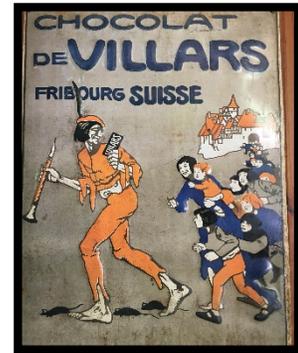


THE HEALTHY REASONS WE LOVE CHOCOLATE

By Geoff D'Arcy Lic. Ac., DOM

*How does the Cacao bean transform into our chocolate obsession?
Where does chocolate come from anyway?
And can it (please god) be good for us?*

We have all grown up with lots and lots of chocolate, given as rewards and treats and part of every holiday since before we can remember. The Swiss are World's number one, bingeing on more than 20 pounds per person, per year, Americans come in at 20th eating a mere 9.5 pounds each, that's about 83 snickers bars per person, every year of their lives. Oh my! how we love our chocolate!!



Why are so many of us so obsessed with it? And can it be good for us? First let's look at where it comes from...

For chocolate's origin we have to peer back through the ancient mists of time, to the ancient cultures of South America, then moving into Central America's Olmec people around 2,000BC. The Olmec (pre-Inca) civilization, flourished in the Yucatan Peninsula over to the Pacific coast of Guatemala, they may have been the first to cultivate the cacao tree around 1000 B.C.



The Cocoa tree bears large fruits, about the size of small pumpkins. When you pick the fruit, and open it up there are small almond sized beans inside, like peas inside a peapod. The beans are then fermented, roasted and ground into a paste that is then mixed with water, to which they often add vanilla, corn, ginger, chili peppers, and other spices, the cacao once transformed, was made into a frothy beverage. Since sugar was not yet



invented, cocoa was most often consumed unsweetened, sometimes with honey.

The Cacao Tree was worshipped by the Mayans who believed it to be of divine origin, cacao is actually a Mayan word meaning "Food of the Gods" Even the Swedish botanist Carl Linnaeus gave a nod to the Mayans when he named the tree's modern generic Latin name '*Theobroma Cacao*' meaning 'Food of the Gods'. The Aztecs so prized the beans, they became a trading currency. When Cortez defeated the Aztec Emperor Montezuma and entered his palace, they hoped to find a massive treasury of gold, but they were very disappointed to find huge quantities of cocoa beans. Unknown to Spanish Conquistador... a national treasure. The Aztecs also regarded chocolate as an aphrodisiac and their Emperor, Montezuma

reputedly drank it fifty times a day, is reported as saying of Xocolatl: "The divine drink, which builds up resistance and fights fatigue. A cup of this precious drink permits a man to walk for a whole day without food". In fact, the Aztec and Mayan warriors often nourished themselves on long marches with nothing more than hot spiced chocolate.



Chocolate's amorous associations began with the Mayan culture. The Mayan Goddess associated with the cacao tree was *Ixcacao*, an Earth Goddess who was associated with fertility and love. An Indigenous myth tells us whenever the balance between humans and nature becomes threatened, cacao comes from the rain-forest to open people's hearts and return the planet to harmony. This Mayan shamanic ceremonial use of the drink-of-the-gods, is often overlooked in modern times because of its lack of any psychedelic properties. But many report its energetic of 'opening the heart'.

The healthy qualities of the cacao bean have largely been overlooked by our culture's commercialization of chocolate and its huge success and huge profits it generated. Creating Holiday associations like Easter and chocolate eggs, Halloween and trick or treats. These all helped shape massive worldwide brand names across the World, such as Hershey, Cadbury, Lindt and Toblerone. But quality has suffered, modern chocolate has undergone extensive processing to suit consumer tastes and its commercialized use of hormone lased milk, refined white sugar majorly detracts from its health-giving properties. From a health perspective, their products are not anywhere where they could be. During their manufacturing process, cocoa butter is mixed with other vegetable oils. This is a cheaper way of manufacturing, most of them also contain sugar or high fructose corn syrup and use soy lecithin as an emulsifier. The Dutch process cacao nibs into processed cocoa powder by a process called alkalized or Dutched, where it is washed with a potassium carbonate solution, that neutralizes cacao's acidity from pH5 when naturally occurring, to a pH of 7 when alkalized, this lessens the bitter taste and allows it to better mix with milk.

There is a major health difference between difference between raw cacao and cocoa powders, when it comes to the amount of beneficial antioxidants present. Raw cacao is by far the highest in antioxidant activity, followed by natural cocoa powder and lastly Dutch-processed cocoa powder because the antioxidants are destroyed or made unavailable for absorption when heated or subjected to chemical treatment (Dutch-processed) during production.

Healthy qualities lurk under the surface within high quality products.

The health difference between Cocoa and Cacao is massive. Cocoa is processed cacao that has been roasted at high temperatures. Cacao is made by cold-pressing un-roasted cacao beans. The process of making cacao is minimal and preserves all the healthy antioxidants, while roasting at high temperatures

destroys them in cocoa. Remember we need anti-oxidants from our super-foods to reverse the effects of damaging effects of free radicals.

Why does chocolate connect so deeply to our biochemistry? How do its compounds light up our neural networks in our brain?

Raw cacao powder contains more than 300 different chemical compounds that's about four times the antioxidant power of your average dark chocolate. It even out does the superfood blueberry by 20 times. A blend of other compounds produce powerful phytochemicals that have amazing super powers to support lowered LDL cholesterol, improved heart function, and reduced cancer risk.

Some Healthy Compounds of Cacao

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Anandamide (the THC mimic) and **phenylethylamine** (the so-called "love" compound) are present in chocolate in very low amounts.

Theobromine (600mg/100grams) is a molecule made by plants. Theobromine was discovered in the 1840s, in cocoa beans. It is a nerve stimulator and diuretic with cardiotoxic properties to dilate coronary arteries, can increase the heart rate.

Cacao effects the brain with Endorphins and Serotonin. Cacao compounds can affect the brain by causing the release of certain neurotransmitters. Neurotransmitters are the molecules that transmit signals between neurons. The amounts of particular neurotransmitters we have at any given time can have a great impact on our mood. Happy neurotransmitters such as endorphins and other opiates can help to reduce stress and lead to feelings of euphoria. **Serotonin** (3mg/100grams) is known as an anti-stress and anti-depressant. One of the chemicals which causes the release of serotonin is **tryptophan**.

Caffeine, (70mg/100grams) has well known bracing and awakening effects on the body-mind. For perspective, a strong venti size cup of coffee can be up to 400mg.

Phenylethylamine. Some call this "chocolate amphetamine" causes changes in blood pressure and blood-sugar levels leading to feelings of excitement and alertness. This compound also potentiates the activity of dopamine, a neurochemical directly associated with sexual arousal and pleasure. It works like amphetamines to increase mood and decrease depression, but it does not result in the same tolerance or addiction. Phenylethylamine is also called the "love drug" because it causes your pulse rate to quicken.

Anandamide has a resemblance to THC of marijuana. Both activate the same receptor which causes the production of dopamine, a neurotransmitter which leads to feelings of wellbeing. Yet it would take twenty-five pounds of chocolate for a similar high to that of marijuana.

Anti-inflammatory. Many epidemiological studies associate cocoa and chocolate consumption to a reduced risk of chronic diseases, to its antioxidant and anti-inflammatory potency reducing inflammatory processes by pro-inflammatory cytokines and their downstream biochemical pathways.

Good Fat versus Bad fat of the Cacao bean

Cocoa butter and powder, separated at the start, are reunited to make chocolate. Most of chocolate's good stuff comes from the cocoa powder. Cocoa butter is composed of a combination of fats that's solid at room temperature, but liquid at human body temperature. Cocoa butter is far from inactive in the body. Cocoa butter consists mainly of palmitic, stearic, and oleic acids. Palmitic acid, a solid, saturated fat, increases risk of cardiovascular disease. Stearic acid, which is also a solid, saturated fat, appears to have a neutral effect, which is uncommon among saturated fats. Oleic acid, meanwhile, is a liquid, monounsaturated fat that decreases the risk of heart disease. Basically, the fatty acids in cocoa butter are thought to have little effect on heart health. All the recent studies seem to indicate a very protective effect on heart health.

One study comes to mind, that of the Kuna Indians living off the Caribbean coast of Panama don't have heart disease and were studied by Norman Hollenberg, a professor of radiology at Harvard Medical School, his research demonstrated is that it's because they drink more than five cups of cocoa a day. Hollenberg believes cocoa may also be the answer to other serious problems. "Several studies have shown that a decrease in blood flow to the brain is tied to both dementia, including Alzheimer's disease, and stroke," he notes. "Increasing evidence points to heavy intake of certain types of cocoa as an easy, inexpensive way to increase blood to the brain and, thus, to play a role in reducing the risk of those devastating diseases."

What's the best form to consume Cacao?

	<p>1. In a hot chocolate. Just add hot water and a bit of honey or agave syrup to sweeten it up, and you'll experience a great buzz and energy boost after drinking it.</p>
	<p>2. In a raw dessert. You can make an amazing chocolate pudding. Video with Po D'Arcy making a delicious desert with frozen bananas and cacao powder to make a banana cacao ice cream https://www.youtube.com/watch?v=4Eruqjfe3ic</p>
	<p>3. In a Power Smoothie. One table spoon in your morning smoothie.</p>
	<p>4. Small piece of high quality dark chocolate with a high percentage of Cacao. Video: How does Cacao make Chocolate? showing Stella Nisus of 'La Maison de Cacao' in Guadeloupe being interviewed by Geoff and Po D'Arcy, Stella shows how cacao seeds are made into our sweet obsession...chocolate. https://youtu.be/MsIOZ3ltgbY</p>

It seems that, in its unprocessed form, Cacao is good for us, and in its reincarnation into chocolate, even a little regularly in moderation can actually be good for us!

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