

BEEF RESEARCH

Human Nutrition Research
In Progress, Funded Projects

Original Scientific Research

Beef as a nutritional strategy to optimize iron status in iron deficient women: a randomized, controlled study (Stephen Hennigar, Pennington Biomedical Research Center)

To determine the effects of incorporating daily meals containing beef or plant-based alternative with or without an iron supplement on indicators of iron status in iron-deficient women or reproductive age. (ClinicalTrials.gov Identifier: NCT04793906)

Effect of minimally processed meat and further processed meat on biomarkers and risk factors for cancer and cardiovascular disease (David Baer, USDA, ARS, BHNRC)

To compare the effect of consuming further- to minimally- processed meat products, in either a lower or higher quality diet, on biomarkers and risk factors for cancer and cardiovascular disease. (ClinicalTrials.gov Identifier: NCT05589389)

Co-funded with Missouri Beef Industry Council, Kentucky Beef Council, Foundation for Meat & Poultry Research & Education

The effects of dietary beta-alanine and carnosine from beef intake on muscle fatigue in older adults (Cydne Perry, Indiana University, School of Public Health)

To compare the effect of a beef-based healthy dietary pattern to a lacto-ovo vegetarian diet on muscle fatigue in adults 65 years of age and older. (ClinicalTrials.gov Identifier: NCT05860088)

A randomized, crossover trial to assess the effects of diets containing lean beef vs. white meat on pancreatic beta-cell function in men and women with prediabetes (Kevin Maki, MB Clinical Research and Consulting, LLC)

To evaluate the effect of dietary protein source (lean beef vs. lean poultry) on pancreatic beta-cell function in prediabetic individuals. (ClinicalTrials.gov Identifier: NCT05456477)

Effects of daily beef intake, as a component of a heart-healthy diet, on cellular zinc status and vascular function in older adults (Carl Keen, University of California, Davis)

To compare the intracellular absorption of zinc after regular consumption of healthy meals containing beef to vegetarian meals. (ClinicalTrials.gov Identifier: NCT05236374)

Role of beef in time restricted feeding dietary patterns (David Church, University of Arkansas, Medical Sciences)

To assess 24-hour protein kinetics at two different levels of protein intake: 0.8 (RDA) and 1.6g/kg/day (2RDA) during a normal dietary and a time restricted feeding pattern in older adults. (ClinicalTrials.gov Identifier: NCT05610644)



BEEF RESEARCH

Linking intake of unprocessed beef to health outcomes via detection of beef's unique signatures (Nancy Krebs, University of Colorado Anschutz Medical Campus)

This study will look at how diet affects overall health including risk factors for heart disease, gut health and inflammation as well as underlying mechanisms linking whole food to health.

Findings from this study will potentially inform effective dietary recommendations and interventions, thereby reducing chronic disease in humans. (ClinicalTrials.gov Identifier: NCT05500976)

Co-funded with Iowa Beef Industry Council

The effect of culinary medicine to enhance protein intake on muscle quality in older adults (Shannon Galyean, Texas Tech University)

To examine the efficacy of a culinary medicine intervention emphasizing convenient ways to increase lean red meat intake and improve diet quality and muscle strength, function, and mass in older adults after four months. (ClinicalTrials.gov Identifier: NCT05593978)

Effects of beef consumption on skeletal muscle protein homeostasis and inflammatory factors in pre- and post-menopausal women (Robert Wolfe, University of Arkansas, Medical Sciences)

To compare the effects of beef as the major dietary source of protein, to a diet featuring plant-based protein sources on muscle protein and whole-body protein kinetics and skeletal muscle inflammatory markers in normal/overweight and obese postmenopausal females.

(ClinicalTrials.gov Identifier: NCT05714462)

Co-funded with Kansas Beef Council

Tracing biomarkers from beef intake by mother to infant via breastmilk (Marisa Burgermaster, University of Texas, Austin)

To define and discover nutritive and non-nutritive differences in beef and plant-based imitation beef products by comparing the types of fat and the process contaminants present in each, assess the impact of these compounds on breast milk composition in a rigorous feeding trial.

Co-funded with Texas Beef Council

Understanding beef preferences during infant complementary feeding (Susan Johnson, University of Colorado Anschutz Medical Campus)

To investigate mother-child interactions during the early introduction of beef-containing products to help explain how preferences for, and ingestion of, beef (and its nutrient-rich profile) begin to develop over the life course.

Co-funded with North Dakota Beef Commission, Texas Beef Council

Role of beef in healthy dietary patterns across infancy and effects on growth, motor and neurocognitive development (Elizabeth Widen, University of Texas, Austin)

To promote healthy feeding focused on animal source diets (including beef), responsive parenting and effective inter-caregiver communication to foster healthy eating habits beginning in early infancy, which should reduce obesity risk in infants and toddlers, as well as promoting optimal growth, motor, and neurocognitive development in the child. (ClinicalTrials.gov Identifier: NCT04177472)

Co-funded with Texas Beef Council



Existing Research Assessment

Data pooling project for investigation of beef, red meat, omnivorous dietary patterns, and human health via metabolomics and machine learning methods (Lauren O'Connor, USDA, ARS, BHNRC)

To investigate metabolomic biomarkers predictive of habitual consumption of beef in the context of various dietary patterns.

Co-funded with Kansas Beef Council

Lean beef as an essential component of a plant-based dietary pattern to promote cardio-metabolic health: Secondary Analyses (Heather Leidy, University of Texas, Austin)

To examine the acute effects of plant-based dietary patterns varying in lean beef quantity during acute energy balance and energy restriction on clinical biomarkers of obesity and cardiometabolic disease risk factors in overweight middle-aged women.

Co-funded with Missouri Beef Industry Council

Beef consumption and health outcomes: A systematic analysis of rigor, reproducibility, and verifiability of current evidence (David Allison, Indiana University School of Public Health-Bloomington)

To characterize the existing randomized control trial evidence on beef consumption and specified health outcomes, its quality and trustworthiness, and identify correlates thereof.