

The difference in response of serum proteins to a high-carbohydrate diet in men and women. By BETTY L. COLES, *Department of Physiology, Guy's Hospital Medical School, London, SE1*

A decrease in serum albumin concentration has been noted in healthy men on a variety of high-carbohydrate diets (Coles & Macdonald, 1966; Coles, 1969.) Similar investigations have now been made in women. A comparison of the serum albumin response to two diets was tested in six young men and six young women. Both diets contained 9% protein by weight. The sucrose diet provided 7 g/kg body-weight of sucrose daily; the isocaloric cream diet provided 3.5 g/kg of sucrose; the additional calories were supplied as double cream. On both diets the serum albumin concentration of the men fell significantly over an 18-day experimental period. The serum albumin concentration of the women showed no significant change on the sucrose diet. On the cream diet there was a significant fall in this fraction in the women from days 0 to 7, but by day 18 the levels had risen to control values.

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REFERENCES

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The incorporation of intravenously injected ^{14}C -labelled glucose and fructose into the serum glycerides of male and female baboons. By M. H. JOURDAN, *Department of Physiology, Guy's Hospital Medical School, London, SE1*

In a previous communication to the Society (Jourdan, 1969) it was reported that fructose, after rapid intravenous injection, disappeared from the serum of male baboons more rapidly than from the serum of female baboons. No such difference between the sexes was found after rapid intravenous injection of glucose.

In an attempt to account for these findings, the incorporation of ^{14}C -labelled fructose and glucose into the serum lipids has been studied.

After an overnight fast, six male and six female baboons were tranquillized and given 0.5 g of either ^{14}C -labelled glucose or fructose/kg body weight in 20% solution by rapid intravenous injection over a period of 3 min. Venous blood was taken before the injection and at intervals up to 5 h after the end of the injection.

The serum lipids were extracted and the ^{14}C activity was measured in the various lipid fractions following separation by thin-layer chromatography.

It was found that specific activity (counts/min per mg lipid fraction) of the glyceride fraction following fructose injection was greater over the 5 h period in the male than in the female baboons. After glucose injection the specific activity in the glycerides was significantly less than after fructose injection, and no difference between the sexes was detectable.