



## Chocolate and Pregnancy

**Question: I recently heard a radio program about the good health effects of chocolate. What about in pregnancy? If I follow my cravings and keep eating chocolate, how much is too much?**

I had better admit up front that I am a chocolate-lover, so if you detect a bias in my response, you detected right. Recent research on chocolate has been kind to us chocolate lovers, even to pregnant chocolate lovers.

In April of this year, New Scientist published a report from the University of Helsinki, Finland, showing an association between chocolate-eating mothers and happier babies. Over 300 pregnant women were asked to rate their stress levels and chocolate consumption. Six months after birth, the mothers were asked to rate their infants' behavior in various categories, including fear, soothability, smiling, and laughter. The babies born to women who ate chocolate daily were more "positively reactive," a measure that encompassed smiling and laughter. The babies of stressed women who ate chocolate regularly showed less fear in various situations than babies of stressed mothers who did not consume chocolate.

Of course, the researchers admit they cannot rule out the possibility that chocolate consumption and baby behavior may be both linked with some other factor. However, chocolate contains over 300 known chemicals, several of which have been shown to promote health and a feeling of well-being. For some of us just thinking about chocolate makes us feel good!

While caffeine is present in small amounts in chocolate, the weak stimulant theobromine is present in slightly higher amounts, as well as phenylethylamine, a stimulant related to amphetamines. All of these chemicals increase the activity of neurotransmitters in parts of the brain that control our ability to pay attention and stay alert and may explain the immediate "lift" that chocolate eaters experience.

Researchers at the Neurosciences Institute in San Diego assert that a naturally occurring neurotransmitter, anandamide, which promotes relaxation, is also found in chocolate. Moreover, other chemicals in chocolate may inhibit the natural breakdown of anandamide, causing the relaxed feeling to last longer.

So can something bordering on the addictive and tasting so delicious really be good for pregnant women and babies?

In a study about nutrition and pregnancy, Dr. Michel Odent found that among 500 pregnant women, chocolate was the most commonly craved food. This finding agreed with his anecdotal findings during decades of work with pregnant women in France and England. Dr. Odent happens to have faith in a woman's innate capacity to know what she needs for herself and her child - he began to look into this highly valued, complex plant food. He found it to be uncommonly rich in magnesium, among other things. Magnesium is an important catalyst for fatty acid metabolism and is needed in increased amounts in pregnancy for the development of the fetal brain. Dr. Odent also found chocolate to be uncommonly rich in flavonoids. Flavonoids are plant compounds with potent antioxidant properties, which enhance our cardiovascular, immune, and cancer-fighting systems. In terms of pregnancy in particular, the predominant flavonol found in chocolate is epitechin. High plasma levels of this flavonol are associated with increased concentrations of prostacyclin. One of the most serious diseases of

pregnancy, preeclampsia, is associated with low concentrations of prostacyclin. “In other words pregnant women who eat chocolate [theoretically] tend to prevent or moderate the shift towards metabolic disturbances associated with a life-threatening disease.... There are no scientific reasons to refrain pregnant women from eating chocolate.”

However, chocolate is not chocolate is not chocolate. While European researchers may be somewhat more justified in their generalizations, even Cadbury in England and Frazer in Finland are dense with sugar, calories, additives and fillers. Just as with other foods rich in flavonoids – red wine, tea, cranberries, peanuts, strawberries, apples and other fruits and vegetables – how cocoa beans are grown and processed determines how much of the original flavonoid content is retained in the end product. Dark and bitter chocolate is twice as high in flavonoids as sweet milk chocolate. Unsweetened cocoa powder starts out twice as high in flavonoids as dark chocolate, but when it’s diluted with milk or water and sugar the flavonoid total decreases to half that in milk chocolate. Studies in Scotland and Italy last year found that consuming milk at the same time as chocolate cancels out the health benefits of chocolate. “Dairy products may inhibit the body’s absorption of flavonoids from other foods as well.”

People who live on an island called Kuna in Panama drink about 5 cups of cocoa every day, include cocoa in many recipes, and recommend cocoa preparations for pregnancy. High blood pressure is so rare on Kuna that it prompted a Harvard physician to study cocoa and cardiovascular health. He found a link between high flavonoid consumption and increased nitric oxide levels, which helps maintain healthy blood pressure. Other studies show that flavonoid-rich chocolate helps prevent clogging of the arteries, or atherosclerosis. The major form of fat in chocolate is stearic acid, which does not increase cholesterol.

Thirty-eight grams or a little over an ounce of dark chocolate produces an immediate positive effect on cardiovascular health, according to a 2002 study at University of California, Davis. One-hundred-twenty-five grams or about 4 ½ ounces of dark chocolate produces a continuing positive effect. This compares to one cup of tea brewed 2 minutes and 3 ½ cups of tea, respectively.

While tea may be a healthier option than chocolate in terms of calories and sugar, it may not satisfy your craving. In order to avoid “chocoholism” and the related fat and sugar roller-coaster, try one high quality dark chocolate after lunch or supper. A little bit of this pure food from the gods (actually, a local goddess makes my favorite chocolate) goes a long way.

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This text was originally published in the Willy Street Co-op Reader in the **Ask the Midwife** column, where Ingrid Andersson of Community Midwives, LLC in Madison, answers questions on pregnancy, childbirth and related topics. More of these articles can be found at Ingrid’s website: [www.gentlehomebirth.org](http://www.gentlehomebirth.org)