

Induction of glucokinase by glucose in rat liver

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EVIDENCE that the nature and amount of carbohydrates in the diet significantly influence the activity of several enzymes related to carbohydrate metabolism is now accumulating. Among other enzymes, glucokinase decreases in rat liver after fasting or after feeding a high-fat diet¹⁻⁴. The activity of this enzyme is restored to normal levels by feeding a protein-carbohydrate diet³, a balanced diet⁴ or carbohydrates alone⁴ after fasting. Since glucokinase activity recovers rapidly under the influence of carbohydrates⁴, it was considered of interest to define more precisely some aspects of the kinetics of glucokinase induction under various dietary conditions. In this communication results obtained by supplying carbohydrates after feeding rats a high-fat diet will be presented. A more detailed report will be published elsewhere. © 1963 Nature Publishing Group.