## Chocolate, The New Food Group...Mishelle Knuteson, M.H.

Chocolate, the new food group.....? It would appear that way with the amount of chocolate that is consumed in the United States and the hype about the benefits, dark chocolate specifically. Yet to receive these great benefits it is important to understand the difference between the forms that the fruit of the cacao tree comes in - cacao, cocoa or chocolate.

Cacao trees produce pods (the fruit) and within each pod are about 20 to 40 beans. As these pods split, the beans naturally ferment, are then dried and cracked. Inside the beans are "nibs" that are small pieces used to make chocolate. They have all the natural fiber, fat, protein, minerals and nutrients of the cacao bean.

Cocoa butter is removed from the nibs by low heating and pressing. The remaining part of the fruit is used to produce raw



cacao powder. This powder is bitter and full of all the health promoting flavanols. Raw cacao powder is not the same as dark cocoa powder you normally buy at the grocery store. Cocoa powder is raw cacao powder that has been heated at high temperatures using a technique called dutch processing. Dutch processing involves adding an alkaline compound such as baking soda to make the powder darker, less acidic and easier to mix with liquids. This technique neutralizes the pH, which makes the powder less bitter. However, it eliminates as much as 98% of the beneficial, active flavanols. Many cocoa products are mixes which include added sugars, milk, fats and/or oils.

Chocolate is run through a more involved process. The raw plant goes through several steps of heating, evaporating and mixing the cocoa and cocoa butter with condensed milk, sugar, emulsifiers and other ingredients. Even the health promoted dark chocolate has lost the beneficial qualities of the raw plant.

Flavanols act as antioxidants that help prevent damage when stress is placed on the cardiovascular system. The two primary flavanols in cacao are epicatechin and catechin. Epicatechin helps to activate nitric oxide which is produced by cells in the immune system called macrophages. These cells work as free radicals to help destroy bacteria, fungi and other pathogens. Nitric oxide also works in the regulatory system by helping to relax the tiny muscles in blood vessels which results in improved blood flow to various organs of the body.

A study done at the University of L'Aquila demonstrated that cacao flavanols helped to improve memory by not only enhancing circulation in the brain but also by supporting the growth of new blood vessels. Other shown benefits include: suppression in the development of plaque in the arteries, reduction of abnormal blood clotting, increased blood flow to the skin, inhibiting the proliferation of human breast cancer cells and help to maintain normal blood sugar levels.

The best way to receive these great health benefits is to purchase organic, unheated, raw cacao powder. Make a drink from the powder by taking your favorite warm liquid (such as coconut milk, almond milk or tea) and add 1-3 tablespoons of the raw cacao powder and a little sweetener (xylitol, honey etc. if desired). A touch of cinnamon or cardamom is nice as well. Remember, it is the bitter compounds that are the beneficial flavanols. Consuming one tablespoon of raw cacao powder per day should be enough to start generating benefits and three tablespoons would provide a therapeutic effect, when consumed daily.

Stop trying to find the perfect dark chocolate bar to receive the benefits from the flavanols in cacao; add raw cacao powder to your daily diet instead.

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