

Anti-Hypertensive Properties of Rice Bran Peptides

Rice bran is extracted in polished rice and is considered a by-product of white rice processing. According to a review published in the journal *Nutrients*, rice bran protein is a prominent source of anti-hypertensive peptides and could be considered an effective ingredient supporting cardiovascular health. The peptides, which include Leu-Arg-Ala (LRA), Tyr-Tyr (YY), Tyr-Ser-Lys (TRL), and other peptides, have a variety of anti-hypertensive properties.

Two of the peptides were observed to have ACE inhibitory effects, while others were observed to have potent vasorelaxant activity. Other peptides appeared to protect



endothelial function, by promoting NO production in the endothelial layer. Some peptides, which can be produced through fermentation, appear to exhibit even more anti-hypertensive effects, such as improving glucose tolerance and adiponectin production.

Additional anti-hypertensive peptides, have also shown anti-hypertensive effects during in vivo trials, one of which involved a stroke-

prone spontaneously hypertensive rat model. "LRA and YY were previously identified and predicted to originate from the same protein," the authors concluded. "LRA exhibited strong vasodilating effects and promoted NO production in the endothelial layer. The mechanism underlying the anti-hypertensive effects of YY was reported as ACE inhibitory activity. Although the mechanisms of the anti-hypertensive pathway were different, these peptides demonstrated potent anti-hypertensive effects after oral administration. YSK was found from trypsin-digested rice bran and its ACE inhibitory activity was similar to that of YY."

Study Finds Blackcurrants Benefit Glucose Metabolism and Insulin Response

In a study conducted by the University of Eastern Finland and Savonia University, researchers found that blackcurrants were able to regulate glucose metabolism, by attenuating the blood glucose spikes and delaying the fall of blood glucose in participants following a meal. A significant effect on post-meal glucose response was achieved with just 75 g of blackcurrants, which the authors of the study said was remarkably smaller than the portions used in prior studies.

The study involved 26 healthy participants (22 female, 4 male) who consumed three different test products and sugar water as a control product at four separate study visits. The four test products were blackcurrant puree with added sugar, blackcurrant containing fermented quinoa, and a blackcurrant product base without blackcurrants. The test product containing fermented quinoa was used in the study due to their perception as healthy by consumers, the authors said. The carbs and sugar components of each product were similar. Blood samples were taken before the meals in the fasting state, and postprandially at 15, 30, 45, 60, 90, 120, and 180 minutes after consuming the meal, which was analyzed for glucose, insulin, and free fatty acids.



Compared to sugar water, both products which contained blackcurrant attenuated postprandial glycaemic response, which was seen in reduced maximums of both glucose and insulin, a delayed fall of glucose, and a delayed rise of free fatty acids because of hypoglycemia. It is believed that with blackcurrant usage over a longer period, this type of berry could be a candidate as a natural ingredient with benefits to type II diabetes management, the authors said, especially due to smaller variations in blood glucose and insulin levels, as well as improved insulin sensitivity observed during the study.

Study Indicates Cranberry Ingredient may Help Women with Overactive Bladder

According to a study published in *The Journal of Urology*, a cranberry ingredient Flowens may help alleviate frequent urination, a bothersome symptom of overactive bladder in women.

Conducted by researchers at Weill Cornell Medicine, the randomized, double-blind placebo-controlled human clinical trial demonstrated a significant effect for Flowens in healthy women aged 18-60 over six months. Women taking a daily 500 mg dose of Flowens experienced two fewer daily episodes of frequent urination than those in the placebo group.

The results of the trial demonstrated the positive impact of cranberry consumption on overactive bladder (OAB) in women. Emilie Fromentin Ph.D., head of explore health, wellness & nutrition said, "This study shows how women consuming Flowens could



experience a reduction in both frequencies and the sensation of urgency associated with OAB. This latest trial provides more clear evidence of the efficacy of this proprietary ingredient when consumed to improve urinary tract health."

Worried About Inflammation? Try Walnuts, Researchers Report

Two studies have shown evidence that a pro-inflammatory diet high in red and processed meats, refined grains, and sugary beverages are associated with a heightened risk of cardiovascular disease or stroke.

The studies have been published in the *Journal of the American College of Cardiology*. However, this risk can be reduced by a high intake of walnuts.

The first study, which analyzed long-term adherence to pro-inflammatory dieting, tracked the results of men and women from the Nurses' Health Studies I and II, starting from 1986 and including a 32-year follow up, found significant associations between pro-inflammatory foods and outcomes



of heart disease, stroke, or cancer in a total of 210,000 participants. Participants' inflammatory indexes were calculated by a dietary intake survey, taken every four years. The index used in the study was based on 18 pre-defined food groups, broken down by the strength of their associations with an increase in inflammatory biomarkers. After controlling for other risk factors, participants with pro-inflammatory diets were 46% more likely to develop heart disease, and 28% more

likely to have a stroke, compared to those at the lowest end of the inflammatory diet index.

In another study, researchers found that daily walnut consumption achieved significant reductions in six of the ten inflammatory biomarkers they assessed in a group of 634 participants, who were either assigned to have about 30-60 grams of walnuts per day, or zero walnuts, with a follow-up period of two years. "The anti-inflammatory effect of long-term consumption of walnuts demonstrated in this study provides novel mechanistic insight for the benefit of walnut consumption on heart disease risk beyond that of cholesterol-lowering," Montserrat Cofan, Ph.D., lead author of the study, said.

Daily Coffee, Green Tea Consumption Linked to Lower Death Risk in Diabetes Patients

A few cups of coffee or green tea daily reduced the risk of all-cause mortality by 63%. Drinking four or more cups of green tea or two or more cups of coffee daily showed significant promise to cut down the risk of death for those with diabetes, according to a large-scale analysis published in *BMJ Open Diabetes Research & Care*.

The observational study tracked a total of 4,923 Japanese people with type 2 diabetes over five years, whose average age was 66. The participants were enrolled in the Fukuoka Diabetes Registry, a multicenter prospective study looking into the effect of drug treatments and lifestyle on the lifespan of patients with type 2 diabetes. Each of the participants filled out a 58-item food and drink questionnaire, which covered the

daily consumption of coffee and green tea. Researchers analyzed the outcomes for those who drank either of the two beverages, as well as those who drank both, or neither. The researchers measured each participant's height, weight, blood pressure, and several potential underlying risk factors were accounted for via blood and urine samples.

In total, 607 participants didn't drink green tea; 1143 drank a cup daily; 1384 drank 2-3 cups, and 1784 drank 4 or more. 994 participants didn't drink coffee; 1306 drank up to 1 cup daily, and 1660 drank two or more cups. During the five-year monitoring period, 218 men and 91 women died, primarily from cancer (114) and cardiovascular disease (76). The association between coffee and tea and a reduced risk of all-cause mortality was significant even at the lowest doses recorded, however, the benefits appeared in a dose-dependent manner among the participants.

Drinking up to one cup of green tea every day reduced the odds of death by 15%, which increased to 27% for those who drank 2-3 cups daily. Getting through 4 or more cups of green tea daily was associ-



ated with a 40% risk reduction.

For coffee drinkers, up to one daily cup reduced the odds by 12%, while having a full cup led to a 19% lower odds of death. Two or more cups reduced the odds of death by 41%. Despite research indicating its potentially harmful effects on the circulatory system, caffeine is thought to affect insulin production and sensitivity. The effects of both green tea and coffee consumption may be "additive," according to the results of participants who drank both, the authors said.

Curcumin Extract Shown to be Effective in Osteoarthritis Symptoms

According to a placebo-controlled clinical trial, published in the journal *Annals of Internal Medicine*, turmeric was efficacious as a therapy for osteoarthritis, in a population of 70 participants experiencing symptomatic knee arthritis and knee effusion-synovitis, and was able to reduce the number of symptoms.

The participants each were administered either a twice-daily dose of turmeric or a matching placebo and were measured over 12 weeks both with MRI readings, as well as secondary outcomes which were measured by the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC)

pain and cartilage composition values. According to the study, osteoarthritis pain as measured by the visual analog scale was reduced significantly in the knee osteoarthritis patients but remained unchanged in the effusion-synovitis group. The supplements also improved WOMAC knee pain, but not lateral femoral cartilage T2 relaxation time.

The authors of the study con-



cluded that the turmeric supplement used in the study were more effective than the placebo for knee pain, but did not affect knee effusion-synovitis or cartilage composition.