Parsley seeds (Petroselinum crispum) spilling from a scoop. These seeds contain a volatile oil known as apiol which is believed to have medicinal properties. It is used to treat malarial disorders and may also be an effective emmenagogue, promoting menstrual flow.

Parsley (*Petroselinum crispum*)

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Patients have a wide range of natural supplements to choose from, including herbal extracts. The medical benefits of some supplements are well documented and scientifically justified, others are not. This series looks at the most common supplements and examines the evidence for their use.

Source

The herb Parsley, *Petroselinum crispum,* is commonly used as a food and spice around the world. The parts used for medicinal purposes are leaves, root, seeds & oil.[1] It belongs to the family *Apiaceae*. The active constituents include: a volatile oil with the main compounds including about 20% myristicin, about 18% apiole, and many other terpenes. The seeds also contain approximately 20% fixed oil, organic acids, flavonoids, including, largely, apigenin (e.g. apiin = apigenin-7-apiosyl-glucoside) and luteolin. Phthalides, coumarins (including bergapten), tannins, polysaccharides, plus vitamins A, C, and E.

Parsley is a source of phytoestrogens, so it could potentially be used for treating osteoporosis and amenorrhea, and for promoting lactation. It is also an excellent source of iron, with parsley having 25 times more iron than liver, gram for gram. Parsley root contains up to 0.5% essential oil with the same constituents as listed above, as well as polyynes including falcarinol. Parsley is also among the highest food source of fluorine, another bone strengthener.[2] Parsley is a rich source of vitamins and minerals. It is an effective treatment for cramps, such as leg cramps, due to the high content of calcium, magnesium and potassium.

Potential uses

Main uses: (well documented)
Strong diuretic, antioxidant, galactagogue (increasing milk production), emmenagogue (stimulating the menstrual process), antimicrobial, inhibited sexual desire in women, preventing osteoporosis, expectorant, abortifacient, smooth muscle antispasmodic, kidney stone (roots, seeds), angina, urinary tract conditions, urinary tract stones, hypotension, anaemia, prostatitis, and vascular disorders.

Other possible uses: (less well documented)
Tonsillitis, tonic for the nervous system, rheumatism, asthma, coughs, cystitis, conjunctivitis, tired/sore or irritated eyes, reducing pain and inflammation, speeding healing of wounds and stings, broken capillaries, varicose veins, bruises and psoriasis, eradicating scalp infestations, breath freshener, flatulence, indigestion, head lice, heartburn, indigestion, liver disorders, and to stimulate liver regeneration.

Supporting evidence

Rats eliminated a significantly larger volume of urine per 24 hrs, when offered an aqueous parsley seed extract to drink, as compared to when they were drinking water. These findings were supported by the results of other experiments using an in situ kidney perfusion technique, which demonstrated also a significant increase in urine flow rate with parsley seed extract. Parsley extract, was shown, to reduce the activity of the Na^+-K^+ ATPase in both cortex and medulla homogenates. Such an inhibition would decrease apical cellular Na^+ reabsorption, lower K^+ secretion, increase K^+ concentration

in the intercellular space and consequently would inhibit passive K^+ influx across the tight junctions. The mechanism of action of parsley seems to be mediated through an inhibition of the Na^+-K^+ pump that would lead to a reduction in Na^+ and K^+ reabsorption and thus to an osmotic water flow into the lumen, and diuresis.[3]

The flavonoid aglycones from an illuminated parsley (*Petroselinum crispum* (Mill.) Nym.) cell suspension culture were identified and quantified as the flavones - apigenin, luteolin and chrysoeriol and the flavonols - kaempferol, quercetin and isorhamnetin. Flavonoid extracts from these cultures were purified by solid phase extraction from RP C-18 phase and given by gavage to rats. Only extract from illuminated culture increased the antioxidative capacity (AOC) of blood plasma temporarily with maximum values after 1 hr. It is concluded that the course of AOC reflects changes in the plasma content of flavonoids.[4]

Precautions

Side effects & Drug interactions

Parsley herb and root can cause allergic reactions of the skin and mucosa in susceptible persons in normal dosages. Phototoxicity is also possible if excessive amounts are taken, due to the presence of furanocoumarins. Excess causes nerve inflammation and abortion. Ingestion of approximately 10g of pure apiole has been reported to cause acute haemolytic anaemia, nephrosis, liver dysfunction and thrombocytopaenic purpura. If the essential oil is taken in large amounts, it can also cause hallucination and a narcotic state, gastrointestinal haemorrhage, kidney irritation, or cardiac arrhythmias. Ingestion of parsley in large amounts may cause dizziness or faintness.[5] Skin may become sensitive to sun and burn easy (especially after topical application of parsley).[6] Patients should not take parsley if they are taking medicines for depression, or those that alter a woman's menstrual cycle or make the skin sensitive to the sun.[6]

Contraindications

Parsley herb and root, taken medicinally in therapeutic dosages, are contraindicated during pregnancy and in people suffering from nephritis. The constituent, apiole, in the essential oil can cause kidney inflammation.

Pregnancy and lactation

Pregnant and nursing women should not take parsley juice or oil in medicinal doses, because it may stimulate uterine contractions. In high doses, pure apiol acts to induce abortion. Parsley is contraindicated in pregnancy due to the emmenagogue effect and uterine stimulation reported in animal research.[7,8]

The safe dosage form

Raw: Use it raw in salads and finely chopped in sandwiches, and sprinkle it on top of hot meals or stir into soups and sauces just before serving.

Dried herb: 2 to 4 grams, or as a tea three times daily, by mouth.[9]

Liquid extract (1:1 preparation in 25% alcohol): 2 to 4 millilitres (40 to 80 drops) three times daily, by mouth.[9]

Infusion: Pour a cup of boiling water onto 1-2 teaspoonfuls of the leaves or root and let infuse for 5-10 minutes in a closed container. This should be drunk three times a day.

Tincture: take 1-2 ml of the tincture three times a day. The daily dose of parsley seed is 1g of the dried crushed seed.

Externally: **Never rub neat oil on skin, as some pure essential oils can burn.** In 3 tsp of carrier oil, mix 2 drops of parsley oil and gently massage into broken capillaries, bruises or varicose veins to help drain the area and strengthen the capillaries.

Parsley tea can also be used as a gargle, as a compress, and as a rinse for scalp infestations.

References and further reading:

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Nasal treatment for migraine

Britannia Pharmaceuticals Ltd and Novartis have announced an agreement to accelerate the development of dihydroergotamine (DHE) nasal powder, an advanced and patented formulation of DHE that has been in development at Britannia since 2001. Britannia's DHE nasal powder formula works very quickly and lasts longer than most migraine treatments, helping to prevent the common problem of recurring migraines. This new formulation is non-irritating, fast-acting, as bioavailable as subcutaneous injections, and more stable than nasal liquid formulations.

SARS vaccine development

Aventis has entered into an agreement with the US National Institute of Allergy and Infectious Diseases (NIAID) to research and develop an inactivated virus vaccine against Severe Acute Respiratory Syndrome (SARS). Aventis Pasteur, the human vaccines business of Aventis, has agreed to develop a candidate vaccine using a similar approach to that of the currently licensed inactivated polio vaccine. It is likely take approximately two years before any candidate vaccine moves into clinical trials.

Completion of Phase 2A study of CS-917

Metabasis Therapeutics have announced the completion of a Phase 2A trial on its first-in-class oral gluconeogenesis inhibitor in patients with type 2 diabetes. The results of the trial provide the first evidence that this new class of drug is capable of significantly reducing blood glucose levels. In preclinical studies, CS-917 reduced the overproduction of glucose by the liver and thereby lowered blood glucose levels.

In the randomised, placebo-controlled, double blind trial, patients with type 2 diabetes received the drug orally once daily for a period of fourteen days. Results from this initial study appear promising in that CS-917-treated patients exhibited lower blood glucose levels for the first six hours after dosing on day 14 compared to glucose levels on the day before the first dose was administered. Moreover, glucose lowering was greater in CS-917-treated patients relative to placebo-treated patients. Additional studies are planned for later this year.

ISIS 104838 Moves Towards Phase III

Isis Pharmaceuticals reported that interim results from randomised, placebo-controlled, phase IIa investigation show that administration of ISIS 104838 300 mg is associated with reduced synovial tissue necrosis factor alpha (TNFα) mRNA levels and stabilised blood TNFα levels. ISIS 104838 is an antisense inhibitor that blocks production of TNFα, a cytokine important in immune responses and inflammation.