A Taste of Chocolate

Just one ounce each day of this bittersweet treat is enough to reap health benefits.

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Studies show that dark chocolate can improve cardiovascular health, decrease stroke risk and possibly even sharpen eyesight. In addition, the anti-inflammatory effects of dark chocolate's nutrient-rich cacao beans may strengthen the immune system, which can help to prevent cancer and other diseases. But before you reach for a chocolate bar, you should know a few facts.

Dark chocolate, which includes natural unsweetened cocoa powder and cacao nibs, is rich in iron, copper, calcium, magnesium, zinc, potassium and phosphorus. The rich confection also contains high levels of polyphenols, which are naturally occurring compounds found in plants. Most of the research on the benefits of dark chocolate focuses on polyphenols known as flavonoids, which have antioxidant and anti-inflammatory properties that protect the body's cells. Flavonoids protect against a variety of conditions and help improve bodily functions.

Heart Disease

Flavonoids in dark chocolate reduce the risk of heart disease in the following ways:

1. They lower blood pressure. Nutrients in dark chocolate help to relax blood vessels and improve blood flow, which, in turn, can also lower blood pressure.
2. They reduce the risk of arrhythmia. Findings associated chocolate with a lower risk of an irregular heartbeat.
3. They decrease cholesterol levels. Eating dark chocolate might help reduce low-density lipoprotein, or bad cholesterol, research shows.

Stroke

According to research, the active phenolic compounds in cacao act to lower cholesterol levels, cutting an individual's risk of experiencing a stroke by 22 percent. Dark chocolate also helps reduce an individual's risk of blood clots.

Diabetes

Dark chocolate can increase insulin sensitivity, which could reduce the risk of developing this blood sugar disorder. Flavonoids help the body use insulin more effectively to control and lower blood sugar levels and decrease insulin resistance. (This condition occurs when the cells of the

body don’t properly respond to insulin.) The compound also benefits those with type 2 diabetes, as these individuals’ chances of experiencing cardiovascular disease doubles if they fall victim to lower levels of high-density lipoprotein, aka good cholesterol.

Mood/Stress

The University of Michigan Integrative Family Medicine Program found that consuming dark chocolate also boosts levels of the feel-good hormones serotonin and endorphins in the brain, thereby improving mood. Furthermore, studies note that the healthy snack can reduce stress levels.

A Cognitive Function

Harvard Medical School found that two cups of hot cocoa a day could keep the brain healthy, reduce memory decline in older adults and support blood flow to parts of the organ that needed it. In addition, a specific preparation of cocoa extract called Lavado might reduce or stop damage to nerve pathways found in patients with these issues, helping to slow cognitive decline in those with such diseases as Alzheimer’s. (A 2016 study published in the journal Appetite suggests that eating dark chocolate at least once weekly could improve cognitive function.)

Eye Health

A research team led by Jeff C. Rabin, OD, MS, PhD, an assistant professor of optometry at the University of the Incarnate Word in San Antonio, noted in findings recently published in JAMA Ophthalmology that flavonols, a type of flavonoid in dark chocolate, prompted “small enhancements in visual acuity” two hours after healthy young adults with an average age of 26 consumed dark chocolate. Scientists think the water-soluble compound found in fruits, veggies and herbs increases blood flow to the retina.

The Bitter Truth

It’s key to know that only bittersweet dark chocolate boasts these health benefits. “The process of adding milk, sugar and any other ingredients [to dark chocolate] will reduce nutrients as well,” says Mitchell Zandes, MS, a registered dietitian in New York, “because these ingredients are taking the place of the cocoa, which would be comparable to diluting a beverage.”

The higher the concentration of cacao is in dark chocolate, the more beneficial its effect on cognition, memory, mood and the immune system will be. “As the percentage of cacao increases, bitterness will increase as well,” Zandes explains. “The reason for this is twofold: The flavonoids in cocoa have a naturally bitter taste. These are the same compounds that contribute to the bitterness of wine and tea, and a higher percentage of cacao—for example, 85 or 90 percent—leaves less room for ingredients like sugar and milk to be added.”

Much sweeter milk chocolate has a far lower percentage of cacao (from 10 to 50 percent) and usually contains milk and more sugar. White chocolate contains no cacao, just cocoa butter, sugar and milk.

Another fact to consider is that eating dark chocolate can trigger the following effects in certain individuals:

Migraines. The tyramine, histamine and phenylalanine content found in cocoa can cause these headaches.

Low bone density and osteoporosis. The American Journal of Clinical Nutrition found that older women who ate dark chocolate every day had lower bone density and strength.

Risk of exposure to toxic metals. Some cocoa powders, chocolate bars and cacao nibs may contain high levels of cadmium and lead, which are toxic to kidneys, bones and other body tissues. Manufacturers say these metals are present only in trace amounts and occur naturally. Although this is of greater concern for children and pregnant women, everyone should be aware of this potential problem when buying dark chocolate.

Kidney stones. Chocolate contains oxalate (an organic acid found in many plants that's also synthesized by the body). People who tend to develop kidney stones or those who follow a low oxalate diet may need to avoid eating chocolate or limit consumption.

Weight gain. At 150 to 170 calories per ounce, dark chocolate can be fattening. The recommended daily serving is just one ounce.

On a positive note, although chocolate contains saturated fat, which can negatively affect blood lipid levels, research shows that when dark chocolate is enjoyed in moderate amounts, the heart-protecting effects of its flavonols could outweigh the risk of developing this problem. In addition, other research finds that the fat in cocoa butter, unlike other saturated fats, has no effect on blood cholesterol.

"I think cacao nibs, natural unsweetened cocoa powder and dark chocolate with 72 percent or more cacao are all excellent choices for consumers," Zandes says. "Natural unsweetened cocoa powder contains less than 20 calories in one tablespoon, so adding it to a smoothie is an excellent idea. I recommend making one with almond milk, a banana, frozen spinach, cocoa powder and a scoop of high-quality chocolate protein powder."

For those who don't care for any of these options and prefer milk chocolate or brownies, Zandes suggests that they find another healthful food to add to their diet.

A piece of milk chocolate with a cup of fresh strawberries would be an excellent choice," he says.

"One thing to keep in mind is that there is a great deal of variability in flavonoid content in cocoa," Zandes says. "Levels will change based on many factors, including ripeness [of the bean] at the time of harvest, soil conditions, storage conditions and time spent on the shelf. This is why it's key to look at chocolate as playing an incredibly small role [in health] and as just one piece of a dietary plan that is rich in fruits, vegetables and whole grains."

If you don’t eat a nutritious diet, adding chocolate just for its benefits is not going to be of much help.

“Fruits and vegetables will always be a greater source of nutrients in the diet,” Zandes cautions. “If you are not meeting the daily requirements for these foods, adding cocoa is unlikely to be very beneficial.”

Cacao Content

Not all dark chocolate is created equal.

Before you start eating dark chocolate for health reasons, check the ingredients to see how much cacao it contains. Then note the country from which it’s sourced. Look for natural chocolate. Avoid chocolate products processed with alkali, a chemical compound which removes nutrients.

Choose a chocolate with 72 percent or more cacao. The higher the percentage of cacao, the more flavonoids the chocolate will contain. The exact amount varies from batch to batch and depends on how it’s processed, which should be clearly stated on the packaging.

“If there is not a percentage listed on the label, it is safe to assume that the amount of cacao in the product is suboptimal,” says Mitchell Zandes, MS, RD, CSCS, a registered dietitian in New York City. “Websites like LabDoor.com and ConsumerLab.com have independently tested various brands of dark chocolate. These organizations compare the content of the product to what is written on the label.”

Avoid chocolate with added butterfat, vegetable oils and artificial colorings or flavorings.

If you’re concerned that a chocolate product might contain metals like lead or cadmium, visit the website AsYouSow.org for a list of products that have been tested and the amount of metals they contain.

If possible, choose “fair trade” chocolate that’s produced according to safe growing practices by manufacturers that pay fair wages to chocolate farmers and don’t use child labor.

Is organic dark chocolate better? “From a nutritional standpoint, choosing organic cacao is unlikely to make a significant difference,” advises Zandes.

In addition, no substantial research supports the claim that organic chocolate boasts higher nutritional and antioxidant content. But organic chocolate might be less exposed to pesticides and might possibly promote biodiversity.

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