

### Dark chocolate—the sweet for your sweetie?



With Valentine's Day coming up, the conversation about chocolate is completely appropriate. The University of California, Berkeley reports in their wellness letter that chocolate derived from the seeds of the coca tree is good for your heart.

Such studies were reported in the British Journal, BMJ, the European Journal of Clinical Nutrition and in BMC Medicine, each study claiming the positive effects of dark chocolate or cocoa-rich products on the cardiovascular system.

Lower risk of heart disease, less risk of stroke, lowered cholesterol and small blood-pressure-lowering in people with hypertension and pre-hypertension were some of the clinical findings.

Chocolate, especially dark chocolate or pure cocoa products, have compounds called flavonoids in it. These compounds are in the same family as those that are found in tea, red wine, grape juice and other plant foods that give these foods their antioxidant, anti-inflammatory and anti-clotting properties. Flavonoids also increase the production of nitric oxide, which causes the blood vessels to relax and dilate, helping blood pressure to lower and decrease other cardiovascular effects. In addition, there is evidence to suggest the benefits of flavonoids from cocoa inhibiting cholesterol absorption and improving oxidation of LDL ("bad") cholesterol, making it less harmful.

OHH Yea! Chocolate is good medication and I love it! Not so fast though. First, just as there are studies that claim positive results, there are studies that did not have positive results and some that did not prove that it was the chocolate, not some other factor responsible for the benefits seen.

In addition, with each of the studies using different formulations of flavonoid levels with different intakes, not distinguishing between milk and dark chocolate, it is hard for anyone to know what

## Extension Corner

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type or amount of chocolate is optimal.

It is possible that people may react differently to chocolate, too. Finally, remember that the chocolate that Americans love to eat is high in sugar, fat and calories, especially if the chocolate is paired with caramel, nougat and other fillings. So, if you eat too much of this chocolate, the positive heart effects would be canceled out by weight gain.

Also keep in mind that not all chocolate is created equal. The processing of the cocoa beans changes the positive heart effects of the flavonoids. In general, dark chocolate has more flavonoids than milk chocolate. The manufacturer's recipe will play a role in determining the flavonoid content. Cocoa made with milk often causes a flavonoid reducing effect as well. If a higher flavonoid level in the cocoa is used then the reducing effect is less apparent.

So, advice for the chocoholic; choose the darkest chocolate that you like. Remember dark chocolate is not as sweet, so it might take awhile to gain a "taste" for it. Like with other foods, choose a chocolate that has cocoa, chocolate liquor or cocoa mass as the first ingredient on the nutrition label, not sugar.

Remember that chocolate is still a treat, not a health food, even if it can have heart-health effects, especially when used in place of other high calorie snacks or desserts. Fruit and vegetables are still the best source of flavonoids, as well as vitamins, minerals and fiber on a daily basis. Maybe combine the two for a nice little treat for your sweet this Valentine's Day. Dip yummy red strawberries in a luscious dark chocolate fondue pot.

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