

The influence of diet on liver phosphorylase. II. Effect of different proportions of carbohydrates, proteins and fats

Niemeyer, Hermann

Pérez, Norma

Radojkovic, Jasna

Ureta, Tito

Liver phosphorylase activity was found to be proportional to the caloric intake of the animal. Rats fed for 6 or 10 days an exclusively carbohydrate diet showed a phosphorylase content of the liver similar to animals fed isocaloric amounts of equilibrated diet, in spite of the protein depletion. The same results were observed with fat-free carbohydrate diets containing variable proportions of casein. The phosphorylase activity decreased markedly in rats kept on carbohydrate-free, high-fat diets, containing as much protein as 25% of the total calories. The diminution of the enzyme content was observed even after only 1 day on the high-fat diet. The rate of increase in liver phosphorylase, after a decrease provoked by a 48-hr, fasting, was the same in animals subsequently fed an equilibrated diet or carbohydrates alone. In the latter conditions the liver proteins remained at the same low levels as during fasting. © 1962.