

Cocaine: History of Use

Coca has been used for ages as a food substitute, a stimulant, a medicine, as an aphrodisiac, a means to stay warm, and as a measure of distance running. An important factor in the spread of coca-chewing among Indians was the need for a food substitute when the Incan agricultural economy broke down due to inter tribal wars. Nutritional analysis shows that 100 g of coca leaves contain 305 cal, 18.9 g of protein, and 46.2 g of carbohydrates, and satisfies the recommended dietary allowances for calcium, iron, phosphorus, and vitamins A, B, C, and E. As a medicinal herb, coca has been used in treating a variety of ailments and diseases, being applied by shaman or medicine men in rites and ceremonies. Studies show that coca leaves have peripheral vasoconstrictive effects that reduces the amount of heat loss through the extremities and produces a higher central body temperature keeping the user warmer.

Coca leaves must be dried after harvesting or else they will lose their potency. Properly dried leaves will retain their potency for several years. Along with the discovery of tobacco and other crops unique to the New World, the Europeans were also introduced to coca. Beginning with the early explorers, who noticed the Indians in the Caribbean chewing coca leaves, and continuing with the conquest of the Incas by Pizarro (1531–1536), the white men were both fascinated and repulsed by this practice. At first, the use of coca was discouraged as evil, but in time, the Spanish learned that the Indians worked harder at high altitudes when they had coca, a fact that became especially obvious when a large silver mine was discovered in 1545 – at an altitude of 16,000 ft (Fig. 9).

By 1565, the King of Spain had issued an official approval for coca's use by the Indian laborers, and a heavy tax imposed on coca helped to build many churches and other buildings in what is now Bolivia and Peru. Accompanying the conquistadors were some men of science, doctors one of whom was Nicholas Monardes, who wrote the first scientific account of coca in about 1569. Interest in coca, however, did not reach similar heights as achieved by tobacco due in part to its inability to be smoked (Europeans didn't take to chewing). Other reasons coca didn't become as popular in Europe as did the tobacco plant, is that the leaves were improperly stored on the voyage from South America and that the leaves had lost most of their potency (Fig. 10).



Fig. 9 With the Spanish Conquest in 1507 Amerigo Vespucci wrote of coca chewing by Indians. In 1531 Pizarro arrives in Peru and conquers Incas territory. In 1545 silver mines were exploited with Indian laborers working at an altitude of 16,000 ft. In 1585 Phillip II of Spain approved use of coca for Indian laborers, and in 1569 the first scientific account of coca was written by Nicolas Monardes

Revised Retail Prices of

COCA WINE.

ARMBRECHT'S
FOR FATIGUE OF MIND AND BODY.
And Counteracts Affections, as

**NEURALGIA,
SLEEPLESSNESS,
DESPONDENCY,**

1880, 1881.

TWELVE BOTTLES, 48s. TWENTY-FOUR BOTTLES, 94s.
Contains Pure Sarsaparilla Wine, and Equal to United and Sarsaparilla. Food and Wine.

Professional Prices: 40s. per dozen; 21s. half-dozen.
(Carriage Paid in each case.)

ARMBRECHT, NELSON & CO.,
Sole Agents: **1, Duke St., Grosvenor Square, London, W.**
Telephone No. 1111. Cable Address: "ARMBRECHT, LONDON."

A Sample Bottle free to Medical Men and Dispensers on receipt of professional card.

Fig. 10 Label advertising the ingredient coca in wine around 1900

Coca Consumption with Wine

The real soaraway success in Europe was “Vin Mariani”. Launched in 1863, it was an extremely palatable coca wine developed by the Corsican chemist and entrepreneur, Angelo Mariani (1838–1914). Prior to this “Vin Mariani” Coca had remained largely obscure until it had been introduced as a product containing extract of coca leaves (not purified cocaine) and wine (2 oz of leaves to a pint of Bordeaux wine) in 1863. Mariani had first tried this new tonic on a depressed actress with spectacular results. Writing a book eulogizing coca, he gathered artifacts of, and material on, the coca-loving Incas. At home, he collected coke-taking paraphernalia. He also took up amateur horticulture and cultivated the coca plant in his garden. When “Vin Mariani” became the most popular of a host of coca-extract products being mass-marketed by Mariani, he became one of the greatest salesmen of his time. By sending “Vin Mariani” for free to famous personalities around the world, he solicited their “opinions”. He then asked for photographs of them with their endorsements, which were published in various newspapers and magazines (Fig. 11).

Coca in Refreshing Beverages

One imitator of Mariani was the Atlanta pharmacist, John Styth Pemberton (Fig. 12). In 1885 he introduced “French Wine Coca” as an “Ideal Nerve and Tonic Stimulant”. The following year, he dropped the wine, and introduced a syrup



Fig. 11 Advertisement of the “Vin Mariani” using popular figures of that time such as the Pope for marketing purposes

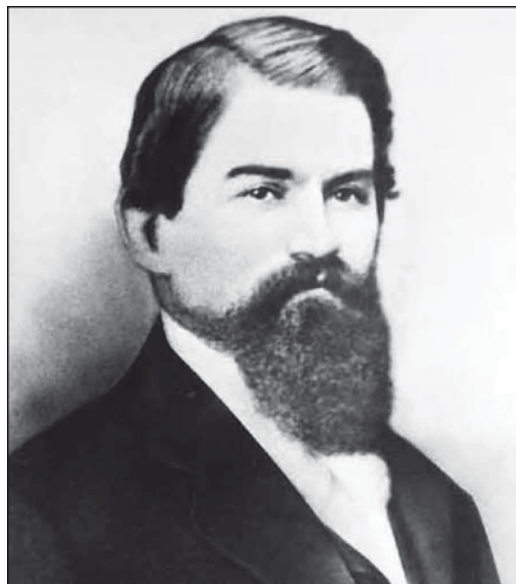


Fig. 12 Pemberton, the inventor of the refreshment beverage Coca-Cola

containing sugar and extracts of fruits from the Kola tree (which contain caffeine) and coca leaves, which was to become famous as “Coca-Cola”. Mixed with water it was sold primarily as a medicine. Being billed as “The Ideal Brain Tonic” and as a remedy for headache, he in 1888 added soda water, and the drugstore soda fountain became a permanent fixture. In 1891, Asa Griggs Chandler, another pharmacist, bought all the rights to “Coca-Cola”, and founded the Coca-Cola Company the following year.

The success of “Coca-Cola” spawned many competitors, among them: Wiseola, Koka-Nola, KolaAde, Celery Cola, Vani-Cola, Dr. Con’s Kola. By 1903, with the many patent medicines and tonics available in the US containing extracts of coca leaves, some even having large amounts of pure cocaine, concern mounted that abuse was occurring or likely to occur.

When Atlanta introduced Prohibition in 1886, Pemberton had to replace the wine in his recipe with sugar syrup, and the wine became ‘Coca-Cola: the temperance drink’ (Fig. 13). Coke was soon touted as “an intellectual beverage”, though not on the basis of controlled clinical trials.

Regulatories for Use of Cocaine

Due to the popularity of cocaine at its height around the turn of the century, there was bound to be some abuse. There were many state laws passed during this period to restrict the distribution of cocaine (and in a few cases opiates).



Fig. 13 Pemberton’s French wine coca proved also popular with American consumers. When Atlanta introduced Prohibition in 1886, Pemberton had to replace the wine in his recipe with sugar syrup. Thus ‘Pemberton’s French wine cola’ became ‘Coca-Cola, the temperance drink’

The first restrictive law was passed in Oregon in 1887, but it wasn’t until 1906 that the Federal Government attempted to regulate any drugs. In that year the Pure Food & Drug Act was passed, requiring labeling of ingredients. This effectively put many patent medicine manufacturers out of business because they didn’t want the government (or in some cases the public) to know what was in their products. If, for example, they listed cocaine, they might violate certain state laws restricting or prohibiting the sale and use of cocaine. The Coca-Cola Company had wisely removed cocaine 3 years earlier to avoid such legal conflict. In 1907, the State of New York passed a very tough law against cocaine trafficking. It was launched by Al Smith, who would later become famous as a candidate for president. In 1912, 14 states required “drug education” in public schools. By 1913, 46 of the then 48 states had laws restricting cocaine, while only 29 legislated against opiates. This tends to suggest that concern over the abuse of cocaine was higher than with any other substance at that time. The Federal Government stepped in finally in 1914 with the Harrison Narcotic Act. This is the grandfather of all the subsequent drug control laws. It was originally a tax law, requiring dispensers of opiates and cocaine to register with the government, but later it was interpreted to be much broader in scope. In fact, in 1922 severe restrictions were placed on the importation of coca leaves, and this is the first time cocaine was being defined as a “narcotic”, a misnomer that persists to this day.

Until 1904 the typical serving contained around 60 mg of cocaine. However, after a series of articles in East Coast newspapers calling for legal action against manufacturers of products containing cocaine, and faced with the growing opinion among the public that cocaine was dangerous, the Coca-Cola Company removed cocaine from their product. However, they continued to use “extractives from coca leaves” (i.e. *E. Novogranatense* var. *Truxillense*) but with the “cocaine removed”, as shown on the label. Sold today, it still contains an extract of coca-leaves, importing 8 t a year, however with no drug in it.

Although the US Government later tried to compel the company to drop the name ‘Coca-Cola’. After protracted legal argument, the name was saved; but traditionalists claimed the drink itself never quite recaptured its original glory. Although the company will neither confirm nor deny it, there is ample evidence that to this day “Coca-Cola” (“Classic”) still contains de-cocanized coca leaf extracts. In fact, there is at least one reference in the literature indicating that since 1969, the Coca-Cola company hasn’t even been required by the government to prove that the leaves are completely decocanized, suggesting that some actual cocaine may be allowed to slip in. The coca leaves are imported by the Stepan Chemical Company of Maywood, New Jersey, who extracts the cocaine for pharmaceutical purposes and recovers the rest of the leaf material, containing essential oils and other alkaloids, for use as a flavoring for Coca Cola.