Flavanol-rich cocoa improves blood vessel function in aging baby boomer study participants

New study suggests natural cocoa compounds may have pronounced vascular benefits for older population


Researchers at Harvard Medical School and the Brigham and Women's Hospital in Boston found that drinking a standardized flavanol-rich cocoa beverage improved several measures of blood vessel function, especially among older study participants. Flavanols are the natural compounds in cocoa that are increasingly being linked to promising circulatory benefits – including improved blood flow and a reduced tendency to form damaging clots.

In the current study, 15 healthy young adults under age 50, and 19 healthy adults over age 50 drank the specially-made flavanol rich cocoa beverage daily for four to six days. The researchers tracked changes in the function of their peripheral arteries using several measures, including peripheral arterial tonometry a standard method for evaluating the health of an individual’s blood vessels. At the study’s completion, significant improvements in vessel function following the consumption of flavanol rich cocoa were seen in both young and older adults. While aging has previously been shown to lead to a deterioration of blood vessel function, this study is the first to demonstrate that the consumption of flavanol-rich cocoa can improve this age-related loss of vessel function in older adults. In agreement with previous studies using this same cocoa, these improvements in both young and older adults appear to be linked to the ability of cocoa flavanols to influence the body’s production of nitric oxide, a key regulator of blood vessel tone.

Compared to the younger subjects, the vessel responses of the older men and women were significantly more pronounced after drinking the flavanol-rich cocoa beverage -- suggesting that the consumption of this flavanol rich cocoa offers a dietary approach for maintaining endothelial vessel function, and indicates the possibility that this cocoa could be useful for improving endothelial function in our aging population.

"Aging is typically associated with deterioration in vessel health, specifically related to function of the critical inner lining, or endothelium," said co-author Naomi Fisher, MD, Assistant Professor of Medicine, Harvard Medical School. "Our findings demonstrate that consumption of this flavanol-rich cocoa can improve the function of blood vessels in a healthy elderly population. More research is needed to see if older adults with cardiovascular disease can also experience these improvements following consumption of this cocoa, but these initial findings certainly offer great promise. These findings have great potential to impact the health of our aging population."

Partially supported by a grant from Mars, Incorporated, this new research builds on a growing body of evidence demonstrating the potential of cocoa flavanols to improve blood flow (or the body's circulation), and perhaps in turn impact long term cardiovascular health. Working in collaboration with premier research institutions throughout the world, Mars has been a leader in unlocking the nutritional and medical potential of the cocoa bean -- with more than 100 peer-reviewed research articles and 80 patents related to flavanols.
"The body of evidence on blood flow-related benefits of cocoa flavanols is impressive," said Harold Schmitz, PhD, Chief Science Officer at Mars, Incorporated. "For the past 15 years, Mars researchers and scientists around the world have been studying cocoa flavanols. This latest research provides additional support for the concept that cocoa flavanols could help reduce the risk, or even offer future treatment potential, for cardiovascular diseases including heart disease and stroke."

In an accompanying editorial, hypertension experts Claudio Ferri, Davide Grassi and Guido Grassi underscored the importance of these research findings, suggesting that the "introduction of cocoa could result in cardiovascular prevention," yet cautioned that not all chocolate offers the benefit of cocoa flavanols. The researchers stated that, "... the flavanol-rich cocoa products used in experimental studies, and even present in some commercially available flavanol-rich chocolate bars that have been tested in controlled short-lasting studies, should not be confused with a number of commercially available snacks that contains many calories but are low in natural cocoa and flavanols."

To help maximize the amount of cocoa flavanols in chocolate, scientists at Mars, Incorporated developed a patented process called Cocoapro® that helps retain consistent levels of cocoa flavanols that occur naturally in cocoa beans. Mars products that are made with the Cocoapro process include Dove® Dark Chocolate and CocoaVia®, a line of heart-healthy snacks that are guaranteed to contain at least 100 mg of cocoa flavanols per serving. Cocoapro cocoa is the most studied cocoa in the world in terms of health impact.

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For more information on the many research studies on cocoa flavanols, visit www.cocoapro.com. Mars, Incorporated is one of the world's top producers of chocolate, and has a strong commitment to health research. With well over 15 years of research into the health benefits of cocoa flavanols, and decades of research invested into improving the cocoa plant and farming techniques, Mars, Incorporated has become the global leader in cocoa science. Mars uses patented and proprietary methods of processing cocoa beans to retain much of the naturally occurring flavanols, marking these products with the Cocoapro® seal, a hand holding a cocoa bean to signify the careful handling.