

Horsetail (*Equisetum arvense*)

Common Names: scouring rush, queue de cheval.

Description: According to the author of *Prescriptions for Herbal Healing* (2002), "Horsetail is a descendant of giant fern like plants that covered the earth some 200 million years ago." There are two different types of horsetail. The above ground portions of horsetail are used medicinally.

Properties: This herb has been used over the centuries to cure a multitude of ailments. It is known for containing silica, which makes connective tissue stronger.

Uses: Use horsetail to strengthen nails, teeth and hair, and treat bedwetting, bursitis, urinary incontinence, hemorrhoids and emphysema.

Doses: This herb can be found as a tincture, tea or fluidextract. Limit the period of time you take horsetail because lengthened use may cause adverse effects.

Warning: Do not take horsetail if you have prostate cancer, eat a diet with high amounts of cholesterol, are nursing, pregnant, under the age of 13, or over the age of 65.

## Horsetail (Shavegrass) Herb and Powder Profile

### Also known as

*Equisetum arvense*, scouring rush, shavegrass, and Field Horsetail,

### Introduction

Horsetail has a recorded history going back to the Devonian period, almost 350 million years ago. The plant at that time was as tall as a modern palm tree. Horsetail, not to be confused with cat-tail, is possibly the most abundant source of silica in the plant kingdom, so much in fact that the herb can be used for polishing metal. It got the name "scouring rush" from this very application. It has had other uses during the ages including being used for kidney and bladder ailments, and as an ingredient in shampoos, skincare products, and in dietary supplements. It has been used as an American folk remedy for gout and gonorrhea, and in traditional Chinese medicine for dysentery with blood, sore throat, and malaria. Modern herbalists usually use it for kidney stones, urinary tract infections, inflamed prostates, and anemia. The German E commission describes its use for urinary tract problems and as a diuretic.

### Constituents

More than 2/3 inorganic constituents, primarily silica and potassium salts. Horsetail from European sources contains the anti-allergy compound quercetin, but the same herb from North American and Asian sources usually does not. The plant also contains small amounts of nicotine.

### Parts Used

The above-ground parts of the plant, dried, cut, and powdered.

## Typical Preparations

Usually in tea, tinctures and encapsulations. Universally used in cosmetics.

## Summary

In very high doses, horsetail is sedative and anticonvulsant. The primary use of the herb, however, is as a diuretic. Gently stimulating increased urinary flow, horsetail helps "flush" infectious bacteria out of the bladder without altering the body's balance of electrolytes. The powdered form of the herb is better when electrolytes may be depleted. It's also the form of the herb being investigated as a treatment for age-related memory impairment.

## Precautions

When taking horsetail powder for its diuretic effect, be sure to drink extra water for maximum benefit. Avoid if there are kidney stones. Don't take horsetail herb if you take an ACE inhibitor for high blood pressure and you have congestive heart failure, as the combination of the herb and the drug can cause accumulation of excessive potassium. Not recommended while pregnant. Toxicity similar to nicotine poisoning has been seen in children who ingest large amounts.

**Botanical: Equisetum arvense, Equisetum hyemale, Equisetum maximum, Equisetum sylvaticum**  
**Family: N.O. Equisetaceae**

- [Description](#)
- [Part Used Medicinally](#)
- [Medicinal Action and Uses](#)
- [Preparation](#)

---**Synonyms**---Shave-grass. Bottle-brush. Paddock-pipes. Dutch Rushes. Pewterwort.

---**Part Used**---Herb.

---**Habitat**---They are chiefly distributed in the temperate northern regions: seven of the twenty-five known species are British, the most frequent being *Equisetum arvense*, *E. sylvaticum*, *E. maximum* and *E. hyemale*. *E. arvense*, the CORN HORSETAIL, is a very troublesome weed, most difficult to extirpate from cultivated land. Many of the species are very variable.

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The Horsetails belong to a class of plants, the Equisetaceae, that has no direct affinity with any other group of British plants. They are nearest allied to the Ferns. The class includes only a single genus, *Equisetum*, the name derived from the Latin words *equus* (a horse) and *seta* (a bristle), from the peculiar bristly appearance of the jointed stems of the plants, which have also earned them their popular names of Horsetail, Bottle-brush and Paddock-pipes.

Large plants of this order probably formed a great proportion of the vegetation during the carboniferous period, the well-known fossils Calamites being the stems of gigantic fossil Equisetaceae, which in this period attained their maximum development - those now existing being mere dwarfish representatives.

The Equisetaceae have an external resemblance in habit to *Casuarina* or *Ephedra*, and as regards the heads of fructification to *Zamia* (a genus of Cycadaceae). The *Casuarina* have very much the appearance of gigantic Horsetails, being trees with threadlike, jointed, furrowed, pendent branches without leaves, but with small toothed sheaths at the joints. They are met with most abundantly in tropical Australia, less frequently in the Indian Islands, New Caledonia, etc. In Australia they are said by Dr. Bennett to be called Oaks. The wood is used for fires, as it burns readily and the ashes retain the heat for a long time. The wood is much valued for steam-engines, ovens, etc., and the timber furnished by these trees is appreciated for its extreme hardness. From its colour it is called in the Colonies 'Beefwood.'

Though mostly inhabitants of watery places, flourishing where they can lodge their perennial roots in water or string clay which holds the wet, the Equisetums will grow in a garden near water, under a wall, or in the shade and will spread rapidly.

[\[Top\]](#)

**---Description---**The stems spring from a creeping rhizome, or root-stock, which produces at its joints a number of roots. Two kinds of stems are produced fertile and barren: they are erect, jointed, brittle and grooved, hollow except at the joints and with air-cells in their walls under the grooves. There are no leaves, the joints terminating in toothed sheaths, the teeth corresponding with the ridges and representing leaves. Branches, if present, arise from the sheathbases and are solid. In most cases, the fertile or fruiting stem is unbranched and withers in spring, almost before the barren fronds appear. It bears a terminal cone-like catkin, consisting of numerous closely-packed peltae, upon the under margins of which are the *sporangies*, containing microscopic spores, attached to elastic threads, which are coiled round the spore when moist and uncoil when dry.

The development of young Horsetails from the spores is similar to that of Ferns, germination and impregnation being effected in the same manner. The Equisitaceae are also propagated in a vegetative non-sexual manner by means of subterranean stolons and by tubers.

The barren summer fronds give off numerous, slender, jointed branches in whorls of about a dozen; in some British species, the fruiting and barren stems are often both unbranched.

A quantity of silica is deposited in the stems, especially in the epidermis or outer skin. In one species, *E. hyemale* (Linn.), the epidermis contains so much silica that bunches of the stem have been sold for polishing metal and used to be imported from Holland for the purpose, hence the popular name of Dutch Rushes. It is also called Scouring Rush, and by old writers Shavegrass, and was formerly much used by white smiths and cabinet-makers. Gerard tells us that in his time it was employed for scouring pewter and wooden kitchen utensils, and thence called Pewterwort, and that fletchers and combmakers rubbed and polished their work with it, and long after his day, the dairymaids of the northern counties of England used it for scouring their milk-pails. Linnaeus tells us that this species, among others, forms excellent food for horses in some parts of Sweden, but that cows are apt to lose their teeth by feeding on it and to be afflicted with diarrhoea. As a matter of fact, cattle, in this country, usually instinctively avoid these plants and would probably only eat them in the absence of better fodder.

The young shoots of the larger species of Horsetail, especially *E. maximum* (Lamk.) the *E. fluviatile* of Linnaeus - were formerly said to be eaten, dressed like asparagus, or fried with flour and butter. It is recorded that the poorer classes among the Romans occasionally ate them as a vegetable, but they are neither palatable nor very nutritious. Linnaeus stated that the reindeer, who refuses ordinary hay, will eat this kind of Horsetail, which is about 3 feet high and juicy, and that it is cut as fodder in the north of Sweden for cows, with a view to increasing their milk, but that horses will not touch it.

Several of the species have been used medicinally, and the older herbalists considered them useful vulneraries, and recommended them for consumption and dysentery. The FIELD HORSETAIL (*E. arvense*), the species of British Horsetail most commonly met with, is the one now generally collected and sold for medicinal purposes. It is common in cornfields and wet meadows, its presence being supposed to indicate subterranean, flowing waters or springs. In this species, the fruiting stems are simple, very rarely branched, appearing early in spring and soon decaying. The barren stems which appear later are branched, six to nineteen grooved, the angles rough and sharp, and terminate generally in a long, naked point; the joints are about 1 inch long and 1/24 to 1/16 inch in diameter, the teeth of the sheaths long and acute. The shoots have neither colour nor taste. The fertile stems are yellowish, shorter and stouter, somewhat succulent, with only two to five joints.

In warmer climates, and even in Lisbon, as *E. debile* and *elongatum*, they require the support of bushes to which they cling. They sometimes attain a great size as does *E. giganteum*, though they never reach the dimensions of the fossil Equisetaceae.

The rhizomes contain a considerable quantity of starch-cells.

*E. sylvaticum*, the WOOD HORSETAIL, which grows in copses and on hedgebanks, has slender, angular stems, 1 to 2 feet high, nearly smooth, ten to eighteen grooved. It is readily recognized by the elegant appearance of the whorls of recurved branches, generally twelve or more branches to a whorl, which are very slender, about 5 inches long, quadrangular and beset by several secondary whorls so that the plant resembles a miniature pine tree. The cones of the fertile stems are 3/4 to 1 inch long.

It is this species that Linnaeus informs us is a principal food for horses in some parts of Sweden. It is used medicinally in the same manner as the preceding species.

*E. maximum*, the GREAT or RIVER HORSETAIL, already mentioned, is found in bogs, ditches, and on the banks of rivers and ponds. It is the largest of the European species, the barren stems attaining a height of from 3 to 6 feet, sometimes nearly an inch in diameter. They are twenty to forty grooved, with numerous joints, pale in colour and smooth, the branchlets quadrangular. The fertile stems are quite short, only 8 to 10 inches high, but thicker; their cones, 2 to 3 inches long.

[\[Top\]](#)

**---Part Used Medicinally---**The barren stems only are used medicinally, appearing after the fruiting stems have died down, and are used in their entirety, cut off just above the root. The herb is used either fresh or dried, but is said to be most efficacious when fresh. A fluid extract is prepared from it. The ashes of the plant are also employed.

**---Medicinal Action and Uses---**Diuretic and astringent. Horsetail has been found beneficial in dropsy, gravel and kidney affections generally, and a drachm of the dried herb, powdered, taken three or four times a day, has proved very effectual in spitting of blood.

The ashes of the plant are considered very valuable in acidity of the stomach, dyspepsia, etc., administered in doses of 3 to 10 grains.

Besides being useful in kidney and bladder trouble, a strong decoction acts as an emmenagogue; being cooling and astringent, it is of efficacy for haemorrhage, cystic ulceration and ulcers in the urinary passages.

The decoction applied externally will stop the bleeding of wounds and quickly heal them, and will also reduce the swelling of eyelids.

**---Preparation and Dosage---**Fluid extract, 10 to 60 drops.

Horsetail was formerly official under the name of *Cauda equina* and was much esteemed as an astringent. Culpepper quotes Galen in saying that it will heal sinews, 'though they be cut in sunder,' and speaks of it highly for bleeding of the nose, a use to which it is still put by country people.

Culpepper says:

'It is very powerful to stop bleeding, either inward or outward, the juice or the decoction being drunk, or the juice, decoction or distilled water applied outwardly... It also heals inward ulcers.... It solders together the tops of green wounds and cures all ruptures in children. The decoction taken in wine helps stone and strangury; the distilled water drunk two or three times a day eases and strengthens the intestines and is effectual in a cough that comes by distillation from the head. The juice or distilled water used as a warm fomentation is of service in inflammations and breakings-out in the skin.'