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## **New Research Demonstrates Lean Beef is Good for Heart Health As Part of a Heart-Healthy Diet, Eating Lean Beef Daily Can Help Lower Cholesterol**

**Centennial, CO (Dec. 15, 2011)** A new study published in the January 2012 edition of *American Journal of Clinical Nutrition* shows that beef can play a beneficial role in a cholesterol-lowering diet, despite commonly held beliefs. The study found that diets including lean beef every day are as effective in lowering total and LDL "bad" cholesterol as the gold standard of heart-healthy diets (DASH, Dietary Approaches to Stop Hypertension).

The Beef in an Optimal Lean Diet (BOLD) clinical study (Effects on Lipids, Lipoproteins and Apolipoproteins),<sup>1</sup> conducted by The Pennsylvania State University (PSU) researchers, evaluated adults with moderately elevated cholesterol levels, measuring the impact of diets including varying amounts of lean beef on total and LDL cholesterol levels. Study participants experienced a 10 percent decrease in LDL cholesterol from the start of the study, while consuming diets containing 4.0 and 5.4 oz. of lean beef daily.

"This research sheds new light on evidence supporting lean beef's role in a heart-healthy diet. Study participants ate lean beef every day and still met targets for saturated fat intake," says Penny Kris-Etherton, PhD, RD, distinguished professor of nutrition at PSU and the study's principal investigator. "This study shows that nutrient-rich lean beef can be included as part of a heart-healthy diet that improves risk factors for cardiovascular disease."

### **The Research**

The study used a rigorously designed Randomized Controlled Clinical Intervention Study to investigate the effects of cholesterol-lowering diets with varying amounts of lean beef. Thirty-six participants (adults ages 30-65 with moderately elevated cholesterol) were randomly assigned to a treatment order and consumed a total of four diets for five weeks each. The cross-over design allowed each participant to serve as his or her own control, reducing any errors associated with biological variation.

The four diets tested in the study were: Healthy American Diet (HAD) as control; Dietary Approaches to Stop Hypertension (DASH); Beef in Optimal Lean Diet (BOLD); and Beef in Optimal Lean Diet Plus (BOLD-PLUS). Although BOLD and DASH diets were both rich in fruits, vegetables, whole grains and low-fat dairy products, the diets differed in their primary protein source. The BOLD and BOLD-PLUS diet's primary protein source came from lean beef while DASH and HAD included white meat and plant protein. The BOLD diet included an average of 4.0 oz/day of lean beef and the BOLD-PLUS diet included 5.4 oz/day of lean beef, while the HAD and DASH diets included 0.7 and 1.0 oz/day of lean beef, respectively. Many of the BOLD and BOLD-PLUS diet menu plans incorporated recipes from *The Healthy Beef Cookbook*.

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Details on each of the dietary interventions are as follows:

	HAD	DASH	BOLD	BOLD-PLUS
<b>Calories</b>	2,097 kcals	2,106 kcals	2,100 kcals	2,104 kcals
<b>Protein</b> (% of total calories)	17%	18%	19%	27%
<b>Carbohydrate</b> (% of total calories)	50%	55%	54%	45%
<b>Fat</b> (% of total calories)	33%	27%	28%	28%
<b>Saturated Fat</b> (% of total calories)	12%	6%	6%	6%
<b>Lean Beef (oz./day)</b> <i>Weight before cooking</i>	<b>0.7</b>	<b>1.0</b>	<b>4.0</b>	<b>5.4</b>

### Research Findings

After five weeks, total cholesterol and LDL cholesterol in the participants were significantly reduced in the BOLD, BOLD-PLUS and DASH diets compared to the HAD diet.

Overall, participants following the BOLD and BOLD-PLUS diets experienced a 10 percent decrease in LDL cholesterol from the start of the study. The improvements in heart health risk factors seen from the BOLD diets were as effective as those from the DASH and other heart-healthy diets, many of which emphasize plant proteins.

Additionally, a recent review of 20 epidemiological studies encompassing more than one million subjects concluded that red meat intake does not increase risk of heart disease.<sup>2</sup>

“This research adds to the body of evidence concluding that you can include beef in your diet every day and get heart-health benefits,” says Shalene McNeill, PhD, RD, executive director, human nutrition research for the National Cattlemen’s Beef Association, which contracts to manage programs for the beef checkoff. “Americans now have more scientific evidence for including lean beef in a heart-healthy diet.”

Many of the most popular beef cuts, such as Top Sirloin steak, Tenderloin, T-Bone steak and 95% lean Ground Beef meet government guidelines for lean. In fact, sixty-five percent of all beef muscle cuts available in grocery stores are lean.<sup>3,4</sup> On average, a 3 oz. serving of lean beef is about 150 calories, an excellent source of six nutrients (protein, zinc, vitamin B<sub>12</sub>, vitamin B<sub>6</sub>, niacin and selenium) and a good source of four nutrients (phosphorous, choline, iron and riboflavin).<sup>4</sup>

To access this study, please [click here](#). For nutrition information, a [fact sheet on this study](#) or recipes featuring lean beef, visit [BeefItsWhatsforDinner.com](#).

#### About The Beef Checkoff Program

The Beef Checkoff Program ([www.MyBeefCheckoff.com](http://www.MyBeefCheckoff.com)) was established as part of the 1985 Farm Bill. The checkoff assesses \$1 per head on the sale of live domestic and imported cattle, in addition to a comparable assessment on imported beef and beef products. States retain up to 50 cents on the dollar and forward the other 50 cents per head to the Cattlemen’s Beef Promotion and Research Board, which administers the national checkoff program, subject to USDA approval.

#### About the National Cattlemen’s Beef Association

The National Cattlemen’s Beef Association is a contractor to the national Beef Checkoff Program, which is administered by the Cattlemen’s Beef Board. Consumer-focused and producer-directed, NCBA and its state beef council partners work together as a marketing organization on behalf of the largest segment of the food and fiber industry.

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2. Micha R, Wallace SK, Mozaffarian D. Red and processed meat consumption and risk of incident coronary heart disease, stroke, and diabetes mellitus: a systematic review and meta-analysis. *Circulation*. 2010; 121:2271-2283.
3. Fresh Look Marketing Group, Total US Beef, 52 weeks ending 9/25/2011.
4. USDA, ARS. 2011. USDA National Nutrient Database for Standard Reference, Release 24. Nutrient Data Laboratory Home Page, <http://www.nal.usda.gov/fnic/foodcomp/search/>