Onion compound linked to lower blood pressure

By Stephen Daniells

23/10/2007- **Quercetin, the compound most commonly associated with onions, may reduce blood pressure by an average of five millimitres of mercury, indicates new research.**

The study, said to be the first to report the blood pressure-lowering activity of this flavonol, found a daily 730 milligram supplement of quercitin led to significant reductions in the blood pressure of 22 people with high blood pressure (hypertension).

Hypertension, defined as having a systolic and diastolic blood pressure (BP) greater than 140 and 90 mmHg, affects about 600 million people worldwide and is associated with over seven million deaths.

The randomised, double-blind, placebo-controlled, crossover study, considered to be the gold-standard for experimental interventions, adds to an ever-growing body of reported health benefits for quercetin. The flavonol was previously linked to reduced risk of certain cancers.

Building on science from animal studies reporting a potential hypotensive (blood pressure lowering) role for the flavonol, researchers from the University of Utah recruited 19 men and women with pre-hypertension (average BP 137/86 mmHg) and 22 hypertensives (average BP 148/96 mmHg). The subjects were randomly assigned to receive a daily supplement of quercetin (730 mg, USANA Health Sciences) or placebo for 28 days.

Lead author Randi Edwards and co-workers report that the hypertensives receiving the quercitin supplement experienced reductions in systolic and diastolic BP of seven and five mmHg, respectively, compared to placebo. No BP changes were observed in the pre-hypertensives as a result of either intervention.

"These data are the first to our knowledge to show that quercetin supplementation reduces blood pressure in hypertensive subjects," stated the researchers.

No changes were observed in markers of oxidative stress, said the researchers. This is in contrast to results from animal studies where such changes have been reported.

Although no mechanistic study was performed by the researchers, they suggested that the flavonoid could limit the production of angiotensin II, a molecule that constricts blood vessels (vasoconstrictor) leading to an increase in blood pressure.

"Further investigation would be required to confirm this speculation," they added.

Corresponding author of the study, Thunder Jalili, told NutraIngredients.com that no follow-up studies are currently planned, but the researchers are studying other aspects of cardiovascular disease using rodent models at the moment.

Cardiovascular health is an increasing topic of concern, and cardiovascular disease causes almost 50 per cent of deaths in Europe, and is reported to cost the EU economy an estimated €169 billion ($202 billion) per year.

According to the American Heart Association, 34.2 percent of Americans (70.1 million people) suffered from some form of cardiovascular disease (CVD) in 2002.

Source: *Journal of Nutrition*
November 2007, Volume 137, Pages 2405-2411
"Quercetin Reduces Blood Pressure in Hypertensive Subjects"
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