NUTRITION

Folic Acid and Blood Cells

Discovery links new B vitamin with the production of white corpuscles. Acid cures blood disorders in rats caused by sulfa drug.

➤ A DISCOVERY linking a new B vitamin, folic acid, with blood cell production in the body has been made at the National Institute of Health. This is the first time a vitamin has been linked with white blood cell production, although a relation between vitamins and red cell production has been hinted by two or three previous reports.

Folic acid will cure the anemia and white blood cell destruction caused in rats by sulfa drugs, Dr. Floyd S. Daft and Dr. W. H. Sebrell, U. S. Public Health Service, report. (*Public Health Reports,* Oct. 15)

Sulfa drugs sometimes cause the same white blood cell destruction, called leukopenia and granulocytopenia, and anemia in human patients. The first practical result of the discovery, therefore, will probably be greater safety in sulfa drug treatment.

White blood cell destruction, or a condition in which there are too few of these cells, however, occurs also in patients who have not been getting sulfa drugs. Some of these cases have been attributed to other chemicals, such as those used in formerly popular headache remedies. In other cases no cause for the condition could be found. The findings on the rats suggest pretty strongly that in all such cases the underlying cause may have been a diet deficient in the folic acid vitamin.

Whether this vitamin plays as important a part in blood cell production as vitamin D plays in bone formation remains for future studies to determine. Folic acid was first introduced to the world under that name by Dr. Roger J. Williams at the University of Texas in 1941, but its only significance heretofore known was the cure of anemia in chickens. It is a member of the vitamin B group and is found more abundantly in liver, kidney, yeast and immature grass than in other materials analyzed, according to a report from John Bowden, E. B. McQuarrie and W. H. Peterson, of the University of Wisconsin. It got its name from the same Latin word that gives us the word "foliage," because it was found abundantly in leaves.

Prof. C. A. Elvehjem and associates at the University of Wisconsin have also found that, although rats can thrive on a diet lacking both folic acid and another B vitamin, biotin, they stop growing and get sick when given a sulfa drug while on such a diet. The ill effects of the sulfa drug, they reported, could be both prevented and cured by adding folic acid and biotin to the diet. Without the sulfa drug, the bacteria in the rat intestine presumably manufacture enough of these vitamins for the animal's requirements.

Dr. Daft and Dr. Sebrell were able to pin the blood disorders in rats definitely to lack of folic acid because they were able to use pure folic acid, instead of a vitamin concentrate, for curing the disorders. This material, which has only been isolated in the past few months, was furnished them by Dr. A. D. Emmett of Parke, Davis and Co., and Dr. E. L. R. Stokstad, Dr. B. L. Hutchings and Dr. N. Bohonos of Lederle Laboratories, Inc.

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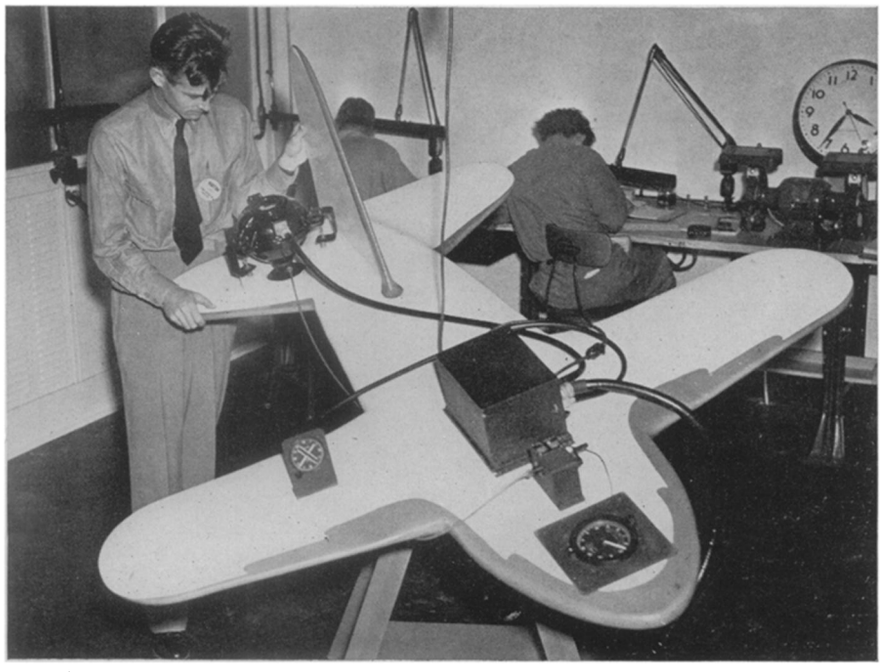

***REVOLUTIONARY**—It is rare that a new type of compass is developed. This one, in production for the Army and Navy at the Philadelphia division of the Bendix Aviation Corporation, is not thrown off by metal nearby (See SNL, Oct. 23). The compass transmitter is shown at upper left, on the tail of a model plane; the amplifier on the center of the "fuselage"; the master indicator on the plane's "nose" and a secondary indicator on the wing at left.*

NUTRITION

Pet Dog May Give Clue To Family's Diet Illness

➤DIAGNOSE my dog, diagnose me, may become the new scientific version of the old saying, Love me, love my dog.

In at least one instance, signs of hidden hunger in a dog eating scraps from the family table led to better understanding of why all the members of the family, though not actually sick, were complaining of weakness, nervousness, irritability and loss of appetite, Dr. Tom D. Spies, of Hillman Hospital and the University of Cincinnati, reports. (*Science,* Oct. 22)

The family's vague symptoms, it turned out, were due to hidden hunger from lack of vitamins. The pet dog which lived on the same diet showed the symptoms more clearly.

Lack of two B vitamins, riboflavin and niacin, may both be detected in dogs eating scraps from the family table, Dr. Spies reports. The niacin lack, it has long been known, leads to pellagra in