8. Thus far no definite evidence has been obtained to show that the carbohydrate tolerance of a diabetic patient is permanently raised by temporary extract treament.

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The degeneration of the testis of rats on a milk diet.

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The degeneration of the testis of rats on rations in which all the protein and vitamines are supplied by milk[1] has also been observed when such rations are supplemented by nucleoprotein and by those proteins of first quality[2] found in kidney and liver. When 2 per cent. or 5 per cent. of these dried tissues or 2 per cent dried thymus (Parke, Davis) or 2 per cent. yeast nucleic acid was supplied in rations containing 50 per cent. dry whole milk, 15 per cent., lard, 2 per cent., salts, and starch, evidences of degeneration and atrophy appeared as early as 155 days of age. Among 27 animals on such rations, the oldest animal still possessing normal gonads was 139 days of age. Of 25 animals over 155 days of age only one had gonads whose weight was normal and in this animals there were other evidences of degeneration. Without exception litter mates of these animals on stock rat food had normal organs. Aside from the decreased weight which was occasionally even less than one-half the normal for the weight of the animal the degenerating glands have a semitransparent glassy appearance; when ruptured they collapse and there exudes a clear colorless liquid which coagulates like lymph. Histologically these glands show a profound degeneration of the germinal epithelium and an abundant proliferation of the interstitial tissue together with numerous clear amorphous areas. In the main these are the features which Allen[3] described as resulting from the absence of water-soluble B in the diet. Since in our milk rations there can be little or no question as to the adequacy of the vitamin B supply, especially when liver or kidney is added, it would appear that the lack of some other substance than vitamin B, and as yet unrecognized, may be solely or jointly concerned in the disappearance of the reproductive function.

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1 Mattill, H. A., and Stone, N. C., *Jour. Biol. Chem.*, 1923, lv, 443.

2 McCollum, E. V., Simmonds, N., and Parsons, H. T., *J. Biol. Chem.*, 1921, xlvii, 235.

3 Allen, E., *Anat. Rec.*, 1919, xvi, 93.