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Characterizing the effect of different diets on the structure of the liver and kidney in mice

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Abstract

It is well established that diet significantly influences health and susceptibility to disease; however, the mechanisms responsible are still unclear. Much of our understanding of disease pathogenesis is developed from mouse studies, most of which are performed in mice fed diets with high nutritional quality which do not appropriately model the “typical” American. There are commercially available “disease-inducing” diets, however they do not consider nutrition in a holistic manner and cause overt metabolic diseases (such as diabetes). We have developed a novel “Americanized” diet that includes several nutritional modifications to match that observed in Americans and considers the differences in mouse and human nutrient requirements. Here we set out to determine how the AD influences liver and kidney health (organs commonly influenced by poor diet) as compared to other commercially available diets.