

Having a cow can be a heart healthy choice

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Lean beef can contribute to a heart-healthy diet in the same way lean white meats can, according to nutritional scientists.

The DASH [diet](#) -- Dietary Approaches to Stop Hypertension -- is currently recommended by the [American Heart Association](#) to [lower cholesterol](#) and reduce risk of heart disease. People following the DASH diet are encouraged to eat fish and poultry, but not much beef.

According to the Centers for Disease Control about 26 percent of American deaths are caused by heart disease.

"The DASH diet is currently the gold standard for contemporary diet recommendations," said Michael Roussell, nutrition consultant and recent Penn State Ph.D. graduate. "The DASH diet emphasizes plant protein foods, poultry, fish and small amounts of lean beef. Consumers often interpret this to mean that red meat is restricted on a healthy diet. Our research is showing that if you can keep your [saturated fat](#) levels controlled and lean beef portions in check, you can incorporate lean beef into a heart healthy diet and still see equal reductions as with white meat and fish."

Roussell worked with Penny Kris-Etherton, Distinguished Professor of Nutrition, Penn State, and colleagues to test three diets that were equally low in saturated fat to see if there were differences in [cholesterol levels](#) at the end of each testing period. They report their results in the current issue of the [American Journal of Clinical Nutrition](#).

They tested the DASH diet, as well as the BOLD diet -- Beef in an Optimal Lean Diet -- and BOLD+ -- Beef in an Optimal Lean Diet plus additional protein. The additional protein in the BOLD+ diet included more beef, as well as other sources of protein like hummus, edamame beans and cottage cheese.

The [control diet](#), called the healthy American diet, consisted of 12 percent saturated fat per day -- twice the saturated fat included in the three test diets -- and 0.7 ounces of beef. The DASH diet included 1.0 ounce of beef, while the BOLD diet had 4.0 ounces of beef per day and the BOLD+ diet included 5.4 ounces of beef.

The study began with 42 subjects who all had elevated levels of low-density lipoprotein (LDL), or bad [cholesterol](#). Thirty-six completed the study and all subjects maintained their body weight within almost five pounds throughout the study periods. Each participant consumed each of the four diets for five weeks. They were given a week or two in between each diet to eat as they wished. Blood samples were taken at the beginning and end of each study period. Subjects were randomly assigned the order in which they received each diet.

On average, participants experienced a decrease in both total cholesterol and LDL cholesterol while on the three different diets. Total cholesterol decreased about 4 percent for subjects on the BOLD and DASH diets, while subjects on the BOLD+ diet experienced around a 5 percent decrease of total cholesterol. LDL cholesterol went down around 5 percent for those on the BOLD diet, about 4.5 percent while on the BOLD+ diet, and almost 6 percent while on the DASH diet.

"To our knowledge, this was the first controlled-consumption study that showed an increase in lean-beef consumption while controlling saturated fat in the context of a heart-healthy diet associated with significant decreases in LDL cholesterol," the researchers wrote.

Provided by Pennsylvania State University

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