Consistent lean beef consumption lowers blood pressure, researchers say

By Michael Fielding on 7/11/2014

Incorporating lean beef into a diet of fruits, vegetables and low-fat dairy can reduce risk factors for heart disease, according to recent research at Penn State. "This research adds to the significant evidence, including work previously done in our lab, that supports lean beef's role in a heart-healthy diet," Penny M. Kris- Etherton, distinguished professor of nutrition, said in a news release. "This study shows that nutrient-rich lean beef can be included as part of a heart-healthy diet that reduces blood pressure, which can help lower the risk for cardiovascular disease."

The DASH eating plan — Dietary Approaches to Stop Hypertension — is currently recommended by the American Heart Association to lower blood pressure and reduce risk of heart disease. People following the DASH diet are encouraged to eat fruits, vegetables, low-fat dairy and protein predominantly from plant sources. Lean beef may be consumed as the predominant protein source in a DASH-like diet, along with fruits, vegetables and low-fat dairy, to effectively help lower blood pressure in healthy individuals, the researchers report in the Journal of Human Hypertension.

This DASH-like diet is also called the BOLD+ diet: Beef in an Optimal Lean Diet plus additional protein. Kris-Etherton and colleagues tested four diets to find the effects on vascular health. The diets tested included the Healthy American Diet — which served as the control — the BOLD+ diet, the BOLD diet and the DASH diet.

The control diet consisted of 0.7 ounces of lean beef per day, while the DASH diet included 1.0 ounce. The BOLD diet had 4.0 ounces and the BOLD+ diet included 5.4 ounces of lean beef. The researchers tested the diets with 36 participants, ages 30 to 65. All participants followed each diet at different times throughout the study period. Subjects were randomly assigned an order to follow each of the four diet plans for five weeks each, with a break of one week in between each new plan. Blood pressure was taken at the beginning and end of each diet period. The BOLD+ diet was more effective at reducing blood pressure when compared to the other diets tested.

"This evidence suggests that it is the total protein intake — not the type of protein — that is instrumental in reducing blood pressure, as part of a DASH-like dietary pattern," the researchers stated. The Beef Checkoff Program and the National Institutes of Health-supported Penn State General Clinical Research Center funded the research.