prolonged supervision of their food by an attendant at their homes. Rarely in my experience does one meet with a nurse, however efficient in other respects, who has had the particular training necessary to carry out the physician's instructions in regard to the administration of definite quantities of solid foods.

There are few households in which the presiding genius of the kitchen is sufficiently intelligent or eager to add to her duties to accurately weigh the food for one member of the family. As a rule the patient must do this for himself, and do it at the table; the difficulties of this procedure have been enhanced by the cumbersome apparatus and more or less complicated

A food scale with an adjustable dial.

calculations which it has been necessary for him to employ. If we are to expect our patients to weigh their food we must make weighing as simple and easy for them as possible.

In order to obviate some of the difficulties I have devised a food scale, with the cooperation of Mr. George E. Chatillon, for the use of physicians and patients which I believe presents a number of features of distinct advantages. This is an accurate spring scale of modest dimensions, 6 inches high and with a 5-inch base, finished in nickel and, therefore, not too conspicuous to be used at the table. It is fitted with a broad circular plate which easily supports the dish on which the food is weighed and it has a base sufficiently wide to keep the scale from being easily upset. The scale is made to indicate grams, having a total capacity of 1,000 grams, the dial being figured for every 100 grams, with subdivisions indicating 20 grams each. By a special contrivance the dial can be quickly rotated to any desired point, by means of a small knob. The result is that the zero point can be easily brought to any position desired.

The method of using the scale is as follows: Suppose the food prescription for a given meal consists of

Meat	100 grams
Potatoes	80 grams
String beans	120 grams
Wheat bread	60 grams

An empty plate is placed on the scale and by means of the knob the dial is rotated until the zero point is opposite the end of the pointer; meat is placed on the plate until the pointer indicates 100 grams; the dial is again rotated until zero is opposite the pointer; potato is added until 80 grams are indicated, and so on, the zero point on the dial being each time brought opposite the pointer until at the completion of the operation we have on the plate all the food for the meal, each kind of food accurately weighed.

In order to get our patients to measure their diet the various articles of food must be weighed; no mere guess work will answer the purpose. The direction to take food in "portions," etc., is most unsatisfactory unless the patient has first learned by means of the scale just how large a "portion" the physician intends him to take. For example, a "portion" of roast beef as served in one of our best public restaurants is equal to two or three servings at the average family table, and by actually weighing "slices" of bread, which I have asked my patient to bring me, in order that I might determine their notion of a "slice," I have found values varying from 30 to 150 grams.

I make it a rule to have each patient whom I am treating for diabetes, obesity, etc., weigh all his food for a period of two weeks. It is surprising and gratifying to see how soon one gets to know just how large is a piece of meat, or fish, or bread which weighs 100 grams. After such practice for two or three weeks the patient can hit pretty close to the mark without actually weighing the food and after this needs to utilize the scale only as an occasional check to his newly acquired art or to determine the weights of new kinds of food.

I can not too strongly urge on every physician who uses the quantitative food prescription to familiarize himself with the weights of the various foods which he is prescribing. Theoretically one might, for example, wish to fill out the caloric value of the diet with 250 grams of cheese, but practically one will find considerable difficulty in making his patient take such an amount; the reason becomes very evident when one weighs out the quantity specified and sees for himself the actual bulk of this item. Familiarity with food weights will make it much easier to prescribe a diet well balanced not only as to its quality and caloric value but also with regard to the habits and customs of the average individual.

The new scale is offered as a simple and accurate means of weighing several foods of different kinds on one plate without mathematical calculations; its design makes it as little conspicuous as possible, and I believe it will be a material aid in inducing patients to undertake a carefully measured diet. It is manufactured by Messrs. John Chatillon & Sons, 85 Cliff Street, New York City.

Dental Prophylaxis.—No doubt much dyspepsia is due to decayed and defective teeth, which preclude complete mastication of the food (even if anybody in America had the time to eat properly). Dentists, like doctors, are now beginning to realize that their true mission is not "a general rebuilding system," but a systematic and well-considered effort to prevent and overcome the decay and loosening of human teeth.—*Scientific American*.

ACUTE ANAPHYLACTIC DEATH IN GUINEA-PIGS

ITS CAUSE AND POSSIBLE PREVENTION; A PRELIMINARY NOTE *

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The animals employed for this study were exclusively guinea-pigs which had been sensitized by a peritoneal injection of horse serum or by a subcutaneous injection of edestin (a proteid obtained from hemp seed). After a number of weeks the animals were tested. This was done by stretching them out on a suitable holder and injecting the horse serum (0.5 to 1 c.c.) or edestin (10 mg.) into a cannula inserted into the external jugular vein, recording at the same time the respiration or blood pressure or both. From the results which we have obtained we would like to call attention to the following:

1. *The animals die of asphyxia.* A few minutes after the intravenous injection of 0.5 to 1 c.c. of horse serum into a sensitized guinea-pig, it will be noticed that the respiration is remarkably modified: the chest no longer expands with each inspiration, but, instead, the front and sides of the thorax sink in. The respirations, which are much more powerful than normal and are accompanied by tonic and clonic convulsions, gradually become less and less and finally cease. The heart continues to beat regularly for minutes after all respiration has ceased. If an animal is allowed to breathe from a large air-bottle which is connected with a tambour, it will be seen that the tambour lever hardly moves while the animal is making these tremendous respiratory efforts; in other words, little or no air enters the lungs. If the blood pressure is recorded it will be seen that the blood in the cannula is black and the blood pressure first rises and then slowly falls.

2. *This asphyxia is due to peripheral causes,* for it occurs after section of both vagi and after the cord and medulla have been destroyed. If the cord and medulla are destroyed, artificial respiration, of course, must be given. Now, again, the blood turns black, and the chest no longer, as a rule, is expanded by the same strength of artificial respiration which before the injection of the killing dose of horse serum gave a good expansion of the chest. At autopsy the lungs present the typical picture of an acute anaphylactic death in guinea-pigs (described *infra*).

3. *This asphyxia is due to an inspiratory immobilization of the lungs.* If the chest of a guinea-pig killed by anaphylaxis be opened, it will be seen that the lungs hardly collapse, and apparently fill out largely the entire chest cavity. There is no marked collapse in typical cases when the entire lung is excised; they seem to be in a permanent state of inspiration. These lungs look pale pink and float lightly on water. Pieces of lung cut off do not collapse, but maintain their distention; the cut surface is moderately dry; pressure shows that this piece of lung is full of air. Usually the cut surface is fairly dry, but pressure at times shows small foci of fine white foam, as if there were some pulmonary edema. This immobility of the lungs in a more or less inspiratory condition is probably due to a tetanic contraction of the musculature of the fine bronchioli and alveolar ducts, imprisoning air in the alveolar sacs. A slight degree of pulmonary edema possibly also aids in the production of this pulmonary inspiratory immobility.

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