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The Impact of Cocoa Flavanols on Cardiovascular Health

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Abstract

The aim of the study was to review the effect of cocoa flavanols on cardiovascular health, with emphasis on the doses ingested, and to analyze a range of cocoa products for content of these compounds. PubMed was searched from 2010 to locate systematic reviews (SR) on clinical effects of chocolate consumption. Thirteen SRs were identified and reviewed, and provided strong evidence that dark chocolate did not reduce blood pressure. The evidence was however strong for an association with increased flow-mediated vasodilatation (FMD) and moderate for an improvement in blood glucose and lipid metabolism. Our analysis showed that cocoa products with around 100 mg epicatechin can reliably increase FMD, and that cocoa flavanol doses of around 900 mg or above may decrease blood pressure in specific individuals and/or if consumed over longer periods. Out of 32 cocoa product samples analyzed, the two food supplements delivered 900 mg of total flavanols and 100 mg epicatechin in doses of 7 g and 20 g and 3 and 8 g, respectively. To achieve these doses with chocolate, around 100 to 500 g (for 900 mg flavanols) and 50 to 200 g (for 100 mg epicatechin) would need to be consumed. Chocolate products marketed for their purported health benefits should therefore declare the amounts of total flavanols and epicatechin.

Keywords: blood glucose; blood lipids; blood pressure; chocolate; cocoa; flavanols; flow-mediated vasodilatation.

Comment in

Impact of Cocoa Flavanols on Cardiovascular Health: Additional Consideration of Dose and Food Matrix.
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