

Beneficial Bites - Dark Chocolate

- I. The Plant
 - A. Chocolate comes from the Theobroma Cacao Tree or Cacao Tree for short (cacao is pronounced: kā – kow)
 - B. The tree has colorful, rugby ball-shaped pods that jut straight out from the trunk, almost defying gravity as they suspend from the tree's thin branches
 1. Each pod contains about 40 cacao beans which are not actually “beans” but rather are seeds
 - C. Cacao vs Cocoa
 1. Cacao is used when referring to the tree, its pods and the beans inside
 2. Cocoa is used when referring to the two products made from the bean...cocoa powder and cocoa butter
 - D. Growing the plant is not easy
 1. The plant only thrives in climates 20 degrees north and south of the equator
 2. It must be planted next to taller trees whose leaves will protect it from direct sun and wind
 3. It is highly susceptible to pests & disease which routinely destroy one-third of the world's yearly crop
 4. Each tree bears only 30 usable pods (1000 beans) per year
 5. It takes 500 beans to make one pound of bittersweet chocolate (1 tree = 2 pounds per year)
 6. Nearly all (90%) of the world's production comes from small family farms under 12 acres

II. History of Chocolate

- A. It is believed that ancient man discovered that the cacao (ka-kow) plant was edible after seeing monkeys eat the pulp from the rugby-ball shaped pods
- B. Not known when ancient man figured out how to use the bean but it is believed it occurred during the time of the Olmecs (an ancient tribe of South Central Mexico from 1200 – 300 B.C.)
- C. Chocolate had a prominent place in the Mayan Civilization, in fact their sacred book actually features the Cacao tree in it's story of creation
- D. The Aztecs of the 14-16th centuries prized the cacao bean so highly that it was used as currency; in fact it was used as currency long after the Aztecs and as late as 1858
 - 1. Forgery was even popular back then; forgers would take empty cacao shells, fill them with earth, reassemble and palm them off as real
 - 2. Beans were the native's coins; a list of Aztec trading prices looked something like this:
 - 1 small rabbit = 30 cacao beans
 - 1 turkey egg = 3 cacao beans
 - 1 large tomato = 1 cacao bean
- E. These ancient civilizations consumed chocolate in a liquid form and was served cold and frothy

III. Health Benefits

- A. Antioxidant power compares to other healthy foods;
 - 1. 1.4 oz of dark chocolate = 1 cup of blueberries
 - 2. 1 T unsweetened chocolate = 1 cup raspberries
 - 3. 1 T cocoa = 1 oz walnuts
- B. Recent findings suggest possible benefits to the cardiovascular system, kidney function, brain health, immune system, diabetes and blood pressure
- C. Researchers report that cocoa and chocolate have the following benefits on vascular health
 - 1. Help limit buildup of plaque in arteries by lowering bad cholesterol (LDL)
 - 2. Help raise good cholesterol (HDL)
 - 3. Help blood platelets to be less “sticky” which promotes healthy blood flow
 - 4. Reduce blood pressure in people with high blood pressure
 - 5. May even help maintain healthy blood sugar levels, increase blood flow to the brain and keep the skin healthy
- D. Minerals present in cacao bean include iron, magnesium, phosphorus, potassium and copper
- E. Dietary fiber...1 T cocoa fiber = 2 gm dietary fiber

*Although it contains cocoa butter and most of the cocoa butter is “saturated” it’s important to note that a large part of the saturated fat is not a harmful type. This particular saturated fat does not increase bad cholesterol. Of course, moderation is still important!

IV. Fun Facts

- The word **Chocolate** comes from the Aztec word **xocolatl**, meaning **bitter water**
- 71% of American chocolate eaters prefer milk chocolate
- Chocolate is a natural antidepressant. It contains tryptophan which helps you create serotonin, your body's own antidepressant
- Contrary to popular belief, chocolate does NOT contribute to acne
- Chocolate is poisonous to dogs. Theobromine found in chocolate is a stimulant that dogs can not break down in digestion
- Chocolate's melting point is just below body temperature, so it melts in your mouth. Melting chocolate in your mouth raises brain activity and heart rate more intensely than passionate kissing, and lasts four times longer
- Chocolate makers use 40% of the world's almonds and 20% of the world's peanuts
- Chocolate is not high in caffeine as some people think. Milk chocolate contains less than dark but both are considerably less than regular coffee
- Natural cocoa powder has more of the healthy antioxidants than dutch (or alkali) processed cocoa
- In general, the higher the percent cacao, the greater the amount of antioxidant power
- Also, the higher the percent cacao, the lower the percent sugar
 - 75% cacao bar has 25% sugar
 - 65% cacao bar has 35% sugar
 - The higher the % cacao, the less sweet the bar and the stronger the chocolate taste
- Chocolate is The Food Of The Gods. Cacao beans come from a tree that is a species **Theobroma**, which translated is **food of the gods**
- A relationship has yet to be found between chocolate and migraines even in migraine sufferers who believe themselves to be sensitive to it
- Tempering chocolate is a complex process of cooling and heating chocolate so that both types of fat found in the chocolate solidify with stability
- "Bloom" also called "Fat Bloom" is a dull white film of fat crystals on the surface of the chocolate and occurs when chocolate is exposed to heat during storage. The chocolate is still edible even if it looks bad

- V. Demonstration – Chocolate tasting
 - A. Chocolate tasting parties have become almost as popular as wine-tasting parties
 - B. We are the Pleasure Tasters (not the Professional Tasters)
 - 1. We're going to sample across several types of chocolate, from milk chocolate to bittersweet
 - 2. We're not going to dim the lights or expect everyone to stay seated
 - 3. We're going to ask for your opinions and if you want to compare notes that's fine too
 - 4. We are going to have fun
 - C. Where cacao comes from has a great influence on the flavor. Here are a few flavors to look for by region:
 - 1. Colombia: moderately fruit, lightly bitter with deep cocoa flavor
 - 2. Costa Rica: fruity with a balanced cocoa flavor
 - 3. Dominican Republic: deep earthy flavor with fragrant tobacco notes
 - 4. Ecuador: fruit and well-balanced floral notes
 - 5. Ghana: deep, classic cocoa flavor lending balance to more complex beans
 - 6. Madagascar: light citrus flavors somewhat like tangerines with bright acidity
 - 7. Panama: classic cocoa flavor highlighted by subtle fruit and roasted nut flavors
 - 8. Venezuela: complex fruit flavors that evoke ripe red plums and dark cherries
 - D. Look!
 - 1. Point out that a well-tempered chocolate will have a high shine, even color and a smooth, unblemished surface
 - 2. How would you describe the color and what do you think affects the color? *(percentage of cacao, presence of milk, source of the beans)*

E. Smell!

1. Before tasting, rub the piece of chocolate to warm and release its aroma
2. Hold it to your nose with cupped hands, sniff and draw slow breaths (*at first it may just smell chocolatey but as you compare with others you may notice general differences in richness, intensity, sweetness and earthiness*)
3. What might affect the aroma? (*dark vs milk, location grown, manufacturing methods*)
4. Are all of the aromas pleasant?

F. Snap!

1. Texture is enormously important to the chocolate experience
2. Snap is the first clue to its texture
3. Snap is a function of the amount and quality of the cocoa butter in the chocolate , how finely ground the chocolate particles are and how well it was tempered
4. The greater the cocoa butter, the gentler the snap

G. Feel & Savor the Melt!

1. Put the chocolate piece in your mouth but RESIST the urge to chew and eat
2. Instead, hold the chocolate against the roof of your mouth and pass your tongue over the bottom of it
3. Notice how it melts and then how it feels (*does it melt readily and feel smooth and creamy or greasy and slimy? does it resist melting and seem hard or waxy? does it feel grainy, gritty, powdery, harsh or drying?*)

H. Taste!

1. Does the flavor come on quickly or slowly
2. Does the flavor change from beginning to end
3. How long does the flavor last
4. Do you need more to give it a fair evaluation?

Let's compare our notes!

VI. Demonstration – Chocolate fondue

A. Equipment and supplies

1. Fondue pot(s) but no more than 2
2. Rubber scraper
3. Apron
4. Large toothpicks
5. Small paper plates
6. Napkins
7. Chocolate for melting (milk and/or dark)
8. Fresh fruit (pineapple, strawberries, bananas, apples)
9. Other items to dip (mandarin oranges, marshmallows, pretzels, ??)

B. Use recipe(s) of your choice for the dipping chocolate

C. Remind everyone that double-dipping is not allowed but they are allowed to dip as many items as they choose!

VII. Wrap up & Comments

A. If you have time and you want to do a quiz, use the Chocolate IQ and pick out 10 or so questions. Prize of a noon meal ticket can be given to the person who gets the most.

B. Remind everyone that our Beneficial Bites in March is Beans and tell them that we have some special presentations and activities planned for that