



# THE PLAIN DEALER

## Chocolate's semigood for you

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Could chocolate actually be good for us? Recent scientific reports have raised the question. It's a bit like that Woody Allen movie where the character wakes up in the future to find out that hot fudge sundaes are healthful, and vegetables are harmful.

The idea that chocolate has health benefits is nothing new. From the 17th to the 20th centuries, Europeans commonly believed that chocolate aided digestion, stimulated the kidneys and was useful in treating anemia, tuberculosis, fever, gout and heart disease.

Here in the United States, however, our fascination with chocolate has been viewed as, well, a weakness of character. Our Puritan heritage at work, perhaps?

So let's consider a few common questions about chocolate.

Is chocolate really good for you?

Maybe. Cocoa is high in certain flavonoids that may have anti-oxidant and vascular protective properties. Other sources of flavonoids are fruits and vegetables, tea and red wines. Population studies show that diets high in anti-oxidants and flavonoids are associated with lower heart disease risk.

In a 2001 Penn State study funded by the American Cocoa Research Institute, treatment with cocoa and dark chocolate made LDL (bad) cholesterol more resistant to oxidation and raised HDL (good) cholesterol in healthy volunteers. Research funded by Mars Inc. supported the Penn State findings. Other studies have suggested that chocolate may prevent blood clots and make blood vessels more flexible. Chocolate is also a fair source of trace minerals such as magnesium.

But chocolate as usually consumed in the United States is high in calories, fat and sugar. It has been claimed that the kind of saturated fat in chocolate (stearic acid) does not raise blood cholesterol. But in a Nurse's Health Study, high intakes of both stearic acid and chocolate were correlated with a higher risk of heart disease.

In view of the current obesity epidemic, it's important to look at nutrient density - that is, the nutrient content of chocolate in relation to calories. For example:

Apples provide 130 milli grams of flavonoids per 100 calories.

Milk chocolate delivers 14 milligrams.

Dark chocolate offers 85 milligrams.

Red wine provides 25 milligrams. But brewed black tea provides 40 milligrams per cup with no calories at all.

If calories are an issue, you may want to rethink getting your anti-oxidants from chocolate.

I hear a lot about the anti-oxidants in dark chocolate, but I really prefer milk chocolate. Am I losing out on

benefits by choosing the lighter variety?

Dark chocolate is a more concentrated source of anti-oxidants. Measure for measure, by weight, dark is slightly lower in calories and saturated fat. Some studies have shown that dark chocolate lowers blood pressure and increases anti-oxidant activity, while milk chocolate does not. If you like milk chocolate, perhaps you should have your chocolate with a cup of tea.

What about white chocolate?

Strictly speaking, white chocolate is not chocolate. In the United States, chocolate must contain cocoa solids, which would turn white chocolate brown. Good-quality white chocolate is made of cocoa butter, sugar and milk. Some white chocolate, however, is made with vegetable oil instead of cocoa butter.

White chocolate is low in the anti-oxidants that are thought to account for some of chocolate's apparent benefits. In an Italian study, dark chocolate was associated with reduced blood pressure and improved insulin sensitivity, while white chocolate had no benefit.

Is there any link between chocolate and acne?

According to the American Medical Association, chocolate does not make acne worse. It's bad enough having acne. Don't deprive yourself of chocolate, too.

I know several chocoholics. Is chocolate really addictive?

Chocolate contains biologically active chemicals that may have mood-altering properties, but the effect is subtle. In a 1999 review, Kristen Bruinsma at the University of Arizona suggested that cravings for chocolate may be the result of its sensory characteristics, psychoactive ingredients and monthly hormonal swings in women.

Sugar itself has a mood-enhancing effect, which is why we crave carbohydrates and not prime rib.

What's the Recommended Dietary Allowance for chocolate?

We're not there yet. In a 2003 review, Francene Steinberg, a researcher at the University of California, Davis, recommended that we choose a variety of anti-oxidant-rich foods such as fruits, vegetables and beverages. This might include flavonoid-rich dark chocolate in small amounts. Some studies have suggested that it takes about 100 grams of dark chocolate (about 3 ounces or 500 calories) to achieve a significant rise in anti-oxidant activity.

The best advice is to stay tuned to emerging research. If you add chocolate to your diet, you'll probably have to cut back on calories somewhere else. As for me, I can't help wondering whether the marketing of chocolate as a health food might have unforeseen consequences. Part of chocolate's appeal is that it is seen as forbidden - sinful and indulgent. Imagine parents of the future insisting that their children finish their chocolate before they leave the table. If chocolate goes into the medicine cabinet, will some of its charm melt away?

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