

**Food+ Research Symposium**  
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**Faculty Abstract**

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*Development of Empirical Evidence on Diet and Health.*

**ABSTRACT:** Strong beliefs have long existed about many aspects of diet and health, but until recently little empirical evidence existed. Beginning in 1980, our group at the School of Public Health and Brigham and Women's Hospital has developed a series of longterm longitudinal studies, now tracking the diets of approximately 300,000 men and women and relating them to incidence of most major causes of morbidity and mortality in the U.S. These studies have also incorporated biomarkers of diet, and more recently have added genomics and metabolomics to understand mechanistic pathways.

Many findings, both hypothesized and unexpected, have emerged from these efforts; these include the relation between *trans* fat intake and risk of coronary heart disease, the benefits of unsaturated fat intake in prevention of heart disease, the importance of carbohydrate quality in relation to risks of diabetes and cardiovascular disease, and the lack of relation between dietary fat and risk of breast cancer. We have shown that a healthy dietary pattern, together regular physical activity and not smoking, can prevent the large majority of heart disease, diabetes, and some cancers. Recent analyses of major protein sources implicate high consumption of red meat in cardiovascular disease, diabetes, and cancer; thus minimizing consumption of red meat represents an important convergence of human and planetary health.