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The destructive effect of oxidation on antiscorbutic vitamine.By **ALFRED F. HESS** and **LESTER J. UNGER.**

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As stated elsewhere,¹ the antiscorbutic vitamine is destroyed by oxidation. Such was found to be the case when 4 c.c. of a normal solution of hydrogen peroxide were added to a liter of raw milk, which was then placed in the incubator overnight. Bacteria did not develop in the incubator under these conditions. When 80 c.c. per capita of this milk was fed to guinea-pigs, in addition to oats, they all developed scurvy in about three to four weeks, a result similar to feeding experiments with milk which had been autoclaved for one hour at 120° C. The addition of orange juice to the dietary served either to protect or to cure animals on this dietary.

Orange juice subjected to oxygen for a short period was likewise found to have lost some of its potency. Previously we had found that milk or tomato juice which had been shaken had lost some of this vitamine. Probably this deleterious action is partly due to the effect of oxidation. The harmful effect of "aging" may also be interpreted in this way.

As foodstuffs undergo oxidative processes frequently in the course of various manipulations, no doubt this factor plays an important rôle. This action probably explains the differences in the antiscorbutic potency of foodstuffs which have been treated in apparently similar ways, for example, of milk which has been heated in open pans or in hermetically sealed bottles.

¹ Hess, A. F., *Brit. Med. Jour.*, 1920, ii, 147.