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The influence of beef fat on growth.By **THOMAS B. OSBORNE** and **LAFAYETTE B. MENDEL**.

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The inability of young albino rats to complete their growth on a diet consisting of isolated proteins, starch, "protein-free milk" and lard has directed attention to the need of some substance to supplement the ordinary nutrients so that the characteristic increment in body weight may proceed to its normal limits.¹ Among naturally occurring fats, butter fat, egg yolk fat, and cod liver oil have been shown to be effective as adjuvants to the above artificial dietary in order to promote growth; whereas lard, almond oil, and olive oil behave otherwise. We have now found that *beef fat* is likewise capable of promoting renewal of growth when it has been checked on the lard diets; or if beef fat is incorporated with the food at an early period there is no cessation of growth until long after the time at which nutritive failures on the inadequate diets usually occur.

The content of the growth-promoting substance appears to be smaller in beef fat than in butter fat. By fractional separations it can be obtained in the more liquid portions of the fat—the "beef oil." Beef oil and beef fat, like butter fat and cod liver oil, seem to exert a curative effect in certain affections of the eyes which the rats experience as the result of malnutrition.

A more detailed account of the work will appear in the *Journal of Biological Chemistry*.

¹ Cf. Osborne and Mendel, *Journal of Biological Chemistry*, XV, p. 311, 1913; XVI, p. 423, 1913; XVII, p. 401, 1914; McCollum and Davis, XV, p. 167, 1913; XIX, p. 245, 1914.