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Study thickens the science of cocoa's heart benefits

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mercredi 17 novembre 2010

5 mars 2010

Related topics : Research, Antioxidants, carotenoids, Phytochemicals, plant extracts, Cardiovascular health Regular consumption of cocoa flavanols may decrease blood pressure in people with mild hypertension, but only at high doses, says a new study from Australia.

Daily doses of cocoa flavanols up to 712 milligrams failed to produce any blood pressure benefits, but a higher dose of 1052 milligrams produced significant blood pressure improvements, according to findings published in the Journal of Hypertension.

The study is reported to be the first to compare the efficacy of cocoa flavanols at different doses on blood pressure, according to researchers from the University of South Australia and University of Adelaide.

"These findings suggest that blood pressure can be lowered through the regular consumption of flavanol-rich cocoa beverages, although higher levels of cocoa flavanols may be required than has been observed with consumption of chocolate-based cocoa flavanol-rich products," wrote the researchers, led by Kade Davison.

Not chocolate, it's cocoa

Mary Wagner, chief technology officer for Mars Botanical, a scientific division of Mars Inc, recently told NutraIngredients that the benefits of the bean revolve around the flavanols (also known as flavan-3-ols or catechins), and particularly the monomeric flavanol (-)epicatechin.

Mars' interest in the active compounds started about 20 years ago when its scientists sought to understand the flavour components of chocolate. The bitter and astringent compounds were isolated, and further study and clinical work showed the health benefits of the monomers and the tannins, particularly (-) epicatechin, she said. The new study was sponsored by Mars and the company supplied the cocoa drink used.

Study details The Australian researchers recruited 32 men and 20 postmenopausal women with untreated mild hypertension, defined as blood pressure between 130/ 85 and 160/100 mmHg. Subjects were randomly assigned to receive one of four doses of a cocoa flavanol-rich beverage for six weeks in a double-blind, parallel comparison. The doses used by the researchers were 33, 372, 712 or 1052 mg per day of flavanols.

At the end of the study, only participants receiving the highest dose of cocoa flavanols experienced significant reductions in blood pressure of 5.3 and 3 mmHg for systolic and diastolic blood pressure.

"This study supports the potential for cocoa flavanols to lower blood pressure, but further research is required to determine the extent of antihypertensive benefit that can be achieved with different dietary sources and doses of flavanols in various cardiovascular pathologies," concluded the researchers.

It's all about the polyphenols

A recent review in the British Journal of Nutrition, led by Gary Williamson from Leeds University, UK (and formerly at the Nestlé Research Center), noted : "Chocolate is predominantly a food for

pleasure, and many people incorporate it into part of a healthy, varied and balanced diet. However, there is controversy over whether it should be recommended for its health benefits." *"The polyphenol content is of more importance and it is essential that, in future, all published trials give a full characterisation of the chocolate or cocoa used and the calculated dose. This characterisation should include a breakdown of the types of polyphenols, especially monomer content."*

Mars Botanical's Risa Schulman will give a presentation at the upcoming NutraIngredients Antioxidants 2010 Conference in Brussels, on the topic of cocoa flavanols.

Source : Journal of Hypertension

Published online ahead of print, doi:10.1038/jhh.2009.105 "Dose-related effects of flavanol-rich cocoa on blood pressure"

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