

**The actions of  $\alpha$ -tocopherol and protein upon the incisor  
tooth of the rat, and the influence of vitamin A  
upon  $\alpha$ -tocopherol activity**

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*(Received 11 December 1957)*

In a previous paper (Irving & Budtz-Olsen, 1955) it was reported that hake-liver oil, when included in a vitamin E-free diet, abolished the prophylactic action of  $\alpha$ -tocopherol. It was suspected that the large amount of vitamin A in the hake oil might be one of the factors responsible. In this paper results are presented to show that excess vitamin A can considerably modify the action of  $\alpha$ -tocopherol.

The prophylactic action of protein added to a vitamin E-free diet was also described in the previous paper, when it was found that the enamel organ, but not the tooth colour, was protected. In this paper, a comparison of the curative actions of  $\alpha$ -tocopherol and extra protein is reported. For tooth recovery protein was as effective as  $\alpha$ -tocopherol, but the dialuric-acid test remained positive in rats on the diet enriched in protein.