



Medicinal plants used in Central Nervous System disorders

Insomnia, Nervousness, and Anxiety

Insomnia

sleep disorder, difficulty falling asleep, daytime fatigue

Anxiety

unease, worry, fear, stress, excessive, persistent

Drugs

Valerian Root

part: dried underground parts

has a characteristic nauseating odor

active ingredients: epoxyiridoid esters, essential oil, and non-volatile sesquiterpenes

action: sedative, hypnotic, muscle relaxant, and antispasmodic actions

adverse effects: an excess can give headaches, excitability, insomnia, arrhythmias, and withdrawal syndrome

interactions: alcohol, benzodiazepines, and barbiturates can enhance its sedative effect

contraindications: not in pregnancy, lactation and children under 3 years of age, do not use before driving or operating dangerous machinery

posology: 2-3 g of drug or equivalent doses of dry extracts, 1 or more times a day

Passionflower, passionflower herb

part: aerial parts (stems, leaves, flowers, and fruits)

Similar to valerian for insomnia, anxiety

active ingredients: Flavonoids, alkaloids, pyranic derivatives, phytosterols

action: sedative, anxiolytic, antispasmodic, and muscle relaxant

adverse effects: an excess can give nausea, vomiting, and sedation

interactions: could enhance the sedation of sedative drugs

contraindications: not in pregnancy, lactation, and children under 12 years old

posology: daily dose of 0.5-2 g of drug or equivalent doses of other preparations

Hawthorn

part: flowering tops

thorny shrub with shortly petiolate leaves and inflorescences in corymb

active ingredients: flavonoids (1-2%, hyperoside) and proanthocyanidins (1-3%)

action: cardiotonic, antiarrhythmic, and coronary vasodilator effects; sedative and muscle relaxant actions

adverse effects: none reported

interactions: do not combine with sedative drugs or cardiotonic heterosides

contraindications: not in pregnancy, lactation, and children under 12 years old

posology: 2-5 g/day of powdered drug or 160-900 mg/day of hydroalcoholic extract

Lavender

part: flower and essential oil

Lamiaceae family

active ingredients: essential oil (1-3%) rich in monoterpenes, tannins, coumarins, flavonoids, and phenolic acids

action: sedative, hypnotic, anxiolytic, antibacterial, carminative, local analgesic, and anti-inflammatory effects, spasmolytic and chologogue actions

adverse effects: none reported

interactions: do not take with other sedative drugs, anxiolytics, or alcohol

contraindications: not in pregnancy, lactation, and children under 12 years old

posology: infusion 1-2g/150 ml, 3 times a day. 1-4 drops/day of essential oil, also topical use

Hypericum or St. John's Wort

part: flowering tops collected at full bloom

perennial herbaceous plant

active ingredients: naphthodianthrone, flavonoids, derivatives of phloroglucinol, tannins, xanthenes, phytosterols, phenolic acids, essential oil

action: antidepressant, anxiolytic, anti-inflammatory, antispasmodic, antiviral, wound-healing, and antibacterial effects

adverse effects: gastrointestinal discomfort, fatigue, headaches, and allergic signs, possible photosensitisation at high doses

interactions: antidepressants, anticoagulants, oral contraceptives, and immunosuppressants, sedative effects of alcohol

contraindications: not in pregnancy, lactation, and children under 12 years old

posology: standardized preparations with at least 0.3% naphthodianthrone calculated as total hypericin or 2-4.5% hyperforin

Saffron

part: stigma and petals

Iridaceae family

active ingredients: heterosidic carotenoids, picrocrocin, and safranal

action: antioxidant, cytotoxic, hypolipidemic, hepatoprotective, neuroprotective, anxiolytic, and antidepressant effects

adverse effects: none reported at doses used for culinary purposes

interactions: none reported

contraindications: not in pregnancy (may stimulate uterine contractions)

posology: hydroalcoholic extracts of saffron stigma (30 mg/day), max daily dose: 1.5g. other uses: spice in food

methyloxanthines

part: cola nut, guarana seed, yerba mate leaf, and tea leaf

psycho-stimulants that reduce fatigue, improve concentration, and produce little addiction

active ingredients: methylated xanthines, mainly caffeine, also theophylline and theobromine

action: CNS stimulant, diuretic, lipolytic, cardiac stimulant, peripheral vasodilator, cerebral vasoconstrictor, smooth muscle relaxant and ergogenic

adverse effects: at high doses can give digestive and neurological symptoms

interactions: additive effect with MAOIs and SSRIs, digitalis toxicity, carbamazepine, clozapine, and dipyrindamole effect, benzodiazepines, cimetidine, ethinylestradiol, and mestranol → caffeine toxicity

contraindications: caffeine allergy, cardiovascular disorders, GI ulcers, gastritis, epilepsy, insomnia, anxiety, pregnancy, lactation and children <12 years old

posology: max 300 mg of caffeine a day, not to consume after 5 pm, take after meals to avoid gastric irritation

Tea leaves

part: young and flexible (fermented) leaves

psychoactive and medicinal properties

active ingredients: caffeine (theine), flavonoids, catechins, catechic tannins, proanthocyanidols and phenolic acids

action: CNS stimulant, diuretic, vasoconstrictor, bronchodilator (theophylline), lipolytic

hypolipidemic
antiplatelet
angioprotective
vitamin P action
anti-inflammatory
antidiarrheal
antibacterial
antiviral
antioxidant

posology: 2.5 g/150 ml in infusion for 2 minutes if used as a stimulant, and 10-20 minutes if used as an antidiarrheal coadjuvant

Adaptogenic plants

plants that increase or enhance the body's defense capacity

against physical or psychological external aggression, acting in a prophylactic (protective) manner

adaptogens capable of adapting the body to situations of stress stimulating the non-specific resistance of the body

Some Plants

- Eleuthero root and rhizome
- Fruit and seed of schisandra
- Rhodiola root and rhizome
- Ginseng root

Ginseng root

part: roots of at least 6 years

White ginseng: removal of external layers, washing and sun-drying.
Red ginseng: steamed, artificially dried or sun-dried.

active ingredients: ginsenosides (2-3%) - tetracyclic and pentacyclic triterpenic saponins; heterogeneous polysaccharides (panaxans A-U)

action: adaptogen, stimulant, fatigue, memory, blood pressure regulation, hypoglycemic, hypolipidemic, estrogenic, immunostimulant, antioxidant

adverse effects: insomnia, nervousness, hypertension, skin rashes, morning diarrhea, estrogenic effects

interactions: effects of MAOIs, oral antidiabetics, oral anticoagulants, antiplatelet agents, digitalis, estrogens, corticosteroids

contraindications: cardiac disorders, hypertension, anxiety, nervousness, pregnancy, lactation, children.

posology: 1-2 g/day of drug, max 3 months (3-4 weeks effects), don't take before going to sleep.

Migraine

Episodic disorder, recurrent attacks of pulsating (unilateral) headache

Neurological (aura) and gastrointestinal symptoms. Vascular phenomena and serotonin ↑ migraines

headache, moderate to severe pain, nausea, vomiting, sensitivity to light and sound, stress, hormonal changes, rejection to foods and drinks

initial vasoconstriction of intracranial arteries, followed by reactive vasodilation

Preventive treatment: avoid triggering factors

Prophylactic drugs: beta-blockers, calcium antagonists, tricyclic antidepressants, antiepileptics, and serotonin antagonists

• Sedative and antispasmodic plants
• Analgesic and anti-inflammatory plants
• Feverfew and butterbur are useful
• Petasins has a spasmolytic effect

Matricaria (feverfew)

part: aerial part, sometimes only leaves

improve migraines evolution, frequency and intensity

active ingredients: parthenolide (sesquiterpene lactone)

action: antimigraine, antiplatelet, anti-inflammatory, analgesic, and antimicrobial

adverse effects: at high doses can give mouth ulcers, contact dermatitis, rebound headaches, insomnia, abdominal pain, diarrhoea, nausea or vomiting, mucosal and tongue inflammation

interactions: effects of antiplatelet and oral anticoagulant drugs

contraindications: hypersensitivity to matricaria, pregnancy, lactation, and under 18 years of age

posology: daily dose for migraine prevention is 50-120 mg of powdered drug (0.2-0.6 mg parthenolide). 4-6 months to observe a beneficial effect, gradually ↓ dose at the end