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V. Vitamin G Deficiency on Concentration of Sugar, Alkaline Reserve, and Glycogen Content of the Liver.*

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In this investigation we have employed a total of 62 animals, 50 pathological and 12 control. The experimental period ranged from 60 to 220 days. The avitaminosis was produced on the dietary regime described by one of us (B. S.) elsewhere.[1, 2] Dermatitis was produced in 24 of these rats. To summarize our results neither arrest of growth nor loss of body weight nor accompanying dermatitis, associated with vitamin G deficiency, had any influence on apparent or true sugar or alkaline reserve. There was a reduction in the glycogen content of the liver in animals that had lost considerably in weight during periods of inanition.

In connection with our studies on the biochemistry and pathology of vitamin G deficiency we wish to point out at this time that from observations made on a total of 125 animals on various vitamin G deficient diets it became apparent that in the majority of animals that developed skin lesions dermatitis preceded the arrest of growth by 20 to 50 days, remarkable growth together with severe dermatitis being quite common. We have also encountered severe skin lesions in a number of positive controls (receiving 10 % autoclaved Northwestern yeast as a source of vitamin G) which showed a growth performance far superior to the Donaldson standard. On the other hand, in our experience, the dietary regime of Sherman and Sandels[3] produced a failure of growth, finally resulting in collapse, unassociated with dermatitis, only 2 animals out of 36 having developed skin lesions. We, therefore, conclude that the growth-promoting and anti-dermatitis factors associated with the "so-called anti-pellagric vitamin G" are not synonymous.

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1 Thatcher, H. S., and Sure, B., *Archiv. Path.*, in press.

2 Thatcher, H. S., Sure, B., and Walker, D. J., *So. Med. J.*, 1930, **23**, 143.

3 Sherman, H. C., and Sandels, M. R., PROC. SOC. EXP. BIOL. AND MED., 1929, **26**, 536.