

Effects of a maternal low carbohydrate, high protein and high lipid diet on metabolism of Wistar rats progeny at adult life.

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Previous studies shows that fetal underdevelopment may be related to a mothers' bad pregnancy or neonatal nutrition. The objective of this work was to determine the effects of a low carbohydrate, high lipid and high protein diet during pregnancy/lactation of wistar rats analyzing the diet consumption, body weight and hepatic steatosis of the littermates. During the gestation and/or lactation period, the females were feed a high protein (45%), high lipid (45%) and low carbohydrate (5%) diet (HLP diet). After lactation period, the littermates were feed during 12 weeks with a balanced diet. During this period, the consumption of diet and body weight were monitored. After this period, the animals were sacrificed and the liver was processed to histological analysis. The relative weight gain of the littermates (g/100 g weight at beginning of balanced diet period) was higher in the group whose mothers feed during gestation and/or lactation with HLP diet as compared with control group (mothers feed balanced diet during gestation and lactation) ($p < 0.05$). Also, littermates from mothers who feed balanced diet during gestation and HLP only during lactation were more susceptible to hepatic steatosis after 12-weeks of balanced diet. In conclusion, these results show that HLP diet offered to mothers during gestation or lactation may affect the progeny's metabolism.

Key words: Diet, high protein, high lipid, pregnancy, lactation.

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