

*Consumer Abstract*

In a recent study completed by Dr. Havel's research group, it was discovered that in comparison with subjects consuming glucose-sweetened beverages, those consuming fructose-sweetened beverages had greater increases of intra-abdominal fat, triglycerides, and cholesterol, in addition to a reduced sensitivity to insulin. These changes can increase the risk of developing heart disease and diabetes; however, the mechanism behind the development of these diseases is not fully understood. Dr. Havel's research group plans to conduct studies in a special rat model of adult-onset obesity and insulin resistance that will answer the following questions: 1) Does consumption of a high fructose diet lead to reduced insulin sensitivity or increased abdominal fat first? 2) In comparison with consumption of a high glucose or high fat diet, does consuming a high fructose diet lead to reduced sensitivity to insulin more rapidly? These questions are important because they will provide a greater understanding of the impact of the current American diet, which is high in fat and sugar, on the development of heart disease and diabetes. These studies will also help researchers to better understand the effects of both the amount and types of sugar and fat on overall health.