

Cocoa:

The Big History of a Small Bean

By Bryon Verhaeghe

Cocoa is the powder made from the seed of the cacao tree. The word cacao is used to describe the tree and ground beans and once the powder is ready to consume both Cacao/Cocoa may be used. These seeds grow in a pod, each pod holding between 20 to 60 seeds that we call beans. The beans contain 40-50% fat that makes it bitter. This fat has many health properties and gave the bean extra value to life. This small bean has a big history.



Using DNA the tree is originally traced to the Amazon and moved to Guatemala and Mexico by the Olmec/Mayan people. It was believed to be the food of the gods and used as a currency.

The Cacao tree requires a humid climate with regular rainfall, good soil and some shade. There are 22 species but just a few are used for commercial purposes. The full name of the tree is *Theobroma Cacao* which means “food of the gods”.

It takes 4 to 5 years before a seedling bears pods. This delay was the beginning of the saying, “when the money grows on the trees”.

These trees have many natural predators. The most common is a larva of a moth that feeds on them. A more potent parasite is blight caused by a fungus that can wipe out entire plantations.



Theobroma Cacao Tree

When the Spanish arrived in Mexico they marvelled with the idea of growing money. The seeds were taken to Europe, Africa and then the Philippines. Cocoa was fashionable and used by high ranking warriors and Royalty. The French wanted to dominate the industry and improved on the taste. Then it was introduced to England and given to Queen Victoria as a gift. Cocoa was highly valued with health benefits and expensive.

The Dutch found the cacao growing in the Philippines and took some seed to Jakarta. The first planting was wiped out by blight-fungus and they started again. They were anxious to bring a lower cost product to Europe. To do this they developed the process we call “Dutching” or “Dutch Cocoa”.



Hot Cocoa Drink

This is where the fermentation stage of production is replaced by an alkalizing agent to reduce acidity. Today this is mostly done with baking soda. The less expensive “Dutched” cocoa was taken to England and mass marketed by JS Fry and Sons.

Mixing cocoa with milk was not possible until the Swiss chemist Henri Nestle figured it out. He discovered that a low fat cocoa would mix with the low water or evaporated milk. This new achievement of milk-chocolate was an instant business success for Swiss Chocolate. Today many companies process, blend and mix cocoa. The recipes that use the high fat and fermented cacao have the most health benefits.

A sweet chocolate has 15-35% cocoa and a lot of sugar. When there is more than 50% cocoa we consider it Dark Chocolate. A Dark semi-sweet is 50-70% cocoa and when the cocoa content is greater than 70% we then call it bitter-sweet. Some 70% cocoas are still milk-chocolate when there are more than 2% milk solids. The health benefits are greater when the cocoa is not a milk-chocolate.

Naturally produced cacao is fermented in four to seven days. Like grapes; this reduces the sugars, kills germs and improves the flavour and aroma.

The medical properties of cocoa continue to be studied. There are many conflicting stories about the health benefits found in cacao. It is difficult to find studies that differentiate between the fermented high fat and high cacao chocolate from people who consume alkalised and fat removed varieties. In a broad statement we have the good natural fermented “cacao” and the bad processed “milk-chocolate”. The main ingredient in milk-chocolate is sugar.

Health Benefits of Cocoa

- **Cocoa lowers risk of heart disease**

Researchers at the Department of Medicine, Harvard Medical School and the Brigham and Women’s Hospital, Boston studied 15 people under the age of 50 and 19 over the age of 50. After four to six days of flavanol-rich cocoa, blood flow improved significantly in both groups but to a greater degree in the older group. The results were published Aug 24, 2006 in the Journal of Hypertension. Their conclusion is that flavanol-rich cocoa will improve heart and artery function in old age. (PMID: 16877960)

Cocoa: “Food of the Gods”

The antioxidant concentration in cocoa was the highest:

2 times stronger than red wine

2-3 times stronger than green tea

4-5 times stronger than black tea

Science Daily (Nov. 6, 2003)

- **Cocoa improves cholesterol**

Johns Hopkins University/Sinai Hospital Program in Internal Medicine, Baltimore analyzed the outcome of 28 healthy volunteers consuming flavanol-rich dark cocoa for one week. Their bad cholesterol (LDL) fell 6% and the good cholesterol (HDL) went up 9%. (PMID: 19005437)

- **Cocoa improves blood flow to the brain**

The Department of Neurology in Boston conducted a study on 34 healthy volunteers aged 66-78. They measured the blood flow to their brains with a special ultrasound device. High content cocoa was added to their diet. After one week the blood flow increased 4-12% and after two weeks this was 6-14% improved. They concluded that stroke and dementia would be reduced by high content cocoa consumption. These findings were published April 4, 2008. (PMID: 18728792)

- **Cocoa improves immune system**

The University in Barcelona, Spain has found that long term flavanol-rich cocoa improved the white cell response to inflammation in lab animals and concluded that long term studies deserve to be investigated in humans. This was published Jan 6, 2009. (PMID: 19126261)

- **Cocoa reduces blood pressure**

Researchers at the America Cancer Society in Atlanta compared 133 adult Kuna Indians living in Panama to 183 that had moved to Vera Cruz. Blood pressure was significantly lower in the Panama group and urine testing ruled out any salt difference in the diets. A diet survey of 118 items found similar diets but that the lower blood pressure group consumed a 10 fold amount of flavanol-rich cocoa. (PMID: 16794446)

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