



## Chocolate Love

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**Question: In Germany my midwife told me to stay away from chocolate. This is very hard for me to do! Is it really bad if I eat chocolate in the evening, when I have some relaxing time to myself?**

The pre-holiday season is the time of year when I get the most questions on the subject of chocolate. I'm happy to report that the research continues to weigh in positively regarding chocolate. Like all foods, the negatives lie in excess and harmful fillers – the take-home message isn't as simple as "eat chocolate and be merry!"

It is clearly not bad for you to eat chocolate, even on a daily basis. Since my first article on chocolate (06/2004), more findings have come in on its positive cardiovascular and other therapeutic effects. Other findings reveal clues to why it seems to be the most craved substance by women, especially around menstruation and in pregnancy, and why jokes compare chocolate to sex.

Crude chocolate is the fermented, dried, and roasted seeds of the pod of the cacao tree. Depending on growing conditions and processing, chocolate and cocoa can vary a lot in the levels of phytochemicals they contain. Processing cacao beans with alkali – referred to as "Dutch" process cocoa – significantly diminishes the beneficial flavanols. Read the labels and choose cocoas that have been "naturally" processed. The darker and more bitter the chocolate, generally speaking, the better for you. Milk chocolate is much less beneficial, typically contains more sugar and calories, and is implicated in chocolate allergies. Make sure the fat in the chocolate you choose is cocoa butter and not a less expensive substitute. The main fat in cocoa butter, stearic acid, is a saturated fat that doesn't appear to raise cholesterol. Another dominant fat is oleic acid, a monounsaturated fat identical to that found in olive oil.

The flavanols and anti-oxidant properties found in cocoa beans, some cocoas, and chocolate are similar to those found in coffee and tea. But while an 8-ounce brewed cup of coffee averages 184 mg of caffeine and a cup of tea 96 mg, 1 ounce of dark bittersweet chocolate has 20 mg of caffeine. The March of Dimes says women who consume more than 300 mg of caffeine a day may experience delayed conception, and higher amounts (>500 mg/day) may be linked to shorter gestations and lower birth weights in babies. Caffeine can also pass through breast milk, and very high caffeine intake may result in a baby's disturbed sleep cycles or irritability. So if you're a chocolate-lover who drinks tea or coffee, keep these caffeine quotas in mind.

The research has found that the flavanols in cocoa and chocolate make blood vessels more responsive to the cell messenger nitric oxide. Nitric oxide is critical in lowering blood pressure, and insufficient response to nitric oxide is implicated in preeclampsia and other hypertensive disorders in pregnancy. Flavanol compounds help keep blood platelets from sticking together and forming blood clots, another protective mechanism in pregnancy and postpartum. Strong antioxidant compounds in cocoa and chocolate have been shown to keep bad LDL cholesterol from oxidizing. Oxidized LDL cholesterol is easily incorporated into plaque, clogging coronary arteries.

New research has shown that the chemical, theobromine, in dark chocolate is a more powerful cough suppressant than codeine, without the side effects. Two ounces of dark chocolate, containing about 900 mg of theobromine, is the amount shown to be effective for adults. Cocoa consumption is also being studied to treat diarrhea and other intestinal problems, because it decreases salt and water loss. Cocoa may become a natural and inexpensive treatment for dangerous diarrheal conditions around the world.

What's the link between chocolate and love? Well, scientists can now tell us what romantics through the ages have known – the same regions of the brain become active when eating chocolate as when embracing your lover. Chemically speaking, love translates into serotonin, dopamine, oxytocin, endorphins, and other brain chemicals. Some of these love chemicals are controlled by phenylethylamine (PEA), which happens to be found, among other places, in chocolate and strawberries (chocolate-covered strawberries, anyone?). Chocolate also contains anandamide, a chemical that targets the same brain structure as THC, the active ingredient in marijuana. Oxytocin and endorphins are the hormones of well-being, bonding, and trust and are pivotal hormones in orgasm, labor, birth and breast-feeding. Surges in oxytocin and endorphins flow from our brains when luxuriating in the food and company we love.

Do we crave chocolate because we need to give ourselves more moments of love and luxury? Do we crave chocolate because it has more iron, ounce for ounce, than beef liver? Do we crave chocolate because it is loaded with copper, magnesium and potassium, is low in sodium, and good for our blood pressure?

Whatever our reasons for craving chocolate, it seems we do not have to guiltily steal this dark pleasure any longer. Go ahead and do a self-inventory of areas in your life and diet that could benefit from further balancing, but know that when your hand reaches for some good chocolate, your body is steering you to good medicine.

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