NUTRITION

Vitamins on the Way

Two new important, soon to be isolated, factors in nutrition, were found in spinach and in cream. Function in human diet not yet established.

➤ SCIENTISTS in nutritional laboratories all over the country are pretty certainly going to present us with more vitamins in the future. You may think there are enough already to keep track of, but when you remember how much the vitamins mean for keeping people well, it is good news that still more may be on the verge of being discovered.

Discovery of a vitamin means that it has been isolated in pure form, Dr. Floyd S. Daft, of the U. S. Public Health Service's National Institute of Health, one of Uncle Sam's top-flight vitamin researchers, explains. As long as scientists are dealing only with an effect on animals of some substance in food, the vitamin has not been discovered, according to Dr. Daft's criterion, even though scientists may feel very certain of its existence.

Two new vitamins are on the verge of discovery, according to this criterion. One of them is folic acid. The University of Texas investigators who coined this name for it took the word folic from the Latin word for leaf, folium.

"Perhaps they were influenced by the fact that they had obtained their active concentrate from four tons of spinach," Dr. Daft suggests. "They also discovered that this vitamin is especially abundant in green leaves of many kinds."

This vitamin is still in the not-quite-discovered stage because so far scientists have been working with concentrates, not with the pure folic acid. Consequently some of the effects attributed to the vitamin may be due to some impurities, that is, other still undiscovered vitamins associated with folic acid.

Folic acid is said to increase the growth rate and restore the color of hair to rats; to influence the hatchability of eggs; to be essential for normal growth and for hemoglobin formation and normal feathering in young chicks; and to be necessary for the formation of white blood cells in monkeys.

A second new, almost discovered, vitamin was obtained from cream. Scientists at Oregon State College started with 15 gallons of pale yellow cream and ended up with 1/10,000 of an ounce of a pale yellow oil, yet this oil has almost two-thirds of a certain activity which was in the original 15 gallons of cream.

The Oregon researchers have not named their new vitamin yet. They call it just "A dietary factor essential for guinea pigs." But the 1/10,000 of an ounce they got from 15 gallons of cream is powerful enough to cure the stiff legs of two million guinea pigs. Whether it will have any effect on human stiff legs or any other human ailment has not yet been determined.

Very often vitamins discovered through their effects on animals turn out to be needed by humans, but establishing that fact is often one of the last steps in vitamin research, even though it is one of the biggest reasons for the work.

One of the important lessons for humans learned from vitamin research is the necessity of eating a varied diet with not too many highly refined foods. If you put a rat or guinea pig or chicken on a purified diet, even with doses of all the known vitamins in pure form, the animal generally gets sick. This is because his diet is lacking some important still undiscovered food constituent. Humans who limit their diet to one or two favorite foods, even if they take vitamin pills, are in danger of getting sick because they, too, may be missing some still undiscovered vitamins that are in the foods they don't eat. The more varied the diet, the better the chances for not missing important, undiscovered food elements.

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FOR FIELD TEST—This kit will be used to analyze newly discovered stands of cinchona for concentration of quinine.

PHARMACY

New Portable Unit Tests Cinchona Bark for Quinine

➤ QUININE content of newly discovered cinchona stands can now be analyzed on the spot by a new portable device, instead of sending bark samples to remote laboratories.

The first four units have just been shipped to South America to speed development of quinine sources and for initial tests under field conditions.

Knowing that quinine fluoresces or glows under ultraviolet light, Martin S. Ulan, Rutgers University pharmacy instructor and consultant to the BEW Office of Imports, went to work with associates to develop a machine that would make laboratory testing of cinchona bark unnecessary.