

epistaxis, estrogenic, expectorant, fatigue, fear, fever, forgetfulness, gastritis, gonadotrophic, hangover, headache, heart, hematoptysis, hemorrhage, hyperglycemia, hypertension, hypotension, impotence, insomnia, intestines, longevity, malaria, menorrhagia, nausea, nervine, neurasthenia, palpitations, polyuria, pregnancy, puerperium, rectocele, renitis, rheumatism, sedative, shortbreath, sialogogue, sores, spermatorrhea, splenitis, stimulant, stomachic, swelling, tonic, tranquilizer, and vertigo.⁴¹

Subcutaneous injections in young mice of ether extracts induce follicle arrector muscle stimulation, the action like that of yohimbine. Ginseng saponin, at a dose of 10 µg/ml, was radioprotective when present prior to gamma-irradiation. Constituents of Asiatic ginseng increase adrenal capacity in stressed animals. Ginseng may improve radiation resistance as part of a general improvement in stress response. Tong and Chao²²⁵ even adduce evidence in support of the ginseng longevity connection: "the cell density of the human amnion cells grown in the medium containing crude aqueous extract of ginseng is greater than that of the control due to the prolonged life span of the treated cells." If Rg₁ can promote mitosis in some tissues in human body in vivo, and this seems likely according to the results reported in rats and mice, perhaps it can improve the general resistance and regenerative condition of a person, especially in the old one, by activating the metabolic processes and cell proliferation.⁴¹ Ginseng extract is said to be mitogenic as well as antimitogenic, depending on the dose used.²²⁵ Ginseng has been shown to facilitate the mating behavior of male rats.²²⁶ Males under the influence of ginseng began ejaculation earlier and repeated the action more often than controls.²²⁶ A compound A (C₆H₆O₃ = 3-hydroxy-2-methyl-γ-pyrine = maltol) was shown to be the antioxidant lying behind the "anti-aging activity of Korean ginseng."²²⁷ Panaxin stimulates the cerebellum system, heart, and blood vessels, panaxic acid invigorates the heart and metabolism; panaquilon stimulates internal secretions; panacene benefits the cerebrum and spinal cord, while ginsenin shows hypoglycemic activity. Both Chinese and Russian investigators have demonstrated hypoglycemic and cardiogenic activity. Ginseng has been given for arrhythmia with shock-like condition, hypotension, and shock. In patients with hypotension and shock, oral administration of ginseng decoction or ginseng powder seemed to strengthen myocardial contraction and elevate the blood pressure. Four-year-old roots contained, per 100 g: 338 calories, 10.0% water, 12.2 g protein, 70.0 g carbohydrate, 4.2% fiber, 1.0 g fat, 2.6% ash. 100 IU vitamin A, 1.0 mg vitamin C, 0.10 mg vitamin B-1, 0.108 mg vitamin B-2, 4.70 mg niacin, 234 mg calcium; 490 mg iron, 1.49 IU vitamin E, 0.48 mg vitamin B-6, 0.0506 mg folic acid, 0.31 mcg vitamin B-12, 216 mg phosphorus, 5.0 mcg iodine, 98.0 mg magnesium, 1.04 mg zinc, 0.62 mg copper, 0.00772 mg biotin, and 0.69 mg pantothenic acid.²²⁸

Toxicity — Emboden lists the plant with his narcotic tranquilizers.⁵⁴ JAMA recently carried an article called "Ginseng Abuse Syndrome",²²⁹ which failed to convince me that moderate use of ginseng was harmful. The histamine-liberating property would indicate caution by asthmatics or emphysema patients. "In 1958, the FDA gave panax ginseng the 'Generally Recognized as Safe (GRAS) status', but only as a tea infusion; the agency has repeatedly confiscated other forms of the herb."²³¹ According to Baranov,¹⁵⁴ "Soviet physicians who have tested ginseng in clinics state that healthy people, under the age of 40, should not use ginseng . . . patients have been found to be allergic to ginseng, showing symptoms such as palpitation, insomnia, and pruritis. Ginseng overdose may cause similar symptoms as well as heart pain, decrease in sexual potency, vomiting, hemorrhage, diathesis, headache, and epistaxis; ingestion of a very large dose of ginseng preparations may even cause death."