

# TerranearPMC Safety Share

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## Week of February 26, 2018 – Chocolate!

Chocolate! The sweetest of confections. And while it is accepted that chocolate can put pounds on you faster than you can put it in your mouth, within recent years there has been clinical evidence to suggest that there are actually some health benefits to this heavily delight.

Chocolate receives a lot of bad press because of its high fat and sugar content. Its consumption has been associated with acne, obesity, high blood pressure, coronary artery disease, and diabetes. OK, no one said chocolate was perfect. But as it turns out, cocoa, the key ingredient in chocolate, contains biologically active phenolic compounds: a material that has significant anti-oxidant properties. Other foods known to have significant amounts of phenolic compounds include a variety of vegetables, fruit, and medicinal herbs. Current studies indicate that these materials help protect the human body against oxidative stress and inflammatory processes.

And a recent study by Harvard researchers suggests moderate chocolate intake is associated with a significantly lower risk for irregular heartbeats. OK, that's enough for me. From now on I'm gonna make sure my heart beat remains regular by having some chocolate for breakfast, lunch and dinner: with some in-between snacks....just to be sure!

The history of chocolate begins in Mesoamerica - the ancient region that consists of middle Mexico to Northern Costa Rica. It was in this region, about 1900 B.C that historians/archeologists are able to trace where fermented beverages made from cocoa were first enjoyed. These people first cultivated cacao plants in the tropical rainforests where they fermented, roasted and ground the cacao beans into a paste that they mixed with water, vanilla, honey, chili peppers and other spices to brew a frothy beverage.

The Aztecs believed that cacao seeds were the gift of Quetzalcoatl, the god of wisdom, and the seeds once had so much value that they were used as a form of currency. The actual cacao seed is from a genus of flowering plants known as Theobroma. While there are about 20 species within this genus, the cacao plant – Theobroma cacao – is the specific plant known for making chocolate. And the actual genus name – Theobroma – is derived from the Greek work theos, meaning “god” and bromia, for “food; thereby translated to “Food of the Gods!”

By 1400, the Aztec empire took over a sizable part of Mesoamerica and because they did not grow cacao themselves, they were imported it. All of the areas that were conquered by the Aztecs that grew cacao beans were ordered to pay them as a tax, or as the Aztecs called it, a "tribute". The cacao bean became a form of currency. The Spanish conquistadors left records of the value of the cacao bean, noting for instance that 100 beans could purchase a canoe filled with fresh water or a turkey hen.

Spanish conquistador Hernán Cortés may have been the first European to encounter chocolate when he observed it in the court of Montezuma in 1519. In 1568, Bernal Diaz, who accompanied Cortés in the conquest of Mexico, wrote of this encounter which he witnessed:

*From time to time they served him [Montezuma] in cups of pure gold a certain drink made from cacao. It was said that it gave one power over women, but this I never saw. I*



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*did see them bring in more than fifty large pitchers of cacao with froth in it, and he drank some of it, the women serving with great reverence.*

After the Spanish conquest of the Aztecs, chocolate was imported to Europe. There, it quickly became a court favorite and within about a hundred years, chocolate established a foothold throughout Europe.

The new craze for chocolate brought with it a thriving slave market, as between the early 17th and late 19th centuries the laborious and slow processing of the cacao bean was manual. Cacao plantations spread, as the English, Dutch, and French colonized and planted. Wind-powered and horse-drawn mills were used to speed production, augmenting human labor. Heating the working areas of the table-mill, an innovation that emerged in France in 1732, assisted in extraction of chocolate and used by Chocolaterie Lombart: claiming to be the first chocolate company in France.

In 1815, Dutch chemist Coenraad van Houten introduced alkaline salts to chocolate, which reduced its bitterness. A few years thereafter, in 1828, he created a press to remove about half the natural fat (cacao butter) from chocolate liquor, which made chocolate both cheaper to produce and more consistent in quality. This innovation introduced the modern era of chocolate. Known as "Dutch cocoa", machine-pressed chocolate was instrumental in the transformation of chocolate to its solid form when in 1847 Joseph Fry learned to make chocolate moldable by putting back the melted cacao butter.

In 1874, Daniel Peter, a famed Swiss chocolatier, experimented with various mixtures in an effort to balance chocolates rough flavor, and eventually stumbled upon that abundant product - milk. This changed everything and chocolate's acceptance after that was quick and enthusiastic. But it wasn't until several years later that he worked with his friend Henri Nestle and created the Nestle Company and brought milk chocolate to the mass market.

Today, the majority of chocolate comes from cacao cultivated in Western Africa. The company with the largest net sales of chocolate products in the Mars Wrigley Confectionary with \$18 billion in sales for 2017, followed by some European companies and then Hersey at \$7 billion.

And today chocolate consumption has been scientifically linked to longer life while being a major source of dietary copper, which is required for a healthy lifestyle. Cocoa and chocolate are also rich in minerals, such as magnesium and iron. Chocolate is a short term source for energy due to the antioxidants and phenolics it contains. This energy source has been used by soldiers for many years during heavy combat situations. A 40 gram chocolate bar contains the same amount of phenol as a glass of red wine and can be a positive source of dietary antioxidants. These anti-oxidants have been proven to reduce the risk of developing cancer or heart disease.

But remember, there is a down side to chocolate consumption! Remember that each pound of milk chocolate contains: 2300 calories, 140 grams of fat, 100 milligrams of cholesterol, 370 milligrams of sodium, 270 grams of carbohydrates and 31 grams of protein. So indulge if you dare! Bon appetite!!

**Even though you are on the right track - you will get run over if you just sit there.** Will Rogers

