



Breaking News on Confectionery & Biscuit Processing

Antioxidant-rich cocoa shows short-term heart benefits: Harvard review

By Stephen Daniells, 29-Sep-2011

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Eating antioxidant-rich cocoa products may improve blood pressure and boost levels of good cholesterol, according to a meta-analysis of studies.

Consumption of flavonoid-rich cocoa was associated with an average decrease in systolic blood pressure of about 1.6 mmHg, researchers from Harvard School of Public Health.

It has been reported that a mere 2 mmHg decrease in systolic blood pressure could lead to 6% fewer stroke-related deaths, a 4% lower rate of heart disease deaths and a 3% reduction in overall deaths among Americans.

Writing in the *Journal of Nutrition*, the Boston-based scientists also report a significant increase in levels of HDL cholesterol following consumption of antioxidant-rich cocoa.

The maximum effects were observed for a flavonoid dose of 500 mg/d, they added.

Cocoa's benefits

The health benefits of polyphenols from cocoa have been gathering increasing column inches in the national media. To date studies have reported potential benefits for cardiovascular health, skin health, and even brain health.

The meta-analysis supports findings from another meta-analysis by researchers from the University Hospital of Cologne that found that consumption of cocoa had significant positive effects on hypertension.

Writing in the *Archives of Internal Medicine* (2007, Vol. 167, pp. 626-634), the Cologne-based scientists: "*The magnitude of the hypotensive effects of cocoa is clinically noteworthy; it is in the range that is usually achieved with monotherapy of beta-blockers or antitensin-converting enzyme inhibitors.*"

The majority of science into the potential benefits of cocoa have revolved around cardiovascular benefits of the flavanols (also known as flavan-3-ols or catechins), and particularly the monomeric flavanol (-)epicatechin.

Meta-analysis details

Led by Mark Shrime, the scientists performed a meta-analysis of 24 randomized, controlled trials. Data was available for 1106 participants.

Results showed that in addition to the blood pressure and HDL improvements, flavonoid-rich cocoa consumption was associated with a decrease in measure of insulin resistance. Insulin resistance occurs when insufficient insulin is released to produce a normal glucose response from fat, muscle and liver cells.

In addition, cocoa consumption was associated with a 1.5% increase in so-called flow-mediated dilation (FMD), a measure of a blood vessel's healthy ability to relax.

"*Flavonoid-rich cocoa consumption significantly improves blood pressure, insulin resistance, lipid profiles, and FMD,*" wrote Shrime and his co-authors.

"*These short-term benefits warrant larger long-term investigations into the cardioprotective role of flavonoid-rich cocoa.*"

Source: *Journal of Nutrition*

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"*Flavonoid-Rich Cocoa Consumption Affects Multiple Cardiovascular Risk Factors in a Meta-Analysis of Short-Term Studies*"

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