# LOOK OUT FOR A

By Dr. Edwin E. Slosson

We are beginning to learn our ABC's in the field of vitamins and even the groceryman can tell us which of his eatables are richest in those elusive but essential factors that the chemist has not yet been able to extract and identify.

Yet it is only twelve years since the first one was found, or to speak more accurately, found necessary. This is the one called "vitamin A" and its importance was discovered in the course of feeding experiments when it was found, contrary to what was then assumed, that all fats were not quite the same in food value, that lard was not so good as butter, and that olive oil was not so good as fish oil, and that white corn was not so good as yellow corn in promoting growth if they were the only source of fat in the ration. That is, all the fats and oils are almost equally edible and nutritious and digestible and useful in furnishing fuel to run the engines of the body, butsome of them, and only some of them, have in them besides a little of something else that the body must have for growth and health.

A new series of very carefully conducted experiments by Professor H. C. Sherman of Columbia have shown that vitamin A is also necessary for the production of offspring. He matched twin white rats of the same litter and sex. One set was fed whole milk powder; the other skimmed milk powder. In other experiments one set was fed butter fat and the other lard or coconut fat. In other respects the rations were the same, mostly ground whole wheat. The first set therefore lived on a diet containing an ample supply of vitamin A, while the other lot had a ration that was poor in vitamin A.

The difference was striking . Both lots of the rats grew up to maturity in about the same time, but the rats that had plenty of A grew bigger and lived longer and produced more young. The rats on the low-vitamin diet weighed only 69 per cent. as much as their better fed brethern. The rats that had plenty of A lived more than twice as long on the average.

But the most striking difference was in the breeding records. The 17 females on the diets richer in vitamin A had a total of 477 young of which they raised 264. The 17 females on the diets poorer in vitamin A gave birth to only 31, and none of these lived longer than two days. Both sets had plenty of the recently discovered "fertility vitamin " X or E, since wheat germ was in both rations.

Another significant fact is that the rats on the vitamin-poor diet showed a greater "susceptibility to infection and particularly a tendency to break down with lung disease at an age corresponding to that at which pulmonary tuberculosis so often develops in young men and women.

Animals that have lived on a liberal diet will store up enough vitamin A to last a long time if they are deprived of it. Nine-tenths of this is laidup in the liver. But it does not appear that any animal has the power to make this vitamin out of any foods that do not contain it. It is most abundant in cod-liver oil, butter, whole milk, liver, herring, egg yolk, alfalfa, clover, cabbage, carrots, sweet potatoes and spinach. It is practically absent from Irish potatoes, lean meat, malt extract, wheat bran, grapes, olive oil, corn oil, lard, tallow and yeast cakes, We do not need much of A, but we need that little much.

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