sedative, frequently relieving headaches. It may also cause unpleasant nerve and digestive disturbances. The infusion is, however, recommended for neuralgic headaches. Tea is reportedly effective in clinical treatment of amebic dysentery, bacterial dysentery, gastroenteritis, and hepatitis. It has also been reported to have antiatherosclerotic effects and vitamin P activity.[29] Tea bags have been poulticed onto baggy or tired eyes, compressed onto headache, or used to bathe sunburn. The plant has a folk reputation as analgesic, antidotal, astringent, cardiotonic, carminative, CNS-stimulant, demulcent, deobstruent, digestive, diuretic, expectorant, lactagogue, narcotic, nervine, refrigerant, stimulant, and stomachic; used for bruises, burns, cancer, cold, dogbite, dropsy, dysentery, epilepsy, eruptions, fever, headache, hemoptysis, hemorrhage, malaria, ophthalmia, smallpox, sores, toxemia, tumors, and wounds.[32]

Fresh leaves from Assam contain 22.2% polyphenols, 17.2% protein, 4.3% caffeine, 27.0% crude fiber, 0.5% starch, 3.5% reducing sugars, 6.5% pectins, 2.0% ether extract, and 5.6% ash. Per 100 g, the leaf is reported to contain 293 calories, 8.0 g H_2O, 24.5 g protein, 2.8 g fat, 58.8 g total carbohydrate, 8.7 g fiber, 5.9 g ash, 32.7 mg Ca, 313 mg P, 24.3 mg Fe, 50 mg Na, 2700 μg β-carotene equivalent, 0.07 mg thiamine, 0.8 mg riboflavin, 7.6 mg niacin, and 9 mg ascorbic acid. Another report tallies 300 calories, 8.0 g H_2O, 28.3 g protein, 4.8 g fat, 53.6 g total carbohydrate, 9.6 g fiber, 5.6 g ash, 245 mg Ca, 415 mg P, 18.9 mg Fe, 60 mg Na, 8400 μg β-carotene equivalent, 0.38 mg thiamine, 1.24 mg riboflavin, 4.6 mg niacin, and 230 mg ascorbic acid. Yet another give 299 calories, 8.1 H_2O, 24.1 g protein, 3.5 g fat, 59.0 g total carbohydrate, 9.7 g fiber, 5.3 g ash, 320 mg Ca, 185 mg P, 31.6 mg Fe, 8400 μg β-carotene equivalent, 0.07 mg thiamine, 0.79 mg riboflavin, 7.3 mg niacin, and 85 mg ascorbic acid.[21] Leaves also contain carotene, riboflavin, nicotinic acid, pantothenic acid, and ascorbic acid. Caffeine and tannin are among the more active constituents.[1] Ascorbic acid, present in the fresh leaf, is destroyed in making black tea. Malic and oxalic acids occur, along with kaempferol, quercitrin, theophylline, theobromine, xanthine, hypoxanthine, adenine, gums, dextrins, and inositol. Chief components of the volatile oil (0.007 to 0.014% fresh weight of leaves) is hexenal, hexenol, and lower aldehydes, butyraldehyde, isobutyraldehyde, isovaleraldehyde, as well as *n*-hexyl, benzyl and phenylethyl alcohols, phenols, cresol, hexoic acid, *n*-octyl alcohol, geraniol, linalool, acetophenone, benzyl alcohol, and citral. Does this mean that the leaves contain more dangerous substances than herb tea? More properly it only indicates that *Camellia* has been more intensively studied than most herb teas. Certain constituents, especially catechin, epigallocatechin, and epigallocatechin gallate, are said to have antitoxidative properties.[29] October 1, 1979, caffeine was trading at *circa* $9 per kilo, theobromine at about $10, and theophylline at about $12.[115] Seeds contain 8.5% albuminoids, 32.5% starch, 19.9% other carbohydrates, 22.9% fatty oil, 9.1% saponin, 3.8% crude fiber, and 3.3% mineral substances. The fatty acids of the oil are 7.6% palmitic, 0.8% stearic, 83.3% oleic, 7.4% linoleic, 0.3% myristic, and 0.6% arachidic acid.[33]

Toxicity — There is evidence that the condensed catechin tannin of tea is linked to high rates of esophageal cancer in some areas where tea is heavily consumed.[37] This effect apparently may be overcome by adding milk, which binds the tannin, preventing its deleterious effects (GRAS § 182.20).[29]