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## **Cerebral blood flow response to flavanol-rich cocoa in healthy elderly humans.**

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### **Abstract**

**BACKGROUND AND PURPOSE:** Cerebral ischemia is a common, morbid condition accompanied by cognitive decline. Recent reports on the vascular health benefits of flavanol-containing foods signify a promising approach to the treatment of cerebral ischemia. Our study was designed to investigate the effects of flavanol-rich cocoa (FRC) consumption on cerebral blood flow in older healthy volunteers.

**METHODS:** We used transcranial Doppler (TCD) ultrasound to measure mean blood flow velocity (MFV) in the middle cerebral artery (MCA) in thirty-four healthy elderly volunteers (72 +/- 6 years) in response to the regular intake of FRC or flavanol-poor cocoa (FPC).

**RESULTS:** In response to two weeks of FRC intake, MFV increased by 8% +/- 4% at one week ( $p = 0.01$ ) and 10% +/- 4% ( $p = 0.04$ ) at two weeks. In response to one week of cocoa, significantly more subjects in the FRC as compared with the FPC group had an increase in their MFV ( $p < 0.05$ ).

**CONCLUSIONS:** In summary, we show that dietary intake of FRC is associated with a significant increase in cerebral blood flow velocity in the MCA as measured by TCD. Our data suggest a promising role for regular cocoa flavanol's consumption in the treatment of cerebrovascular ischemic syndromes, including dementias and stroke.

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