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Contact: Bill Seiler bseiler@umm.edu

Ellen Beth Levitt eblevitt@umm.edu, 410-328-8919

BLACK AND GREEN TEA MAY PREVENT CARDIOVASCULAR DISEASE

Study Measures Impact of Tea Antioxidants on Blood Vessels after High-Fat Meal

Cardiologists at the University of Maryland Medical Center conclude that drinking black or green tea may help reduce a potentially harmful constriction of blood vessels after a high-fat meal. Their study, presented this month at the scientific session of the American College of Cardiologists in Atlanta, adds to a growing body of research that suggests antioxidant-rich foods and beverages may help to prevent heart disease.

"Consumption of a high-fat meal can produce a chemical chain reaction within blood vessels which can temporarily impair their ability to dilate or widen, a normal response to increased blood flow. However, antioxidants seem to prevent this chain reaction," says University of Maryland Medical Center cardiologist Mary Corretti, M.D., lead author of the study. "Our study found that drinking tea reduced the negative impact of a high-fat meal on blood vessel function," says Dr. Corretti, who is also an associate professor of Medicine at the University of Maryland School of Medicine.

Antioxidants protect cells from potentially damaging by-products created when oxygen is metabolized or used by the body. Antioxidants may reduce the risk of some forms of cancer, heart disease and stroke. Tea contains flavonoid antioxidants.

Previous studies by Dr. Corretti and her colleagues have shown that vitamins C and E, both antioxidants, may help improve the ability of arteries to dilate when taken with a high-fat meal.

Participants in the current study included 30 healthy, adult, non-smoking volunteers, ages 20 to 55. On three occasions, the volunteers ate a 900-calorie, fast food meal that contained 50 grams of fat. They also drank a

cup (240cc) of one of three different beverages with each meal-iced black tea, iced green tea or an iced liquid that resembled tea. The volunteers were people who rarely drink tea.

Using a noninvasive technique that the University of Maryland team has perfected, researchers took ultrasound measurements of an artery in the arm before, and then three hours after the meal and tea. The measurements were obtained after blood flow was temporarily halted in the upper arm with an inflatable blood pressure cuff. After the cuff is removed, blood vessels would normally be expected to dilate in response to the rush of blood back into the artery.

"Dilation is a marker of vascular health. A reduction in the ability of blood vessels to dilate, even temporarily, can contribute to heart disease or the risk of a heart attack," says Dr. Corretti. She adds that although the study observations are preliminary, "they suggest that how we eat our food and in what combinations may have a significant impact on our overall cardiac health." Other researchers in this study included Yeymi De Leon, Charles Mangano R.D., M.S., [Gary Plotnick, M.D.](#), and [Robert Vogel, M.D.](#), of the University of Maryland Medical Center and the University of Maryland School of Medicine.

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