this laboratory was found absolutely unsuitable for this determination.

4242

Tolerance for Levulose in Several Types of Experimentally Produced Liver Injury.*

RALPH C. CORLEY.

From the Department of Bio-Chemistry of the School of Medicine, Tulane University.

In view of the unquestioned importance of the liver in carbohydrate metabolism, numerous attempts have been made to correlate hepatic efficiency and tolerance for various sugars. Among these fructose has attracted considerable attention. With experimental animals there seems but little question that impairment of the function of the liver is associated with a decreased ability to metabolize fructose, as evidenced by the greater hyperglycemia resulting. Having available a method for the determination of levulose in blood and urine, it has seemed of interest to study the effect of hepatic dysfunction on circulating levulose after administration.

In the normal rabbit, levulose disappeared from the blood in 90 minutes subsequent to its intravenous injection in doses of 2 gm. per kilo of body weight. The rate of removal was not strikingly affected by mild poisoning with various substances that are injurious to the liver, but more rigorous treatment with phosphorus, chloroform, and hydrazine sulfate did have an evident effect, levulose still remaining in the blood at the end of 90 minutes.

The oral ingestion of levulose in quantities as large as 7 gm. per kilo of body weight caused but slight increase in the total blood sugar and the appearance of very little levulose in the circulation. The liver poisons were without marked influence on the amount of levulose appearing in the blood stream, but the total blood sugar rose to very high levels when levulose was fed.

* Aided by a grant from the David Trautman Schwarz Research Fund.