

MEDICINE

# Vitamin Plus Casein Protects Rats Against One Cancer

## Substances Are Not Curative in Human Cancer But Finding Is Exciting Because It May Give New Lead

**P**ARTIAL protection by diet against a certain type of experimental cancer in rats has been achieved in research at Memorial Hospital, New York City. The work is reported by Dr. C. P. Rhoads, C. J. Kensler, K. Sugiura, N. F. Young and C. R. Halter (*Science*, March 28.)

One of the B vitamins, called riboflavin, already prominent in diet news, and casein, chief protein of milk, are the diet ingredients responsible for the cancer protection.

"These two substances are not curative in human cancer," Dr. Rhoads declared. He said they have already been tried on cancer patients but no cures resulted.

Scientists hearing of the work of Dr. Rhoads and associates had been wondering whether these diet ingredients could

protect man against cancer, even if they cannot cure it.

"There is no evidence bearing on the application of this principle to cancer in man," Dr. Rhoads said when asked about the possibility of cancer prevention in humans.

The results of the research are nevertheless considered "exciting." They give a new lead in the long search to find what relation, if any, diet may have to cancer, and they will encourage scientists to keep on working along this line with greater hope of finding something that is applicable to cancer prevention in man.

The rats in the experiments got cancer from being fed a dye called butter yellow. This chemical has nothing to do with butter and is not found in any food-stuffs. Its ability to cause liver cancer and

liver cirrhosis was discovered by Japanese scientists who were trying to reproduce in laboratory animals a condition commonly found in people in southwestern regions of the Orient, as a step toward finding why so many of these people get cancer of the liver and stomach.

Butter yellow produces cancer of the liver in from 70 to 80 out of every 100 rats. When in addition to butter yellow the animals are given daily doses of riboflavin and casein, cancer develops at a rate of only 3 out of every 100, Dr. Rhoads and associates report.

Riboflavin alone, however, is almost without protective effect against the dye-caused cancers. The addition of casein to the riboflavin was suggested by Professors Vincent du Vigneaud and Dean Burk of Cornell University Medical College. They and the Memorial Hospital group are now trying to find what diet factors besides riboflavin may be involved in cancer protection and how casein exerts its protective effect in rats. The sulfur-containing amino acids, especially, are under investigation.

*Science News Letter, April 12, 1941*

PUBLIC HEALTH

## Diphtheria Epidemic in Halifax a Warning

**A** DIPHTHERIA epidemic which raged in Halifax, N. S., this winter and threatened to slow that prize port's steady flow of supplies to embattled Britain has a lesson for us here in the United States. The story of the epidemic and of the Harvard Medical School expedition's part in controlling it has been delayed by war censorship. It can be told now that the epidemic is over and steps have been taken to prevent its recurrence.

Diphtheria is a preventable disease and has been so since the last great war. Toxin-antitoxin and toxoid when given to children are almost sure preventives of diphtheria in later life. Toxin-antitoxin was first used in 1913 and 1914. Most doctors and health authorities now urge parents to give their children this protection. In Halifax, apparently, parents had not been advised, or had not followed advice to have their children protected against diphtheria by immunization.

When the Harvard expedition arrived in Halifax, the town was, in the words of one member of the expedition, a virtual "hell-hole of infection." Its normal population of about 70,000 had nearly doubled and one-third of the city's doctors had been called to service.

Arriving ships brought the infections



**STRATEGIC**

*This is pure tungstic oxide that will be used to make the very fine wire for electric light bulbs. Westinghouse Lamp Laboratories are investigating the use of American tungsten ores which would make us independent of sources in the Orient.*