

OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Wayne Terai

A Valentine's Treat: The Brain-Boosting Benefits of Dark Chocolate

Dr. Terai encourages patients to choose a diet plentiful in delicious, nutrient-rich foods, including a moderate amount of dark chocolate (about one ounce per day of at least 60 percent cocoa chocolate).

Evidence has been mounting for several years that chemicals in dark chocolate help lower blood pressure and cholesterol, in turn protecting against cardiovascular disease. But now — just in time for Valentine's Day — new research indicates that this candy-aisle favorite also enhances mental and emotional well-being.



Unwrap Peak Mental Performance

A gift of dark chocolate for your sweetheart is a gift of flavanols, the antioxidant chemicals responsible for the treat's heart-healthy reputation. Flavanols facilitate blood circulation. Because they boost blood flow to the brain, flavanols may potentially heighten mental function.

In one experiment, consumption of flavanol-rich foods including chocolate increased cognitive test scores in a group of elderly participants (*J Nutr* 2009;139:120-7).

Stay Sharp for Years to Come

According to exciting scientific findings, cocoa flavanols appear to protect the brain from age-related deterioration (*Int J Med Sci* 2007;4:53-8).

Flavanols are not the only component of dark chocolate that cause Dr. Terai to recommend it. Researchers report that substantial quantities of resveratrol — the antioxidant compound that gives red wine its claim to fame as a health tonic — are also present in cocoa (*J Agric Food Chem* 2008;56:8374-8).

One study in mice suggests that resveratrol may stave off or decrease the severity of neurodegenerative diseases such as Alzheimer's disease (*Neurochem Int* 2009;54:2111-8). In another study, mice fed diets high in resveratrol had longer lifespans (*Nutr Rev* 2008;66:591-6).

The Road to Happiness May Be Paved With Chocolate

It's no surprise that the taste of chocolate makes many people smile. But most people are unaware that the chemicals in chocolate may rouse happiness on a biochemical level. Researchers in Finland surveyed a group of elderly men about their candy preferences, general health and psychological well-being.

Those who preferred chocolate enjoyed not only superior overall health but also greater levels of happiness, lower levels of loneliness, and fewer signs of depression (*Eur J Clin Nutr* 2008;62:247-53).

Find Out More About Nutrition and Wellness Research From Dr. Wayne Terai

If you are interested in nutrition and wellness research, you have come to the right place! Dr. Terai is committed to providing patients with the latest cutting-edge research.

We are focused on teaching our patients and community about this vital health information, which will jump-start them on the road to wellness. To this end, each week we present one hot-off-the-presses *Optimal Health University*® topic. To find out more about this revolutionary approach to patient education, or to suggest future topics, please call our office today!

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One possible explanation for the link between chocolate and happiness is its concentration of certain amino acids which are precursors to dopamine, the neurotransmitter associated with the pleasure center of the brain (*Harv Mens Health Watch* 2009;13).



Animal tests show that other chemicals in chocolate called polyphenols also have antidepressant-like properties (*Nutr Neurosci* 2008;11:269-76). In addition, chocolate contains small amounts of serotonin, a central nervous system neurotransmitter, which helps regulate mood (*J Chromatogr A* 2005;1098:111-5).

Sweet Stress Reduction

A daily dose of dark chocolate might counter the harmful effects of stress on the body. In a just-published experiment, volunteers who described themselves as “highly stressed” ate 40 grams of dark chocolate daily for two weeks.

The chocolate used was a common commercially available brand with 74 percent cocoa solids. Blood and urine tests confirmed that the chocolate-eaters exhibited reduced levels of stress hormones, as well as a decline in metabolic and gut microbial imbalances associated with stress (*J Proteome Res* 2009;8:5568-79).

Delicious Pick-me-up

Could your special sweetheart use a mental pick-me-up? Help him or her skip the high — and subsequent crash — from caffeinated coffee or soda.

Instead, reach for a piece of dark chocolate. Chocolate offers an extra boost of energy thanks to theobromine, the alkaloid chemical that gives cocoa beans their bitter taste. Like its cousin, caffeine, theobromine stimulates the central nervous system. However, the stimulant effects of theobromine are longer-lasting and milder than those of caffeine, which is also present in relatively small amounts in chocolate (*Nutrition* 2009;25:1104-5).

Buyer Beware: Not All Chocolate is Healthy

As you peruse the heart-shaped boxes in the candy aisle, remember that only authentic dark chocolate offers brain-boosting and mood-enhancing benefits. Other forms of chocolate may be destructive to health. Milk chocolate has a comparatively low cocoa content, and white chocolate contains no cocoa solids, so both lack the salutary properties of dark chocolate.

Since there is no legal definition of “dark chocolate” in many countries, the doctor recommends that you check the label before you buy. Look for chocolate labeled as containing at least 60 percent cocoa. The beneficial components of chocolate come from the cocoa bean itself, not other added ingredients.

Seek out a high-quality product with a short ingredient list, which should include little more than cocoa solids, cocoa butter, sugar, and perhaps milk and vanilla. Steer clear of chocolate

products containing high fructose corn syrup, vegetable oil or artificial flavors. Also avoid filled chocolate candies, even if the shell is dark chocolate.

Stick with plain dark chocolate. Pure cocoa powder, which is available sugar-free, is another great way to reap the benefits of the cocoa bean, and a good choice for diabetics. Tame cocoa powder’s bitter taste by mixing it to beverages, smoothies, or yogurt. Organic and fairly traded chocolate products are also becoming more common.

Finally, the doctor reminds patients to enjoy dark chocolate in moderation as it does contain a significant amount of fat and, depending on the product, refined sugar. Limit consumption to one ounce per day. Diabetics should avoid chocolate containing sugar. In some people, chocolate may aggravate other disorders, such as migraine headache and eczema. So talk to the doctor first if you have any health condition.

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