Volume 32 | Number 7 Article 7

1952

# Vitamin 607

Virginia Wilcox
*Iowa State College*

After 22 Years
ISC Scientists
Discover . . .

# Vitamin 607

*by Virginia Wilcox*

*Technical Journalism Sophomore*

IN 1931, two Iowa State College professors, Professor Lester Yoder and Dr. B. H. Thomas, began research on a project of the Agricultural Experiment Station. The project concerned vitamins. Now, after twenty-two years of extensive research, study and experimenting, the two men revealed a new compound which they term "Vitamin 607."

The new compound is similar in action to the "sunshine" Vitamin D, whose action, according to Yoder is not yet fully understood.

Like Vitamin D, Vitamin 607 is used in treating rickets. Rickets, by definition, is "a disease of early childhood that is characterized by alterations in the bone due to a defective deposit of calcium salts at the growing ends of the bones." When affected by rickets the head of the bone becomes square and bulky and often the spinal column and long bones are bent.

Rickets is particularly prone to develop in Vitamin D deficient individuals during periods of rapid growth, which explains the commonness of the disease in small children.

## *A comparison*

Before looking at the difference between Vitamin 607 and Vitamin D, an explanation of Vitamin D is necessary.

Vitamin D is an antirichitic substance which regulates the phosphorus-calcium metabolism. Besides occurring naturally in fish liver oils, egg yolks and other foods, Vitamin D can also be prepared in the laboratory.

Vitamin D plays an important part in maintaining the proper metabolism of both phosphorus and calcium. The absorption of calcium is controlled chiefly by the dietary, intestinal hydrogen-ion concentration, and the presence of Vitamin D.

## *The main difference*

The main difference between Vitamin D and Vitamin 607 lies in the way they are formed. Both Yoder and Thomas stress the fact that 607 is built chemically and does not require action of light. On the other hand, the most common D vitamins are prepared by ultraviolet irradiation of other compounds related to cholesterol, a fatty substance found in animal tissue. Too, 607 is related to cholesterol, even though it is produced chemically.

This new vitamin differs from Vitamin D, too, in that the number of rat units, the unit used in laboratory experiments with Vitamin 607, will ~~produce~~ more effect against rickets than the same number of rat units of Vitamin D.

Vitamin 607 has such a low potency compared to the D vitamins treated by radiant light that it can not compete with them in practical therapy, say the two discoverers. They also said however that 607 has advantages such as water solubility in addition to fat solubility and production of denser bones, when fed to laboratory animals.

Yoder and Thomas added that "the development of a chemical agent such as Vitamin 607 puts in our reach a new tool better adapted to the further study of the bone formation and growth than the original 'sunlight' vitamin."