

Yerba Mate – Healthy Energy Beverage

100% Organic Energy Fueled by Vitamins and Nutrients – Higher Antioxidant Levels than even Green Tea

Yerba Mate Defined.

Yerba Mate (*Ilex paraguariensis*) is a small tree native to the subtropical Atlantic forests of Brazil, Paraguay, and Argentina. This evergreen member of the holly family was introduced to modern civilizations by the indigenous Guarani of Paraguay, Argentina and Brazil. An infusion, brewed from the dried leaves and stems of the tree, is consumed by millions of South Americans as a **healthful alternative to coffee**. Deemed “The Drink of the Gods” by many indigenous groups in South America and “*the green gold of the Indios*” by Europeans, yerba mate possesses a multitude of health benefits that have begun to attract the attention of American scientists and consumers.

The nutritional value associated with Yerba Mate.

While yerba mate has been used as a base for herbal medicines in South America for centuries, the plant’s benefits and therapeutic properties have recently been verified by a number of scientific studies. The chemical components of yerba mate are similar to those found in green tea; however, yerba mate is much more nutritious.

Each infusion of yerba mate contains:

- **Vitamins:** A, C, E, B1, B2, Niacin (B3), B5, B Complex
- **Minerals:** Calcium, Manganese, Iron, Selenium, Potassium, Magnesium, Phosphorus, Zinc
- **Additional Compounds:** Carotene, Fatty Acids, Chlorophyll, Flavonols, Polyphenols, Inositol, Trace Minerals, Antioxidants, Tannins, Pantothenic Acid and 15 Amino Acids.

Nicknamed the “liquid vegetable,” yerba mate has 196 volatile (or active) chemical compounds found in the yerba mate plant – of which 144 are also found in green tea. Yerba mate contains 24 vitamins and minerals, 15 amino acids, and **11 polyphenols**, a group of phytochemicals which act as powerful antioxidants. Polyphenols are considered to exhibit anticancer effects in mammals by strengthening an organism’s natural defenses and protecting it against cellular destruction.

In addition to polyphenols, yerba mate leaves contain **saponins**. Saponins are phytochemicals that have been found to specifically stimulate the immune system and aid the body in protecting against disease. In fact, one study yielded three new saponins in the yerba mate leaf. These “natural detergent” compounds (glycosides) are found in a wide variety of plant life, which bind with cholesterol so it cannot be reabsorbed into the system and is excreted from the body.

Yerba mate is high in chlorophyll which helps reduce the binding of carcinogens to DNA in the liver and other organs. It also breaks down calcium-oxalate stones (better known as kidney stones) and can boast higher polyphenol and antioxidant counts than either green or black teas.

Clinical Studies of Antioxidant Properties of Yerba Mate.

Yerba mate has significant antioxidant activity. In a study published in 1995 by *Biochemical and Molecular Biology International*, researchers concluded that water extracts of yerba mate **“were more potent antioxidants than either ascorbic acid (vitamin C) or butylated hydroxytoluene.”** A few years later, a group of researchers embarked on a study to again investigate the antioxidant properties of *Ilex paraguariensis* infusions. Those findings were published in March of 2000 in the journal *Biochemical and Biophysica Research Communications*. Their results suggest **“that ingestion of extracts of *Ilex paraguariensis* could contribute to increase the antioxidant defense of an organism against free radicals attack.”** In a more recent study, published in the November 2001 issue of *Fitoterapia*, researchers took a look at seven different plant species in South America. They found that yerba mate **“contained a higher content of flavonoids and caffeoyl derivatives than any other assayed species.”**

Yerba Mate Provides a Wealth of Nutrients

The Pasteur Institute and the Paris Scientific society in 1964 were interested in this healthy source of vitamins and did a thorough study of its properties. The investigators concluded "it is difficult to find a plant in any area of the world equal to mate in nutritional value" and that yerba mate contains "practically all of the vitamins necessary to sustain life."

In addition, results from a study done by researchers at the University of Madrid assert a high content of mineral elements, especially K, Mg, and Mn, in mate. They considered those findings "to be of great relevance" to the nutritional value of mate infusions.

Health Benefits From Drinking Yerba Mate.

There are many positive effects of mate drinking that have been observed by consumers, and further confirmed in scientific studies. The positive effects listed below have been directly or indirectly attributed to drinking yerba mate infusions.

Induces Mental Clarity- Yerba mate has the ability to quicken the mind and increase mental alertness and acuity. Yerba mate also provides sustainable energy due to its complex combination of xanthine alkaloids and caffeine. Although its caffeine content is comparable to coffee, the stimulation is balanced by yerba mate's nutritional content. Clinical studies have shown that caffeine-sensitive individuals generally have very positive results and don't experience the hard side effects (jitters, stomach discomfort, headache) commonly associated with caffeine.

Sustains Energy Levels/Reduce Fatigue-Yerba mate is a central nervous system stimulant. The metabolic effects of mate appear to include the ability to maintain aerobic breakdown of carbohydrates during exercise for long periods of time. As a result, more calories are burned, thereby increasing cardiac efficiency and delaying the build-up of lactic acid. Additionally, mate's blend of xanthine alkaloids: caffeine, theophylline and theobromine, provide sustaining energy.

Boosts the Immune System-The yerba mate plant contains a number of powerful phytochemicals called saponins. When studying the effect that saponins have on plants, it has been discovered that saponins are the plants' active immune system and function as a "natural antibiotic." Research looks very promising that the effects saponins are being transferred to the human body when ingested. Scientists are looking at how

saponins can help humans fight fungal infections, combat microbes and viruses, boost the effectiveness of certain vaccines.

Helps Relieve Allergies-Linda Rector Page, N.D., Ph.D., notes that yerba mate is helpful in opening respiratory passages to overcome allergy symptoms. Shown to reduce the severity of some allergies and hay fever, yerba mate works by stimulating the adrenal glands to produce corticosteroids, which help suppress the inflammation and immune response due to allergies.

Aids in Weight Control-For many years now, physicians in Europe have been incorporating yerba mate in treatments for obesity. In 2000, a research team studying obesity at the Charlottenlund Medical Center in Denmark tested an herbal preparation of Yerba Maté, Guarana, and Damiana (YGD) for gastric emptying and subsequent weight loss. They concluded that the herbal preparation, YGD capsules, significantly delayed gastric emptying, reduced the time to perceived gastric fullness **and induced significant weight loss** over 45 days in overweight patients treated in a primary health care context. In addition, maintenance treatment given in an uncontrolled context resulted in no further weight loss, nor weight regain in the group as a whole. Guayaki recommends that the product be used as part of a program that includes a healthy diet and sufficient exercise.

Aids in Elimination-The indigenous of South America traditionally use yerba mate to treat gastrointestinal disorders as eupeptic and choleric agent. Research conducted by a team at Catedra de Farmacologia in Buenos Aires, Argentina found that yerba mate does in fact induce an increase in bile flow and **enhance intestinal transit**.

Diabetic Treatment-Yerba mate has been shown to inhibit the formation of advanced glycation end products (AGEs), with an effect comparable to that of two pharmaceutical grade AGE inhibitor drugs. The formation of AGEs plays a part in the development of diabetic complications.

Inhibits Lipid Peroxidation-A study conducted by Gugliucci and published in *Biochemical Molecular Biology International* (1995) claims low-density lipoprotein (LDL, or "bad cholesterol") oxidation is **inhibited by extracts of yerba mate**. Oxidation of LDL is considered to be the initiating factor to the onset of atherosclerosis (thickening and hardening of the arteries).

Fights Bad Breath-Polyphenols found in tea and yerba mate have been shown to prevent both the growth of bacteria responsible for bad breath and the bacteria's production of odorous compounds.

Side-Effects Associated with Yerba Mate

Tea is second, only to water, in worldwide consumption. Today, tea is considered a healthful beverage and a powerful antioxidant/anti-cancer agent. Numerous clinical studies have highlighted the health benefits of incorporating tea into one's diet. Ironically, the earliest studies on tea and cancer hinted at the possibility that **tea might actually cause cancer**. Initial evidence showed that some populations drinking large quantities of tea had higher rates of esophageal cancer. Upon careful examination, it was found that the high rates of this particular cancer were due to the temperature at which the tea was consumed rather than the tea itself. For example, in some parts of northern China it is customary to drink very hot tea, and this was associated with a two- to three-fold

increase in risk for esophageal cancer. Historically, South Americans have seen a higher rate of upper-aerodigestive tract cancers (esophageal/throat/mouth) than North Americans and Europeans. The search for culprits has pointed towards higher consumption rates of tobacco, alcohol, and red meat. However, yerba mate has also been analyzed because it is native to South America and widely consumed as an herbal infusion. Studies have suggested a link between this **heavy mate drinking** and an increased risk of upper GI cancers. However, researchers have been unable to identify any chemical compound within the mate plant that is considered carcinogenic. To study the role of hot mate drinking, alcohol, tobacco, and diet in esophageal cancer, a case-control study including 131 cases and 262 hospital controls was carried out in La Plata, Argentina. In multivariate analyses, statistically significant increases in risk were detected for alcohol, tobacco, and some dietary factors but not for hot mate drinking. Instead, studies suggest the **method of consumption** could be the contributing factor to an increased risk of cancer. Heavy consumption of very hot mate through a metal straw (bombilla) can cause repeated scalding to the back of the throat and esophagus. The greater body of research from the medical community suggests a general connection between the rapid consumption of hot foods and beverages and an increased risk of esophageal cancer. Yerba mate, like coffee and tea, is considered safe by the FDA and is on their GRAS (Generally Recognized as Safe) list. Consumed at a safe temperature, mate **is recognized as one of the most healthful natural beverages on earth.** Suggested daily consumption is 2-3 cups of a 3-4g infusion.

*These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease.

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