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Vital Signs

Effects: Dark Chocolate: A Fix for Smokers' Plumbing?

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Dark chocolate, but not white chocolate, may improve the ability of smokers' blood vessels to expand and contract in response to the body's needs, Swiss researchers have found.

The scientists divided 25 smokers into two groups. One group ate about two ounces of dark chocolate containing 74 percent cocoa, and the other consumed two ounces of white chocolate, which contains no cocoa.

The investigators calculated platelet activity and the flexibility of the blood vessels, two measures of healthy function, in an artery in the upper arm of each subject. In those who ate dark chocolate, both measures were considerably improved, and the effect lasted about eight hours.

White chocolate had no effect on the blood vessels. Total antioxidant status also significantly increased two hours after eating dark chocolate, but not after eating white chocolate. The report appears in the Dec. 19 issue of *Heart*.

The scientists believe the effect is caused by a large class of substances in chocolate called polyphenols, a group that includes flavonols, which are potent antioxidants. Dark chocolate, the authors write, has a higher polyphenol concentration than other antioxidant-rich foods like wine, tea or berries.

Dr. Roberto Corti, a cardiologist at University Hospital in Zurich and the lead author of the study, stressed that eating chocolate will not counter the ill effects of [smoking](#). "We 'used' smokers as a model for decreased vascular function," he wrote in an e-mail message. "We believe that the beneficial effect can probably be seen in all patients who have a high oxidative stress. This highlights the potential of substances such as flavonols in cardiovascular health."