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The value of gelatine and gelatine preparations in the diet of man.

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Four albino rats were given a diet of dried bread, 80.5 per cent.; butter, 15.0; salt, 2.0; and yeast, 2.5. Four others were given the same diet except ten parts of bread were replaced by ten of granulated gelatine. At the end of seventeen weeks the first group attained an average weight of 113 grams, and the second group an average weight of 194 grams. The gelatine thus supplemented the cereal diet with respect to protein, probably due to its high content of lysine in which cereals are low.

One hundred c.c. portions of plain milk and of milk containing one per cent. of gelatine were given to four normal men on successive days. Gastric digestion was followed by the fractional method. Finer and softer curds were formed with gelatine-milk than with plain milk. The hydrochloric acid was more rapidly and completely combined. The digestion time was shortened.

Eight children from three to eight months of age and suffering from indigestion or malnutrition, some with large curds in vomitus and stools, were placed on gelatine-milk for from six weeks to four months. A decided improvement in nutrition was noted in all cases and no untoward effects were observed.

Fifty persons suffering from tuberculosis were given gelatine in addition to their regular egg-milk diet. Thirty-five showed definite improvement. In most of the other cases intestinal ulcerations and other complications existed. The effects noted were probably due largely to the better utilization of milk.

The digestibility in the human stomach of a number of the more common gelatine preparations was studied by the fractional method. Four hundred c.c. of 1.5 per cent. gelatine left the stomach in one hour. Fruit juice preparations left the stomach almost as rapidly. Those containing cream remained a little longer. Because of the extreme ease with which gelatine preparations are digested and their appetizing character, they

are especially suitable for the diet of convalescents. Thus orange gelatine was more easily handled by the stomach than the commonly used orange albumin. The preparations containing milk and eggs serve as vehicles and make it possible to increase in the diet the amount of these foods for which some persons (especially children) may have a distaste.

In ten individuals showing hypo- or hyper-acidity, gelatine was also readily digested. It should prove of value in stomach disorders because of the slight burden it places on the digestive functions, its acid-combining power, and low degree of acid stimulation.

Gelatine preparations made from fresh orange, lemon and strawberry juice with the degree of heating commonly employed in the household showed essentially the pronounced antiscorbutic action of the fresh juices themselves. Scurvy in guinea pigs was readily overcome by small amounts of such preparations.

A study was made of the indican and phenol elimination of a normal man on a diet, the protein portion of which was supplied by gelatine. Knox gelatine was used in this as in the other tests, 72 grams per day being given for five days. In another period a meat diet was given. The indican output fell from 8.25 mg. on the last day of the meat period to 0.70 mg. on the last day of the gelatine period. Total phenols fell from 506 to 193 mg. The period averages were 474 and 331 mg. respectively. The decreases in indican and phenols were probably due to the low content of gelatine in tryptophane and tyrosine.

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The cultivation of the organisms of rocky mountain spotted fever and typhus in tissue cultures.

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In these experiments tissues from infected adult guinea pigs were grown in plasma obtained from normal guinea pigs. With

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