

Horsetail: Cultivating and Building a New Relationship

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Horsetail "Equisetum Hymale" is the most important herb that Doug Simons uses and recommends for all aspects of dental health. Doug recommends using Horsetail for ongoing maintenance of healthy teeth, and especially for use during times of compromised, damaged or infected teeth. For specific uses of the herb, please refer to the DVD.

This booklet will show you how to identify, cultivate, harvest, store, and most of all, get to know Horsetail.

Identifying Horsetail:

In the wild, horsetail prefers to grow around, or in, water and in somewhat sandy soils. Look for it in shady wetlands, along wet paths in woodlands, and around creeks and streams. There are a variety of species throughout the world, some deciduous, some evergreen.

The hollow stalks form a dark ringed, jointed segment and lacks flowers. Its appearance is somewhat like a reed or rush growing between 1-5 ft tall with cone-like heads at the tips about 3/4 - 1 1/2 inches long which shed spores in the summers. It remains the only plant surviving on earth that still belongs to the ancient and primordial spore-bearing division of plants, Equisetopsida. Horsetail is also rhizomatous, spreading by underground stems and forming clumping stands. Its tiny leaves unite to form a sheath around the stem. This sheath darkens in color and feel like scales, which add to an already abrasive surface. The species of choice for this DVD is Equisetum hyemale. The important distinguishing feature is that it has a single upright stem. The Horsetail we **do not use** has a lot of branching off the stem.

History:

The Latin name for Horsetail is Equisetum. This is derived from the Latin words "equus" meaning horse, and "seta" which means bristle. Astrologically, it is ruled by Saturn. Horsetail has been on the Earth for over 200 million years. This plant is a primitive species that has inhabited this planet since before the dinosaurs.

Humans and animals alike have been using horsetail medicinally as well as nutritionally for centuries. The Roman physician Galen, used horsetail as a remedy for bladder and



kidney problems. The Ancient Greeks used it externally for wound healing. The English Herbalist, Nicholas Culpepper also applauded its use in treating ulcers, wounds, ruptures, and inflammations on the skin. The young shoots of the plant were often ingested by Native Americans.

What's Inside Horsetail that makes it so useful?

Horsetail contains a high amount of **silica**. Silica occurs as a mineral all around us in nature and most commonly as sand. Its properties are not only restorative, but essential in the building blocks of bone and connective tissue. That is to say, it helps rebuild enamel and supports all bones throughout the body including the matrix of the teeth.

While the high content of silica is believed to give horsetail its bone healing actions and tissue rebuilding capabilities, the plant also contains amounts of **calcium**, potassium, selenium, alkaloids, bitters, flavonoids, and tannins.

Horsetail as a Food Medicine:

Doug Simons has spent many years working with Horsetail and will go in depth on how the nourishing components of Horsetail are used as preventative care and to restore health in our teeth within the DVD. Horsetail also has a nourishing and restorative affect to the entire body, most especially the areas that are governed by the Kidneys: the bones, hair, nails and teeth.

Horsetail also strongly supports the connective tissues and helps regain balance throughout the body.

What does regular use of horsetail do to our teeth and body?

There is a noticeable, yet slight boost in oil production on skin and in hair with the regular use of horsetail. Nutrients in the plant may cause skin, hair, teeth and nails to become stronger. Herbalist Doug Simons has found that continued use of horsetail strengthens the teeth and prevents cavities; especially when your teeth feel weak.

Many scientists and doctors have contended that our bones need calcium and have encouraged the use of calcium supplements. However, new studies find that this could actually create calcium deposits in the bone. A study done on the fetuses of rats in utero (yuck) found that before the skeleton is formed silica is present. Then, once the calcium and bone is formed the silica vanishes. We are now learning that our bodies need silica in order to create the calcium that our skin and tissue require to regenerate itself. Ingesting the horsetail acts to communicate with our bodies and help it to know exactly where our bodies need the silica in order to strengthen and heal and recalcify our teeth and other bones.

More than Medicine:

Horsetail is commonly referred to as "scouring rush" which comes from using sections of the plant as a scouring "pad" to clean pots and pans. In Japan it is used as a traditional polishing material like fine grit sandpaper. The larger sections of the plant can

be pulled apart and made into a whistle. It is also used widely as an ingredient in shampoos, soaps, and skincare products. It is also said that muskrats feed on the plant and in Sweden it is fed to cows to help boost milk production.



Preparing Horsetail for Use:

For proper tooth health maintenance herbalist Doug

Simons recommends getting to know the plant. You can eat the fresh plant as is, or dry the plant and make freshly ground powder. It should be very vibrant in color (very green). Use 1 teaspoon in a glass of water 5-10 days out of each month or as outline in the DVD for more serious tooth imbalance. In his experience, he has found that an infusion is not affective.

Other herbalists say Horsetail is most potent when extracted as a fresh plant tincture. According to Matthew Wood an “infusion is not sufficient.” Earthwise Herbal). This plant requires a fresh plant extraction in alcohol, or a decoction covered and boiled for 15-20 minutes for maximum potency. This is not to say that taken as a tea it is not a suitable medicine, and it has been suggested by some herbalist to always add a pinch of horsetail in every blend of tea you make for optimum health.

Another interesting preparation comes from Herbalist and Wildcrafter Ryan Drum: “Once the aerial plant part is fully formed, its need for silica in solution is very low. Mature, fully-grown vegetative stalks have a very low dissolved silica content. For biosourced silica, press out the fresh juice of young live horsetail plants. Preserve by freezing or syrumping in full-strength honey.”

Plant Awareness & Quality Considerations:

When gathering this plant, be aware of your surroundings. Horsetail likes to grow in boggy water and therefore, anything upstream or around the area you want to verify doesn't have toxicities, pesticides and fertilizers. Use caution when gathering.

In addition, have respect for the area and plants, you don't just want to harvest it all, take time to get to know your areas and where this plant grows in abundance. We highly recommend growing it with the intention of having enough to harvest and building a relationship with this plant.

Recognize that just like any other food (i.e. eggplant, peanuts, etc) people can have different experiences ingesting it. So take your time getting to know the plant. Horsetail is NOT known for being a plant that causes allergic reactions but like anything we want to take our time to verify what our body likes.

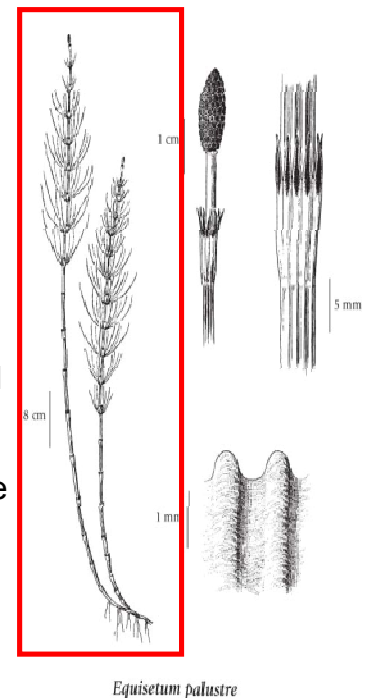
Horsetail is reputed to gather agricultural toxins so making sure it's gathered in a clean area is VERY important. Gathering the correct species (*Equisetum hyemale*) is important due to some toxicity noted in other species and the plants ability to absorb toxic substances. If you purchase dried horsetail, it should be a vibrant lime green upon grinding, not dead and brown looking.

If you are in a “special population”-pregnant, children, pets, those with autoimmune disorders or other sensitive health conditions, should consult with a trusted source before ingesting on a regular basis.

Wildcrafting Equisetum:

Cultivating Horsetail is our recommendation. Wildcrafting herbs is an art and science that takes years of quiet observation or apprenticing. Being able to identify horsetail in the wild does not mean that you SHOULD harvest it. Take pictures; look at its growth habits. Learn from it. If you are managing land with large stands you have properly identified that are in a pristine location, lucky you. It is generally a hearty plant and pretty resilient to carefully managed wildcrafting of its aboveground parts.

Other reasons for being especially careful with Horsetail in the wild is due to its ability to absorb toxins, and is used in permaculture as what is called a “bioremediator.” Species of *Equisetum* “palustre” (pictured to the right in a box) contains toxic alkaloids which can be harmful if ingested. There are other species that look like this with branches coming off the main stem that you do not want to ingest. If you accidentally ingest this one you'll experience a headache and some other mild side affects but this plant is not to be feared or is not dangerous to your life, it's just not the appropriate one for herbal use.



Growing/Cultivating Horsetail:

When obtaining Horsetail from a nursery, herbalist Doug Simons recommends *Equisetum hyemale*.

As a wildscape addition, gardeners have found when grown in or near water the plant stems make a popular playground for dragonflies. It also serves as food for various kinds of wildlife including mammals, geese, and other waterfowl.

Horsetail appreciates partial to full sun(in most parts of the country), and can grow around 3 feet in height. *Equisetum hyemale* is an evergreen and will usually shed its spores from June to September, and sometimes early spring. It could die back some in winter, but don't worry, if it likes where it is growing, it is there to stay! Many gardeners



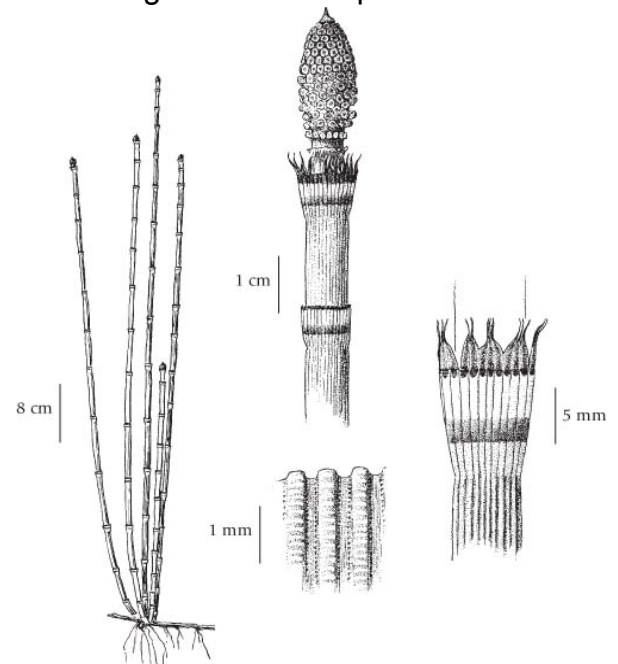
use horsetail in graywater systems, this of course may not be the same horsetail that you want to use in your medicinal applications. Since horsetail enjoys moist sandy soil, you may want amend yours depending on the area of the country you live in. If you live in a more arid and dry area, I recommend growing it around a pond or in a bed you can keep moist and giving it a little more shade. In Texas, I have found it likes to grow on the Northeasterly side of my home, where it won't get fried and dry up from the oh so powerful sun. If growing indoors or in greenhouses be sure to use large containers to make sure the plant is receiving a good amount water. In smaller pots, watering and soil content becomes more critical, and the horsetail tends to need more attention to assure it's receiving adequate nutritional needs and water. It does very well in shallow water. If not in shallow water, be sure to water daily and prune out old stems that may become dry and brown. Horsetail has been known to flourish, so take care where you decide to plant it, it could take

over eventually. Equisetum reproduces and spreads using spores and rhizomes. These two methods of propagation work as follows.

Spores: Early in spring, thick stems appear that are fleshy colored and short (as pictured right). A cone-like structure called the strobilus emerges from the top of each stem. When matured, the strobilus (left) bursts releasing spores that germinate in the soil. When the fertile stems die, they are replaced by sterile stems that are hollow.

Rhizomes: A rhizome is an underground (usually horizontal) plant stem that produces roots that travel beneath the soil and send up shoots. These two attributes make horsetail easy to cultivate. This is also the reason it is found so abundantly and grows so easily in the wild.

When beginning to propagate horsetail, start with 3 - 5 plants depending on the size of your garden or indoor facility and harvest all but one or two before they go to spore. If all are allowed to germinate you may have more than you might expect the following year as they do spread easily and will also reproduce using their rhizomes. Watch carefully and be sure to pay close attention to when they begin to shoot up the strobili. When the strobili bursts the spores will spread quickly and efficiently! They do their job well, so watch carefully!



Equisetum hyemale ssp. affine

Harvesting and storing Horsetail:

Harvest the above ground parts of the plant anytime of year when green or looks alive.. If you crack or smash the plant, it will turn black, so attempt to gather the whole stem without too much crushing.

It is simple to use a drying rack if you have one available. Make sure that the rack is placed in a location with constant air flow at 80-100°F. This should keep the plant from rotting and allow it to dry sufficiently for storage. If the plant is not allowed to dry adequately, it may rot and mold.

It may take up to a week to dry. If you live in a moist area of the country, hanging herbs to dry may not work. The herbs may look and feel dry, and then when placed in a glass container they end up molding. It is worth obtaining a food dehydrator if you live in a humid climate

When it is completely dry, handcut the dried stalks with scissors into short pieces for storage in airtight, opaque glass containers.

Important Points:

- This plant has no flowers and appears as a reed-like green stalk with black rings. Cone-like fruiting heads about 3/4 - 1 1/2 inches long at the tips of fertile, upright clumps of cylindric, green stems
- Highest amount of silicon dioxide (silica) found in any plant on Earth.
- Silica is an essential element in the human body for the growth of bones, hair, teeth, and connective tissues.
- The plant grows mostly in marshy areas and wet sand.
- Be smart about where you buy your Horsetail and make sure you are cultivating and/or harvesting the correct species!
- Dry carefully and thoroughly before storing to prevent rot and molding of plant material.
- Plant propagates using spores and rhizomes. Can flourish well. --Recommended dosage for strengthening Teeth: 1 teaspoon 5-10 days a month.

LINKS FOR TIPS ON ORGANIC, PESTICIDE FREE GARDENING:

Links from www.mountainroseherbs.com

Organic and Pesticide Free Resources

- Organic Consumers Association <http://www.organicconsumers.org/>
(Protecting organic standards for the consumer)
- Pesticide Action Network <http://www.panna.org/>
(A necessary organization that will help you stay informed concerning pesticide issues)
- Organic- It's Worth It <http://www.organicitsworthit.org/>
(A resource guide for organic living)
- NCAP (Northwest Coalition For Alternatives To Pesticides)
<http://www.pesticide.org>
(A fabulous organization offering pesticide free alternatives for the public)

References:

<http://medherb.com/Therapeutics/Male - Finesse in Herbal Prescribing .htm>

The Earthwise Herbal: A Complete Guide to Old World Medicinal Plants by Matthew Wood (pg 244-247).

Botany in a Day: Thomas J. Elpel's Herbal Field Guide to Plant Families, 4th Ed.

<http://www.botanical.com/botanical/mgmh/h/hortai39.html>

<http://www.mountainroseherbs.com>

<http://www.henriettesherbal.com/eclectic/kings/equisetum.html>

<http://www.animacenter.org/horsetail.html>

<http://www.bonap.org/WidespreadThoroughlyDistributed.html> (for map)

<http://kentsimmons.uwinnipeg.ca/2153/lb5pg1.htm>

Ryan Drum

NPIN

<http://www.rook.org/earl/bwca/nature/ferns/equisetum-WIP.html>

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