Theobroma cacao
Malvaceae
(formerly Sterculiaceae)

Cacao (from Mayan kakaw)
Chocolate
(from Olmec/Aztec Xocolatl)
Cocoa

Part used: seed (“bean”)

Native range: Tropical. Originated in Mesoamerica (Mexico, Central America); now widely cultivated in Latin America, western Africa, and Southeast Asia.

Harvestable status / sustainability: widely cultivated; commercially cultivated cacao is monoculture and genetically non-diverse, and is currently threatened by climate change, fungal disease and spreading pests; labor and child labor abuses are widespread.

Flavor: bitter

Energetics: mildly cooling, drying

Actions: antidepressant / mood and spirit lifting, CNS stimulant, cardio-bitter, nutritive, and tonic (anti-hyperlipidemic, hypotensive, vasodilative, anti-platelet), pulmonary, expectorant and antitussive, nutritive and antioxidant, anti-inflammatory, digestive bitter and astringent, bronchodilative, bronchial muscle relaxant, and respiratory bitter, mild diuretic

Popular and misunderstood: although considered a food plant, cacao should instead be viewed by herbalists as a Mesoamerican sacred and ceremonial plant. As a food, it is a medicinal food and specific remedy with a strong personality, and should be consumed as a beverage in the correct form (see notes on preparation below).
Most people are unfamiliar with the true energetic and flavor of cacao, having never had non-alkalized and unsweetened chocolate as a beverage. (Milk chocolate and solid chocolate for eating is a comparatively new invention, having appeared first in the 19th century and gaining prominence only in the 20th century. Historically and traditionally chocolate is a drink.)

Cacao is a solid bitter, exemplifying the various ways a bitter herb can open channels, and a slightly astringent herb, the bitter flavor balancing some of the stimulating effects. It is a solid nervine bitter, lifting the Spirit, a respiratory bitter that opens constricted airways, a cardiac bitter that clears Heat from the Heart and Mind and improves metabolic health by reducing platelet aggregation, and a digestive bitter, strengthening the gut and improving absorption.

In 1777 Sauer wrote of chocolate that it “invigorates and fortifies the spirit, strengthens the heart, heals injured lungs, eases difficult breathing, and revives limbs wearied from hard labor...[helpful for] easing sharp humors, sweetening a sour stomach, attenuating thick, mucusy fluxes, for refreshing the spirit, and for quieting diarrhea.”

**Indications:**

**Cerebral and Emotional indications:**

- Lifts the Spirit; for melancholy with lethargy, dull or foggy thinking
- Nervine bitter – the bitter flavor has a clearing action on the Mind that balances its stimulating action.
- Stimulates blood flow response in the brain in short term response; may reduce risk or aid in prevention of cerebral dysfunction, vascular dementia, cognitive decline, as well as stroke.
  - Stimulates endocannabinoid receptors and release of dopamine in pleasure centers of the brain
  - Tryptophan / amino acid content provides precursors to 5-HTP and serotonin

**Cardiovascular and Metabolic Health indications:**

- Antioxidant, anti-inflammatory, and cardiac bitter
- Clears Heat from the Heart and Heart-Mind
- Hyperlipidemia: phenols are twice as high as in red wine; can lower LDL (by up to 75% - Keville and Hobbs) and may increase HDL
- Reduces inflammation, prevents platelet aggregation and plaque accumulation; reduces the activity of blood platelets that contribute to plaque and blood-clotting
- Strengthens and improves pliability of blood vessels, dilation, and blood flow – flavanoids increase circulating NO levels
  - Lipids including stearic acid, a neutral fatty acid reduce levels of and oxidation of L.D.L., and may raise H.D.L.
  - Flavanols in cacao strengthen blood vessels, improve pliability, and increase blood flow.
In one Johns Hopkins study of 1,535 people, funded by the National Heart, Lung and Blood Institute, a couple of tablespoons of dark chocolate resulted in lower levels of thromboxane, a compound that indicates blood clotting. Blood analysis also showed slower clotting.

- Mild diuretic useful in cardiac edema in cases of Congestive Heart Failure
- Vasodilative and hypotensive: lowers elevated blood pressure and increases available circulating nitric oxide (NO) which has a positive inotropic and relaxant effect, improving blood vessel tone and reducing thrombogenicity.
- May also improve insulin performance and prevent / reduce risk of diabetes mellitus type 2.

Effects on vitality and adrenal function:
- Cacao has long been used to provide energy and maintain energy throughout the day. The small amount of caffeine contraindicates it for people who highly sensitized and for people who are adrenally exhausted. At the same time, in comparison to coffee or even black tea, cacao is low in caffeine and a useful substitute for those stronger stimulants for people who are becoming adrenally depleted or fatigued. In particular unsweetened hot cocoa once in the morning, then perhaps again midday, can help many people to end a coffee addiction.
- The last Aztec Emperor Montezuma was recorded to tell Hernán Cortés in 1519 that chocolate is a “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 1898 Felter and Lloyd wrote that cocoa “is a very useful nutritive article of diet for invalids [and] persons convalescing from acute diseases...”

Nutritional and digestive indications:
- Although largely forgotten now, historically cocoa was used even into the 20th century to improve a feeble or weak digestion, as documented by authors including Sauer, Felter and Lloyd.
- Restores health to the mucosal lining of the gut (Sauer)
- Digestive bitter tonic to increase digestion, absorption, and elimination
- Gently astringing: binds the gut and counters loose stools and diarrhea
- Nutritive and easily digested tonic for people who are feeble, convalescent, invalid, etc.
- Nutritional content:
  - High in Magnesium and may aid in Calcium absorption and utilization in the bones and nervous system
  - Trace minerals, fatty acids, and amino acids
  - High phenolic content gives cacao one of the strongest antioxidants of foods that have been tested
  - Cravings for chocolate, which and to be distinguished from cravings for sugar since the two are sometimes conflated, during PMS or otherwise, can indicate magnesium or other nutritional deficiencies
Respiratory indications:

- Cacao is a respiratory bitter that dilates the bronchi and eases breathing in cases of wheezing and asthmatic states.
- Can be useful in cases of emphysema, COPD, and bronchial spasm; largely due to theobromine content.
- Loosens phlegm and promotes expectoration

Safety, contraindications, interactions and/or toxicity:

- There are no dangerous contraindications (apart from some breeds of dogs!). That said, there are several contraindications:
- Sometimes over-stimulates; contraindicated for people adrenally exhausted or with a high sensitivity to caffeine and other stimulants, although caffeine content in cacao is vastly lower than coffee or black tea.
- In some people cacao can aggravate migraines (tyramines) and/or acne especially when hormonally modulated; purines (methyl xanthines) can sometimes exacerbate hormonal imbalances underlying breast pain or endometriosis, and certain PMS patterns (although in other cases it is helpful).
- Low levels of oxalates but may potentially exacerbate calcium oxalate-based renal and urinary calculi in people who are sensitive.

Preparation:

Traditional preparation is powder as a beverage in water or small amount of dairy or nut milk. For many adding a small amount of cayenne, ginger, or something pungent will balance the energetics and flavor.

Good quality cacao should be non-alkalized (not “Dutch cocoa”), organic, and fair trade. Although often eaten in “raw” form today, traditionally it is in fact generally mildly fermented and/or roasted before consumption. Mildly fermented or roasted cacao can be better tolerated by some.

- “Dutch chocolate” processing removes and neutralizes acids using alkaline compounds, also reducing therapeutic flavanols.
- Raw nibs may not have the same benefit

Cocoa butter is a good emollient for creams, ointments, cosmetics, and vaginal and rectal suppositories.

Dosage:

1-2 Tablespoons powder provides full therapeutic dose / day; adjusted for the individual.

Major plant constituents:

Over 700 constituents have been identified (Mabberley):

- High levels of phenols including
- Tannins
- Proanthocyanins, flavonols, catechins, and epicatechins, which are antioxidant, normalize blood pressure, improve vascular function, reduce insulin resistance and improve insulin sensitivity, reduce inflammation, and reduce platelet aggregation.

- Phytosterols
- Lipids and fatty acids including oleic acid, stearic acid, palmitic acid
- Amino acids including
  - Tyramine – can induce migraines in people who are sensitive
  - Tryptophan, a neuro-active amino acid and precursor to 5-HTP and from there serotonin

- Alkaloid content, which imparts most of the bitter flavor to chocolate:
  - Caffeine: 1.29% as much as tea (Caldecott)
  - Methyl xanthines / purine alkaloids: similar to adrenaline in structure
  - Theobromine, the plant metabolic precursor to caffeine, discovered in 1841 and also found in kola nut and in smaller amts in tea. Bronchial muscle relaxant and also strongly diuretic in an isolated form, but poorly absorbed. Toxic to some breeds of dogs.
  - Theophylline (isomer of theobromine) in small amts
  - Phenylethylamine, which is a neuro-modulator and stimulates release of dopamine in the brain; similar structurally to amphetamine and albuterol (used for asthma), as well as endogenous catecholamines.

- Small amounts of anandamide (endogenous cannabinoid) and tetra-hydro-beta-carboline which are psychoactive and mood elevating

Additional notes:
- The name of the genus *Theobroma* name means “food of the gods” (Greek θεός (theos), meaning "god," and βρῶμα (broma), meaning "food".
- Cacao appears to have co-evolved with monkeys to disperse its seeds (Mabberley). There are approximately twenty species in the genus, all native to tropical parts of the Americas. Several other spp. are sometimes used in smaller amts in chocolate blends. They are pollinated by biting midges (flies) that breed in the decaying fruit (Mabberley)
- Cacao seeds (“cocoa beans”) were used as currency in Mesoamerica until at least the 1850’s and even into the 1920’s (Mabberley) in Yucatan, Mexico.
- Milk chocolate was not invented until 19th century.
- According to the International Labor Rights Forum, “in 2009, the U.S. Department of State estimated that there were more than 109,000 children working in the “worst forms of child labor” in Cote d’Ivoire’s cocoa industry, and about 10 percent of those were victims of human trafficking or forced labor. In Ghana, the U.S. Department of Labor estimated in 2010 that about 43.5% of Ghanaian children aged 5-14 years were working.”
Sources:
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Hobbs, Keville, Women’s Health, Women’s Herbs
Romm, et al., Botanical Medicine for Women’s Health
Skenderi, Herbal Vade Mecum
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