

simple method which allows, in the guinea pig, the production of very intensive hypertrophy of the thyroid gland within a relatively short period of time.

Thus far these results apply only to the guinea pig, where the thyroid gland seems more responsive to stimulation than in certain other animals.

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Studies on Growth. II. Effect of Liver Extract on Food Consumption, Food Utilization and Growth.

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In certain of our experiments it has been necessary to investigate the effect of the addition of liver to the diet of growing rats. Osborne and Mendel¹ have recently called attention to the marked acceleration of the growth rate which occurs under these circumstances. It was possible from our experiments to show the difference between the action of yeast and of liver on the consump-

TABLE I.
Effect of Liver Extract and of Yeast on Food Consumption, Food Utilization and Growth.

Diet	No. of rats*	Aver. increased wt., 40 day period	Aver. food intake	Calories per gm. increase in weight	Remarks
Mixed stock control diet	17	gm. 115	cal. —	—	Diet fed <i>ad libitum</i> .
B + 0.3 gm. yeast	10	118	1345	11.4	" " " "
B + 0.3 gm. yeast and liver extract	10	161	1630	10.1	" " " "
B + 0.15 gm. yeast	17	62	975	15.7	Restricted food intake
B + 0.3 gm. yeast	16	80	975	12.2	" " "
B + 0.3 gm. yeast and liver extract	10	73	975	13.4	" " "

* Males, 30 days of age, were used.

¹ Osborne, T. B., and Mendel, L. B., *J. Biol. Chem.*, 1926, *lix*, 661.

tion and the utilization of food. The addition of yeast to diets partially inadequate in the vitamin B complex increases the food intake of the rats but primarily increases the degree of utilization of the food ingested. The addition of liver to an adequate diet has little effect on the degree of utilization of the food but greatly increases the food intake. The effect of yeast and of liver on the consumption of food was demonstrated in experiments in which the diets were fed *ad libitum*. The effect of liver and of yeast on the utilization of food was demonstrated in experiments in which the food intake was restricted so that the rats received equal quantities of food of equivalent calorific value. The results of these experiments are shown in Table I. The extraordinary effect of the liver on the rate of growth of rats may be attributed to the increased food intake resulting from stimulation of the appetite. It is noteworthy that this stimulation of appetite was most evident during the first half of the 40 day period and was hardly apparent during the last half. This investigation of the relation of the appetite to food intake, food utilization, and growth is being continued.

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Pathogenic Properties of Organisms Obtained From Joints in Chronic Arthritis.

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During recent years considerable evidence has been brought forward to show that chronic arthritis is due to streptococci. Forkner, Shands and Paston¹ obtained *Streptococcus viridans* from the joints in 11 of 63 cases; Cecil, Nicholls, and Stainsby² obtained cultures of atypical streptococci from the blood in 49 of 78 cases.

I wish to report the results of cultures from the joints of 50 cases. In most instances the cultures were made from material obtained by aspiration of the joints and periarticular tissues. From 10 to 20 cultures were made from each joint and several varieties of culture media were used. The media which proved most successful were Rosenow's glucose brain broth and hormone medium, made from beef heart.

¹ Forkner, Shands and Poston, *Arch. Int. Med.*, 1928, xlii, 675.

² Cecil, Nicholls and Stainsby, *Arch. Int. Med.*, 1929, xliii, 571.