

Researchers study potential health benefits of natural chemicals in muscadine grape seeds

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Could some of the natural chemicals found in plants be powerful enough to improve cardiovascular health? Researchers at Wake Forest University Baptist Medical Center are conducting the first-ever clinical study to evaluate the potential cardiovascular health effects of Nature's Pearl Muscadine Grape Seed Supplement.

The scientists are evaluating the influence of this supplement on blood vessel function in 50 participants who have cardiovascular disease or are at high risk for developing it. They'll also determine whether there are effects on cholesterol and other fats in the blood, blood sugar levels and vessel inflammation, which are all associated with increased risk of cardiovascular disease.

Nature's Pearl is prepared in a way that generates a high concentration of plant chemicals, including gallic acid, ellagic acid, oligomeric proanthocyanidins (OPCs) and resveratrol. These are known to be antioxidants, or nutrients that can prevent or slow the oxidative damage to the body. The role of oxidative stress in blood vessel disease has generated interest in dietary sources of antioxidants, including black and green tea, grape seeds, olive oil and cocoa.

Muscadine grapes have been shown to be more potent in antioxidants than any other variety of grapes, and laboratory studies have suggested that grape seeds have higher antioxidant capacity than grape skins. Studies in humans have shown improved antioxidant capacity when grape seed supplement is added to the diet, as well as improvements in

blood vessel function. However, the studies did not specifically include muscadine grapes, which have extremely high levels of antioxidant and anti-inflammatory compounds when compared to other fruits.

“The goal of the current study is to determine if daily doses of the Nature’s Pearl supplement, which is specially prepared to maximize its natural antioxidant and anti-inflammatory concentrations, will have a favorable effect on cardiovascular risk factors,” said David Herrington, M.D., M.P.H., lead investigator and a professor of cardiology.

Study participants are patients at Wake Forest Baptist’s Family Medicine and Internal Medicine practices and are between 18 years and 65 years old. For the first four weeks of the study, participants are randomly assigned to take either 1,300 mg. (two capsules) of the Nature’s Pearl Muscadine Grape Seed Supplement (grape seeds) daily or a placebo (inactive capsule).

For the next four weeks, participants do not take capsules to allow the product to “wash out” of their systems. Then, the groups will switch so that those who took placebo originally will take the supplement for four weeks.

Ultrasound technology is used to determine blood vessel function or “reactivity.” Blood flow in the brachial artery, the major vessel in the arm, is measured both before and after the arteries are constricted with a blood pressure cuff. In a healthy subject, the artery dilates after the constriction. Decreased reactivity is a sign of reduced artery function and is thought to be a precursor to atherosclerosis, the buildup of fatty deposits in the vessels that can lead to heart attack or stroke.

The test is used in the brachial arteries because the heart’s arteries cannot be directly imaged with ultrasound. However, atherosclerosis is a disease that affects vessels throughout the body, and the test is considered a

good indicator of overall vessel function.

The study will also measure any effects on total cholesterol, low-density lipoprotein or “bad” cholesterol, triglycerides, high-density lipoprotein or “good” cholesterol, blood sugar levels and markers for inflammation, such as C-reactive protein and interleukin-6.

Patients have been recruited and the results are expected to be analyzed in early 2008.

“Cardiovascular disease is a significant problem in this country so it is worthwhile to examine foods that may have medicinal benefits,” said Herrington. “In this case, our goal is to determine whether the Nature’s Pearl supplement, which looks promising because of its extremely high antioxidant and anti-inflammatory content, will positively affect artery health.”

Source: Wake Forest University Baptist Medical Center

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