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A Comparison of the Growth Rate of Rats on a Pellet Diet and a Semi Synthetic Diet

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Abstract

In the present study, the long-term effects of a pellet diet and a semi synthetic diet on the biochemical parameters of serum were investigated. After acclimation for one week, the 8-week-old-rats were divided into two groups and given either a pellet diet or a semi synthetic diet (20% casein diet). Blood was collected prior to and after 4, 12, 24 and 48 weeks on the diets. Body weights were higher in the semi synthetic diet group throughout their lifespan. The median survival rate of the semi synthetic diet group was 72 weeks, while that of the pellet diet group was 94 weeks. The serum AST concentration in the two groups was similar, though ALT was higher in the semi synthetic diet group. Total cholesterol in the serum increased in both groups but was higher in the semi synthetic diet group during the experimental period. The results obtained from this study suggest that the differences in the aging process in the rats fed the experimental diets might relate to cellulose and vitamins.
