**Culinary Medicine** 

# A Look at the Health Benefits of Chocolate Without the Weight Gain!



by Stefanie Schwartz, MS, RD, CDN and Rich Strongwater, M.D.

Can chocolate really be good for you? Are there really health benefits?

The answer is YES, but it must be the right kind of chocolate and the right amounts.

The Kuna Indians of the San Blas islands of Panama experience less diabetes, hypertension, heart attacks, stroke and cancer than the mainland Panamanians. And when the Kuna migrate to the mainland their incidence of hypertension increases significantly. Their secret? The Kuma islanders eat more fruit, more fish and 10 times more cocoa!

## How Dark Chocolate Can Be Good For You

Dark chocolate is made from the seed of the cacao tree and the higher the percentage of cacao solids in your chocolate, the greater the amount of antioxidants it contains. Antioxidants may protect your cells against free radicals, which play a role in heart disease, cancer, and other diseases.

Cacao includes polyphenolic and methylxanthine compounds, these compounds can reduce your risk of cardiovascular disease by reducing blood pressure, cholesterol levels, and possibly by reducing insulin resistance. Dark chocolate may also improve blood flow to the heart and brain while improving cognitive function and mood.

The polyphenolic flavinols (catechin, epicatechin, and procyanidins) in dark chocolate exert their positive health effects in several ways and includes increasing the production of nitric oxide which in turn reduces endothelial dysfunction, lipoprotein oxidation, platelet aggregation and endothelial inflammation. In this case, the endothelium is referring to the inner lining of arteries.

So dark chocolate has a greater polyphenol and flavonol content than does tea. By inhibiting low-density lipoprotein oxidation this appears to inhibit cholesterol deposition in the arteries. And dark chocolate not only inhibits LDL oxidation (which may improve endothelial function) it also lowers LDL levels slightly and raises HDL levels slightly. Remember, LDL cholesterol is the "bad" cholesterol, HDL cholesterol is the "good" cholesterol and oxidized LDL is the really bad stuff that lays down atherosclerotic plaque.

Dark chocolate also contains fiber and minerals beneficial for vascular function.

- 100-kcal dark chocolate (70-85% cacao) contains 1.7 g of fiber
- 100-kcal dark chocolate contains 1.9 mg iron (25% of RDA in adult men and postmenopausal women)
- other minerals present- magnesium, copper, potassium and calcium

Caffeine and theobromine, the methylxanthines found in cacao have well known robust physiological effects. See the article "Health Benefits of Methylxanthines in Cacao and Chocolate" by Rafael Franco, Ainhoa Oñatibia-Astibia, and Eva Martínez-Pinilla to learn more about the specific health benefits of these compounds.

## The Right Kind of Chocolate

The key to getting the benefits from chocolate without the weight gain is to choose a high-quality dark chocolate that contains 60%-90% cacao and to limit portion size to 1 ounce per day.

The greatest health benefits of dark chocolate are seen above a concentration of 60% cocoa solids. One ounce of dark chocolate containing 60%-69% cacao solids has 165 calories, 11 g of fat, and 15 g of total carbohydrate. As the percent of dark chocolate reaches 70%, the calories increase to 170 per ounce, but with only 7 g of sugar. This percent of cacao solids contains about 40 mg of caffeine.

## Warnings

Chocolate can be contaminated with the heavy metal cadmium, which is a kidney toxin. Consumer Lab.com independently tested 42 chocolate products for purity and found that many common chocolate brands have dangerous levels of cadmium. Dark chocolate bars having the highest flavonol content and lowest levels of cadmium are:

- Endangered Species 88% cacao,
- Ghiardelli Intense Dark 86% cacao,
- and Lindt Excellence 90% cacao Supreme Dark.

White chocolate offers few benefits, and milk chocolate contains too much sugar.

## ABOUT THE AUTHORS

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Richard Strongwater is a board certified Family Medicine physician who provides primary care and travel medicine services in Pleasantville, New York. He attended S.U.N.Y. Upstate Medical School and did his internship and residency at Overlook Hospital in Summit, New Jersey. Richard Strongwater is founder, president, and chief strategic officer of Ironwood Medical Information Technologies, Inc. Their first patented product can be explored at <u>www.fibonacciMD.com</u>. Richard serves as one of the managing editors for this innovative medical information site. Richard enjoys hiking, kayaking, and eating his daughters' gourmet meals.

## Stefanie Schwartz MS RD CDN

Stefanie Schwartz earned her degree at Hunter College and has owned her own private practice, Nutritionally Yours in Chappaqua, New York for 23 years. Her specialty counseling areas are weight loss, heart disease, diabetes, gastrointestinal disorders, inflammatory diseases, and food addiction. She works one on one with families, and does group lectures. Her other current interests are cooking, hiking, and weight training.

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