Astragalus membranaceus

January 2016

Natural Herbal Living

Magazine, Herb Box, and Herbal Education Resources
Astragalus is a traditional Chinese herb that has become popular over the last few years. It is a mild adaptogen, and a potent immunomodulator, along with so much more.

Astragalus is in the Fabaceae (pea) family and is a common vetch in Asia. There are many vetches around the world that are used medicinally and as a food. Astragalus is among those.

Although it is found in many herbals, you will find this herb even more commonly as a daily food, eaten to help maintain and improve health over a long period of time. Traditionally, astragalus is thought to be good for just about anyone, from small children to elders, and everyone in between. It is well researched, and has over 5000 years of documented use in Traditional Chinese Medicine. This is one herb that I don’t hesitate to share with the world.

I chose astragalus for the wintertime, not because it is grown or harvested this time of year, but because I find people need a good amount of immune support in the winter. Between the lack of natural vitamin D, the very close quarters with other humans, general nutrient deficiencies that come along with eating too much holiday foods (mainly sugar), and not enough micronutrients like zinc, magnesium, and vitamins, we are susceptible to more viral infections during the winter months. Astragalus is a good ally to help us balance the immune system and support it in working more efficiently.

So please enjoy Astragalus, our good friend, and January herb of the month.

Green Blessings,

- Amanda
Table of Contents

Astragalus Herbal Monograph 4
History of Astragalus 15
Tasty Astragalus for Children’s Health 21
The Miraculous Nature of Astragalus 27
Astragalus Stress Soother Treats 36
References 39
Glossary of Herbalism 43
Disclaimer 53
Author Bios 54
Astragalus Herbal Monograph

Nina Judith Katz

**Latin Name:** *Astragalus membranaceus*

**Other names:** Milk vetch, huang qi, tragacanth

**Part Used:** root

**Chemical Constituents:** amino acids, ash, essential fatty acids, fiber, flavonoids, glycosides, iron, magnesium, polysaccharides, saponins, silicon, zinc

**Actions:** tonic, adaptogen, antibacterial, anti-inflammatory, antioxidant, astringent, diuretic, hemostatic, respiratory, cardiac, hypotensive, antipyretic, anticancer, antiaging, immunomodulant, immunostimulant

**Energetics:** slightly warming, sweet, yang
Affinities/Tropism: Spleen and Lung meridians; immune system; spleen, lungs, heart, liver, kidneys

Family: Fabaceae

Astragalus in Traditional Chinese Medicine

Astragalus has been used in Traditional Chinese Medicine (TCM) since time immemorial; it is among the herbs mentioned in Shennong’s *Materia Medica*, said to date back 4500 years or more. There are different subspecies found in China, Korea, and Japan, but their uses are fundamentally the same.

In TCM, astragalus is used as a tonic to increase qi, generally strengthen the body, and treat chronic illness by strengthening core energy and the immune system. More specifically, it is used to strengthen the *weiqi*, the protective layer of qi understood as the border between the qi body and the physical body, and as part of the energetic immune system. As such, astragalus helps regulate sweating. It is generally warming and helps to build yang. Because of its general strengthening capacity, it aids in the recovery from excess bleeding, including after childbirth.¹,²

Astragalus also tonifies the Spleen meridian, especially in conditions of deficiency, marked by pallor, frequent or chronic fatigue, lethargy, weak limbs, loss of appetite, or diarrhea, and astragalus can help with all of these problems. TCM associates the Spleen meridian with digestion, the muscles, circulation, and keeping things in their proper places within the body. Chinese medicine regards prolapse as a failure of the Spleen qi to hold things in their proper places. Spleen weakness also causes the
energetic state of internal dampness, indicated by phlegm, loose stools or diarrhea, edema, distention, weight gain, or lethargy. As a Spleen meridian tonic, astragalus treats prolapse, edema, and energetic dampness, numbness, and also generally strengthens the muscles, posture, digestion, and metabolism. Astragalus also treats complications in recovery from stroke when they are associated with blood stagnation and qi deficiency. In addition, TCM also uses astragalus as a diuretic and to lower blood pressure and aid in tissue repair.\textsuperscript{1,2,3,4}

As a Lung meridian tonic, it helps people getting frequent colds, and treats Lung deficiency problems, which may include wheezing, shortness of breath, and other respiratory problems. The Lung meridian also governs the skin, and astragalus is traditionally used for skin problems that aren't healing properly, such as chronic boils, sores, abscesses, ulcerations, wounds, and bruises that won't heal. If there is puss inside a sore that hasn't released, astragalus can help it drain.\textsuperscript{1,2,3,4}

In addition, TCM uses astragalus for palpitations, chronic nephritis, and urinary incontinence. They also often include astragalus in herbal formulas as a gentle stimulant to enhance the action of the primary herbs in the formula. The most frequent use of astragalus, however, is to address serious chronic or deep-rooted illness by strengthening the immune system and the core energy of the body.\textsuperscript{2,4}

**Astragalus in Western Traditions**
Interestingly, the first century C.E. Western botanist and physician Dioscorides used astragalus in much the same ways as the TCM herbalists. Dioscorides wrote:

Astragalus is a small little shrub on the ground, similar to chickpea in the leaves and sprigs. The little leaves are purple, and the root lies underneath—round, of a good amount, similar to the radish, with strong, black, hard growths folded one within another like horns—pleasantly astringent to the taste. It grows in windy, shady and snowy places, and in great abundance in Memphis, Arcadia. A decoction of the root (taken as a drink in wine) stops flowing bowels and induces urine. It is good (similarly) dried into powder and sprinkled on old ulcers, and it staunches blood. It is pounded with difficulty because of the solidity of it. It is also called chamaeyce, onyx, or gatales, the Romans say pinus trivius, as well as ficus terrae, and some call it glacula, scene talum, or nonaria.

Pliny echos this description, but also adds, “vis ei ad spissanda corpora,” which translates to, “Its strength lies in building up the body.”

Spissanda can mean thickening, condensing, crowding, or making full. His idea seems to echo the TCM idea that astragalus generally strengthens the body, core energy, and musculature. Pliny also gives it as a vulnerary. Despite Dioscorides account of the Roman name for it, Pliny uses the name astragalus, not pinus trivius, (Diana's sacred pine) or ficus terrae (earth fig).

Related species, Astragalus gummifer and Astragalus verus, are used in Western herbal traditions for their gum, tragacanth. In the British Pharmaceutical Index of 1911, tragacanth from Astragalus gummifer is mentioned mainly as an emulsifying agent, used for example, to hold the ingredients in cough drops in suspension. Cook's Dispensatory gives verus as a mucilage for soothing
This species of astragalus has been used for thousands of years in Kurdish medicine to treat ringworm, and a 2012 guinea pig study confirmed that *Astragalus verus* is effective for this.\(^5\)

Aside from this use, astragalus basically disappeared from western herbalism after Pliny and Dioscorides, and then resurfaced in the late 20\(^{th}\) century when interest in Traditional Chinese Medicine brought it to the attention of practitioners interested in integrating TCM with Western herbalism; scientific studies of astragalus have increased interest in it among Western practitioners. Turkish folk medicine uses astragalus as a vulnerary and for leukemia.\(^6\)

Astragalus strengthens several specific aspects of the immune system, including white blood cell count, interferon, and T cell activity.\(^6,7,8\) Its effects vary from the more dramatic, stimulant effect it can have on a person dealing with an acute virus to the subtler but deeper effect it has on a depleted immune system. Opinions vary on whether it is appropriate in autoimmune conditions; on the one hand, if the immune system is already too active, there is concern that astragalus could exacerbate the underlying problem, but since it is both immunomodulant and anti-inflammatory, it may be useful in autoimmune conditions.

Stephen Buhner has written extensively about the use of astragalus in both preventing and treating Lyme disease. He advises people living in areas where Lyme is endemic take astragalus year-round as a preventative measure, and that those with early- or middle-stage Lyme take it at a higher dose. Lyme is definitely an illness where it is appropriate to strengthen core energy, the immune system, and the anti-inflammatory responses. Buhner notes that it is appropriate for several specific symptoms of Lyme, including not only inflammation and
compromised immunity but also fatigue, palpitations, shortness of breath, and night sweats.\textsuperscript{8}

Scientific Studies of Astragalus

There have been many interesting studies of astragalus, most conducted in China. The flavonoids, polysaccharides, and saponins are all considered active constituents, although most studies look only at one set of compounds, not at all three, let alone the entire herb.\textsuperscript{9} Herbalists tend to favor use of the whole plant, or in this case the whole root, which allows synergy among all of the constituents, including those scientists are not yet studying. Many of the Chinese studies have looked at astragalus in a formula with one or more other herbs, but some have tried to isolate the effect of astragalus, or its presumed active constituents, alone.

Given the TCM association of astragalus with the Spleen meridian, it's interesting that one of the studies showed that astragalus flavonoids helped to restore cell proliferation to an atrophied spleen. The focus of the study was actually on the immune system; the spleen stores and filters the blood and is part of both the immune and the lymphatic systems. It looked at rats given a restricted diet to induce chronic fatigue, which led to abnormal cytokine production, compromised the immune system, and caused the spleen to atrophy. The astragalus flavonoids restored cytokine balance and led to improved physical endurance in addition to aiding the spleen.\textsuperscript{10}

A 2013 study found that two of the flavonoids from astragalus root (isoliquiritigenin and liquiritigenin) significantly reduce the
production of three of the cytokines involved in inflammation processes.¹¹

**Immunity**

A 2004 study found astragalus effective at inhibiting Herpes Simplex Virus type 1, commonly known as oral herpes.¹² Similarly, a 2013 study investigated the efficacy of astragalus polysaccharides as a treatment for avian influenza, also known as bird flu, specifically for the strain H9N2. The study found that astragalus polysaccharides enhanced the immune response generally and inhibited the virus successfully, both *in vitro* and *in vivo*.²² A 2007 study showed that saponins from a variety of astragalus native to Turkey (not *Astragalus membranaceus*, but instead *brachypterus, cephalotes, microcephalus, oleifolius*, and *trojanus*) activate T cells to produce the cytokine Interleukin 2, which has a strong immunomodulatory and antitumor effect. *Astragalus oleifolius* had the strongest effect of the species investigated. Interleukin 2 is often administered as part of cancer treatments.

As I have said, there are conflicting opinions as to whether astragalus is appropriate for autoimmune conditions. A 2010 study of astragalus polysaccharides administered to rats in whom arthritis was induced found that it improved their conditions by several measures, and concluded that its use in autoimmune conditions deserved further study.

**Cancer**

Much of the research on astragalus focuses on cancer. Astragalus supports immune function and also increases cell death for many forms of cancer. A 2007 study showed astragalus having antitumor effects on a wide variety of cancer cells, both *in vitro* and *in vivo*, and increasing the immune response to tumors.
through a few different mechanisms simultaneously. A 2013 study showed that astragalus saponins inhibit the growth of stomach cancer cells, disrupt their spreading, and increase apoptosis (programmed cell death) among them.

**Heart**
There have been several studies looking at astragalus as a heart medicine. Two weeks of use led to a reduction in sodium content in red blood cells. Another study showed improved left ventricular function after heart attacks, as well as improved antioxidant activity in red blood cells. Several studies have shown improvement in angina patients; some of these have been from herbal formulas with astragalus, but at least one reported improvement from astragalus alone. Astragalus also helped in a study of viral myocarditis.

**Liver and Kidneys**
There have also been a few studies confirming the use of astragalus to restore kidney and liver function, including for hepatitis. Here too, more studies have looked at formulas including astragalus than at astragalus alone, but there is at least one study confirming its use as a simple for each of these vital organs.

**Stroke**
Both human and rat studies indicate that Traditional Chinese Medicine is right in using astragalus to aid in recovery from stroke. The human study, which looked at acute hemorrhagic stroke, concluded that it is advisable to give stroke patients astragalus treatment starting within 24 hours of the stroke, following the protocol of the trial. Patients in the treatment group received freeze-dried extracts of astragalus; the astragalus was examined first to ensure lack of microorganisms, heavy metals,
and pesticides, following the standards of Good Manufacturing Practice (GMP). The group treated with astragalus did significantly better than the control group in several areas of self-care, such as bathing, grooming, and dressing the lower body. Although there wasn't much difference after 12 weeks, 4 weeks out, the astragalus group did much better with comprehension, social interaction, expression, problem solving, and memory.

The rat study, which looked at cerebral ischemia, divided the rats into a treatment group, a control group, and a model group; the experimenters induced stroke in both the control group and the treatment group, but not in the model group. The treatment group received 3 milliliters of astragalus intravenously per kilogram weight, and the model and control groups both received saline. The astragalus was standardized for astragaloside. After a stroke, there is a gene (c-jun N-terminal kinase 3, or jnk3) that starts to produce considerably more of an enzyme (JNK3) that signals nerve cells to self-destruct. In the model group, there was considerably more of both the messenger RNA for this gene and of the enzyme that it builds than in the control group. The treatment group also had more than the control group, but far less than in the model group. The treatment group had substantially less tissue death (infarction) than the control group, as well as better behavioral and other physiological results, although all of these markers were higher than for the model group, which hadn't experienced stroke. The researchers posit that this may be because astragalus reduces the production of JNK3.

**Stress-Induced Anxiety and Memory Loss**

Astragalus isn't generally used as a nervine, but a 2009 study done with rats found that astragalus reduced the anxiety and memory impairment characteristic of stress. The control group
showed behavioral, physiological, and chemical signs of stress. The group treated with astragalus performed better in the behavioral tests than either the control group, which was subjected to the same stress as the group receiving astragalus, or the normal group, which was not. Physiologically and chemically, the astragalus group did significantly better than the control group, but still showed some differences from the normal group that may be attributed to stress.\textsuperscript{17}

**Male Fertility**

A 1994 study found that a water extract of astragalus increased sperm motility \textit{in vitro} by 22.6\%. This is significant, because sperm motility is one of the key factors in male fertility.\textsuperscript{18}

**Using Astragalus Safely**

It is important to remember that herbs taken in medicinal doses must be regarded with concern for safety and how they may interact with pharmaceutical drugs.

**Dose**

TCM doses range from 2 to 60 grams, with most doses in the 9–20 gram range. Traditionally, the herb is often incorporated into broth or stock for soup and stews. 120 grams is considered the maximum dose. Higher doses are used for stroke patients.\textsuperscript{1,2,3} David Hoffman recommends 4–8 ml of tincture 3 times a day, or 2–4 teaspoons decocted three times a day.\textsuperscript{7} Stephen Buhner recommends 1 gram twice a day for Lyme prevention and 4 grams 4 times a day for an active infection, but he advises working up to that dose gradually.\textsuperscript{8}
Contraindications and Precautions
Most astragalus comes from China, and there are legitimate concerns about the safety of Chinese herbal products. I recommend purchasing local astragalus whenever possible or growing your own. (It's hardy to zone 4, but you need to wait 3 years before harvesting.) If you do buy from China, I suggest buying the whole root; at least you'll know that it hasn't been adulterated. In addition, look for the Good Manufacturing Practices label.

Astragalus is contraindicated in cases of qi stagnation, painful obstruction, yin deficiency with heat, and liver yang rising.²,³ Astragalus may be unadvisable during immunosuppressant treatments.⁷ It is also known to potentiate interleukin and acyclovir,⁷,⁸ and is contraindicated in late-stage Lyme infections.⁸ Additionally, astragalus is contraindicated with organ transplants, as well as with opiates and cyclophosphamide.⁸
History of Astragalus

Stephany Hoffelt

Except in ancient Chinese texts, astragalus is conspicuously scarce in historical herbal records. Despite its applications as an adaptogen herb and beneficial food, it does not appear to belong to the Ayurvedic Materia Medica. In fact, respected medical herbalist and Ayurvedic practitioner Todd Caldecott refers to astragalus by its Chinese name in his texts.¹ You don’t see much mention of *A. membranaceus* in early European herbals, either. This is most likely because vetches like astragalus are quite common all over the world, and people have always used their native vetches in a similar manner, without any need to write about it.
Greece
The Greeks utilized many members of the Astragalus genus. “Astragalos,” as it was called in Ancient Greek texts, referred to *A. glycyphylllos* (milk vetch) and the root was used to staunch “flowing bowels” and to “induce urine.” Among other members of the genus written about by Dioscorides is Tragakanthe (*A. tragacantha*), which has since assumed the common name “goats-thorn.” Dioscorides calls it a broad, woody root, used for coughs, “pain of the kidneys and erosion of the bladder.”

Britain
The Anglo Saxon manuscripts mention vetch but were most likely referring to *Vicia cracca* (cow vetch) or *Vicia sativa* (bean vetch), which are not members of the *Astragalus* genus but are still in the Fabaceae family. This seems to have continued for some time. Thomas Hill’s early treatise on English gardening refers to only the *Vicia* genus and Culpeper mentions *Vicia hirsute* (common black vetch). Many species of astragalus are referred to by the common name of milk vetch, likely due to the fact that it was known to increase the milk supply in livestock.

Various species of astragalus most notably *A. gummifer* and *A. tragacantha* have historically been slashed to obtain the gummy exudate tragacanth which is mentioned in Culpeper and the British Pharmacopeia of 1858. Gum tragacanth is used as an emulsifying agent in foods and cosmetics. It can be made at home if you have a dehydrator.
China

By far the richest history of *Astragalus membranaceus* medicinal use comes from Chinese texts, which is traced back to Emperor Shen Nong. Known as the “Divine Farmer,” Shen Nong lived around 2800 BCE. The *Shi pen* mentions that he experimented with 365 medicinal herbs during his lifetime and eventually turned green and died from an overdose.

A manuscript, known as the *Shen nung Pen Ts'ao king* is attributed to him, but it is not documented until *T’ao Hung king* wrote it down with his own addendum in approximately 500CE. This was probably based on oral healing traditions passed down through the centuries.

*Astragalus’* Chinese name *Huang Qi* translates as “yellow leader,” due to the yellow color of the root and its importance in many formulas including *Huang Qi Jian Zhong Tang* or “Astragalus Strengthening the Center Decoction.” (See recipe below.)

**Huang Qi Jian Zhong Tang Formula**

This formula is known for warming and tonifying the “center” organs—the spleen and stomach. This in turn helps to replenish
the vital life source that circulates throughout the body which is referred to in Chinese medicine as Qi. This formula is used to treat various types of ulcers, along with anemia, weakness during recovery from illness or a medical procedure, hepatitis, fevers, night sweats, gangrene, and a number of other things.

The recipe is for a decoction. Decoctions were the most common method of delivery written about in ancient Chinese manuscripts, and they continue to be the method of choice in modern Chinese hospitals.

**Ingredients**
- 9 g Huang Qi (*Radix Astragali membranacei*)
- 18 g Bai Shao (*Radix Paeoniae albae*)
- 9 g Gui Zhi (*Ramulus Cinnamomi cassiae*)
- 6 g Zhi Gan Cao Radix (*Glycyrrhizae uralensis praeparata*)
- 10 g Sheng Jiang Rhizoma (*Zingiberis officinalis recens*)
- 12 Da Zao (*Fructus Ziziphi jujubae*)
- 30 g Yi Tang (*Saccharum granorum*)

**Directions**
1. Simmer the formula above with a quart and a half of water for approximately 40-60 minutes or until the liquid is reduced by 1/3.
2. Drink this formula in 1-cup servings once or twice daily for as long as needed.

**Vegetarian Astragalus Stock**
The primary use for astragalus in Chinese culture seems to be as a medicinal and culinary tonic herb. It is a key ingredient in many
soups that are considered tonic in nature. There are many, many recipes for basic stocks, but the following recipe is my own that I have settled on after much experimentation. You can use this as stock in any soup or when cooking rice.

**Ingredients**

- 1 onion or leek, chopped
- 6 cloves of garlic
- 4 dried shitake mushrooms
- 1 Tbsp dried astragalus root
- 1 C mung bean sprouts
- 1 Tbsp gluten free tamari sauce
- 1 tsp chili oil (optional)

**Directions**

1. Put all these ingredients in a large stock pot or crock pot and cover with 15 cups of filtered water. You can also add marrow bones (roasted at 350 degrees for 15-20 minutes) or chicken livers, if you want a meat component. This probably renders the stock more blood-building.
2. Simmer until the liquid has reduced by a third, or until it looks like you have about 10 cups left.

**Honey-Fried Huang Qi**

Decoctions made from honey-fried Huang Qi are considered useful in treating Spleen and Lung Qi deficiencies and is used to address imbalances such as “chronic cases of fatigue, diarrhea, organ prolapse and all cases of deficiency.” Because I can never leave a recipe alone, I have added a couple corrigent herbs to my honey-fried Huang Qi.
**Ingredients**
- 30 g honey
- 5 g cinnamon chips
- 100 g dried astragalus, shredded root works best

**Directions**
1. Weigh out the ingredients using the metric setting on a kitchen scale.
2. Mix and stir-fry in a bit of sesame oil, enough to lightly coat the bottom of the pan.
3. Fry over low heat until the herb turns brown and is no longer sticky to the touch.
Tasty Astragalus for Children’s Health

Angela Justis

As parents and teachers, we often try to guide young ones towards kindness and sharing with others as a way to show caring. Yet sometimes, little ones unintentionally share unpleasant things like viruses and bacteria. And indeed any adult who has been in charge of caring for children knows that they oftentimes run into rampant illnesses among peers.

Lucky for us, we can turn to astragalus and employ its immune-boosting properties to help in protecting our little charges. And happily, astragalus is easy to use with children, assisting in fortifying them against all that unintentional sharing that inevitably happens. Astragalus’ very mild, pleasant taste is easily
tolerated by kids and it is simple to include in everyday cooking and tasty herbal recipes.

Herbalist Rosemary Gladstar tells us that astragalus “is sometimes called the young person’s ginseng,” acting as an adaptogen.¹ In particular, astragalus helps to strengthen the immune system, benefiting children, including those who tend to catch every cold going around.² Beyond boosting the immune system, astragalus is known by herbalists for helping to benefit and build the lungs and digestive systems, imparting strength and health, which can be helpful especially for children who experience weakness in either of these areas.³ Further, a clinical study done with 90 asthmatic children found astragalus to be helpful in preventing asthma recurrence, in particular when combined with hormonal treatment.⁴

The simplest way to incorporate astragalus into your child’s regime, for most folks, is by including it in the everyday recipes that you are already making. When cooking up a pot of rice, soup, sauce, or tea, add a few pieces of astragalus to the pot. Once the food or beverage is done simmering, remove the astragalus and serve. Your whole family will get some nice support from astragalus right on their dinner plate, and they will be none the wiser! If you want to enjoy making and sharing herbal remedies with your child and family, the recipes below create tasty child-friendly ways to offer astragalus.

**Happy Immune Honey Paste⁵**

What could be better than licking herb honey from the spoon? This yummy concoction is adapted from a Rosemary Gladstar recipe.

**Ingredients**
- 2 parts astragalus powder
• 1 part ashwagandha powder
• 1 part holy basil powder
• ½ to 1 part cinnamon powder
• ¼ part cardamom powder
• honey
• fruit concentrate or rose water (optional)

Directions
1. Place the herbs in a bowl and mix well.
2. Add honey a little bit at a time until you have created a lovely paste. You can also add fruit concentrate or rose water to loosen the honey up a bit, and for additional flavor.
3. Taste your paste and adjust the herbs as needed to make it delightfully delicious!
4. Keep your paste in a jar with a tight lid in the fridge, and enjoy a daily dose by the spoonful!

Caution: Please keep in mind that it is recommended that honey not be given to children under age one.

Additional powdered herbs to consider adding to your tasty honey paste: echinacea, shiitake mushrooms, elderberry, hawthorn, codonopsis, schizandra, and ginger.
Warming Apple Cider

Ingredients
• 3 C organic apple cider or juice
• 3 C water
• 2-4 cinnamon sticks
• ¼ to ½ inch chopped fresh ginger
• 4 to 6 sticks astragalus
• 3 Tbsp dried rose hips

Directions
1. Add all the ingredients to a nice big pot.
2. Bring to a low simmer. Let simmer for 15 to 20 minutes, or longer if you wish.
3. Strain out the herbs before serving, and enjoy sipping this tasty brew while it’s warm.

**Astragalus ‘n’ Berry Syrup**

**Ingredients**

- 15 to 20 slices astragalus root, each piece about 2–4 inches
- ¼ C elderberries
- ¼ C hawthorn berries
- ¼ C lycium berries
- peel of one orange
- 4 cinnamon sticks
- 8 C water
- 2 C honey

**Directions**

1. Add the water and herbs to a stock pot.
2. Bring to a low simmer. Simmer your brew until the water level decreases by about half.
3. Strain out the herbs.
4. Return the liquid to the pan and add honey.
5. Heat at a low temperature to very gently to melt the honey.
6. Pour your syrup into clean jars and label them, being sure to include the date you made the syrup. It will last up to 3 months if kept refrigerated.

The adult dosage is 1 big tablespoon per day to help prevent illness. It can be taken up to three times per day if there has been known exposure, or during convalescence. However, do not use
this syrup during acute illness. (Information on dosages for children is below.)

Caution: I’ve already said this, but just to be on the safe side—remember it is recommended that honey not be given to children under age one.

Children’s Dosage Guidelines for Herbal Remedies

When giving children herbs, herbalists often use one of the rules below to help guide them in choosing appropriate dosages. These guidelines are based on either the child’s weight or their age. Always keep in mind that sensitive children may respond better to lower doses of herbs, and always watch your child for any adverse reactions.

Clark’s Rule
This rule is based on the weight of the child and also assumes that the given adult dosage is for a 150-pound adult. To use this rule, take the weight of your child and divide it by 150. For example, if your child weighs 50 pounds, you would divide 50 by 150 (50/150 = .333 or 1/3) so your child would take 1/3 the adult dosage.5

Young’s Rule
This rule is based on the child’s age. To use this rule, add 12 to the child’s age then divide the age by this number. Here is an example for a 6-year-old child: 6+12 = 18, then 6/18 = .333 or ⅓ of the adult dose.6
The Miraculous Nature of Astragalus

Gina Gibbons

Related to the common field vetch that can be found across the globe, *Astragalus membranaceous* is considered one of the most effective and powerful plant tonics available to us. A humble member of the legume family, this plant grows vigorously in a tall, upright and bushy fashion with cream-colored flowers. In Chinese medicine, the land of its origin, it is believed to be a potent qi tonic—a leader in fact. This may be why its name is “Huang Qi,” which translates to “Yellow Leader” or “Yellow Superior.” (In China, yellow is considered the color of highest honor.) Chinese medicine associates the color yellow with the spleen, the Earth, and the Middle.
**Tonic Properties**

First, a little about tonics: Medical herbalist David Hoffman says in his book, *Medical Herbalism*, that they “nurture and enliven. Truly gifts of nature to a suffering humanity, these are whole plants that enliven whole human bodies. To ask how they work is to ask how life works!”

A beautiful quality that most tonics possess is that they are not overly heating or stimulating, which allows them be used for longer periods of time. Tonics generally are suitable for most constitutions.

Recently, astragalus has received a lot of attention because of its adaptogenic properties. In our Western world, wrought with stress and constant movement, we find ourselves needing tonic and adaptogenic plants such as astragalus more and more, to simply help us live healthfully in our environment and fast-paced society.

Not only is astragalus treasured for its ability to support us during stressful times, it is also a known immune-modulator. Deeply nourishing, sweet, and fragrant, astragalus is exactly what many of us need, especially during the transition from summer to the cooler winter months. This time of change, stress, travel, and kids going back to school can ultimately lead to compromised immune systems, and a lack of overall vitality.

Typically, echinacea is recommended during these times, but as a preventative, astragalus is probably much more effective. Traditionally, it has been paired with ginseng to increase vitality and the ability to resist infections. It strengthens us from the core and can protect us against pathogens, while also strengthening those with debilitating chronic weakness. It is important to also remember astragalus after sickness as well, as it can help to bring vitality back to the body. According to herbalist Guido Masé, this
wonderful root is said to “enliven the earth energy of human beings, while also helping to fortify the protective shield, which, like a sword, repels invaders attempting to assail our bodies.” Immune-modulators can also be used when the system is overactive, as it is with autoimmune issues and allergies. Astragalus also helps with adrenal function, digestion, and fatigue, plus it has anti-cancer properties.

Astragalus contains a saponin component known as astragalosides, which are credited for the herb’s deeply fortifying, immune-supporting, and tonic qualities. By affecting the hormonal regulation of the immune system through the hypothalamus, pituitary gland, and adrenals, tonics such as astragalus help to harmonize the body. Like many of the traditional Chinese tonics, it has mildly sweet flavor, which in herbalism is understood to provide a deep sense of nourishment and satisfaction to the body.

In Chinese Medicine, astragalus is classified as a support for both Yang Qi and Yin Qi, which are the two major immune-regulating components within the body. In the case of Yang Qi, it regulates what is known as Wei Qi, which is considered the protective qi, or surface, superficial energy, and could be compared to the Western concept of the immune system. It energizes and warms the exterior of the body, including the limbs, and emanates from the rhythmic motion of the lungs. Yin Chi penetrates deeper into our immune function, all the way down to the bone marrow. Astragalus nourishes the bloodstream and builds it while easing it gracefully through the vessels. It also helps to regulate the body’s fluids and aids in digestive processes.
Recovery

Another incredible quality of astragalus is its ability to support the body in recovering from the havoc cancer treatment can wreak. There is evidence, both scientific and anecdotal, that astragalus can combat the negative side-effects of chemotherapy and radiation. This is due to the active polysaccharide constituents found within the root. A decrease in the toxic-adverse effects of chemotherapy, and an elevation in the quality of life and immune function, have been documented in many clinical studies.\(^4\)

If there is a lack of appetite and general depletion following a fever or disease such as mononucleosis or even potent treatments of chemotherapy, Masé recommends to simmer slices of the root along with rice or another simple grain. A pinch of ginger can be added if that feels supportive as well.\(^1\) The simple and general nourishing nature of these medicinal foods can make a significant difference in a patient’s overall wellbeing and drive. Such foods can help bring back vitality and strength where there is depletion.

Incorporating Astragalus

So this herb is pretty great, but how do you go about consuming it? Well, for starters, don’t forget astragalus when you’re using your crockpot or simmering any tea or soup for a long time. Simply add it to your soups along with onions, garlic, and other medicinal food roots such as burdock. (See page 19 for Stephany’s favorite broth recipe.) Here are some of my favorite ways to enjoy astragalus.
Astragalus Decoction

A simple decoction can be made and drunk throughout the cold-weather months. We can start drinking it while the leaves are still on the trees to strengthen the immune system before the onslaught of viruses and bugs start their attempt to enter our system.

Ingredients

• 1 dozen six-inch slices astragalus root
• 1 gallon of water

Note: You can use powdered or shredded roots instead if that’s what you have available. In that case, place about 1 cup of the root into a muslin cloth and tie it tightly.

Directions

1. In a large pot, add 1 gallon of cool water.
2. Add the slices of astragalus or the muslin bag filled with powdered or shredded root.

3. Cover and simmer for several hours. (Add more water along the way if needed, until a thick, cloudy liquid forms.)

4. Strain the liquid or remove the muslin bag.

5. Drink by the cupful.

6. The remaining broth can be stored in the fridge for about 2-3 days. If there is a lot left, it can be frozen to prevent spoilage. Use this a base for soups, or simply reheat and drink it like tea, perhaps adding fresh ginger to enhance the flavor.

**Astragalus Nut Balls**

This recipe is a great alternative for those who prefer a quicker preparation, or for those who may not enjoy drinking their astragalus. Remember, this is just a base recipe, and any number of additional ingredients can be added, according to your taste.

**Ingredients**

- 1 C powdered astragalus root
- ½ C nut butter (almond, peanut, sunflower or tahini for example)
- ½ C raw honey
- Finely shredded coconut (optional)

**Directions**

1. In a large bowl, mix together the nut or seed butter of your choice and the honey.

2. Slowly mix in the powdered astragalus.

3. Once the desired consistency has been reached, roll the mixture into snack-sized balls and coat them in finely shredded
coconut or additional astragalus powder for easy storage. (This keeps the balls from sticking together and creating a mess.)

4. Consume two or three of these nut balls each day to help prevent upper respiratory tract infections, strengthen the lungs, and enhance immunity overall.

5. Store the remaining balls in the refrigerator or freezer.

**Astragalus Tincture**

Being a big fan of the potent extraction, simplicity, and ease that tinctures offer, I personally love astragalus in this form. I find it pairs beautifully with ashwaganda (*Withania somnifera*) and reishi (*Ganoderma lucidum* or *tsugae*), other deeply nourishing tonic herbs. This earthy formula seems to strengthen my connection to the core of the Earth and of myself, where true vitality resides.

Mindfully, I take my daily dose of these medicines and feel as if they sharpen my sword of self-protection. If I feel a cold coming on, I double my dose. I’ve found this to be an effective prevention, particularly during times of stress that often go hand in hand with inadequate sleep, menstrual flow, or sudden exposure to cold.

These allies feel comforting on a deep level, as they are going to the source of any imbalance rising to the surface in the form of physical, emotional, or spiritual symptoms. Having plants to support us during times of transition, whether it be seasonal or daily, is a blessing and a gift. It can help us cope with whatever it is we are being asked to face, regardless of the season.

**Ingredients**

- Astragalus root (preferably shredded)
- 100 proof alcohol

**Directions**
1. Fill a mason jar with the chopped astragalus root as small as you can get it to maximize surface area (and therefore extraction).

2. Cover the plant material with alcohol

3. Place a lid on the jar, covering it tightly.

4. Allow the alcohol to extract the medicinal qualities in a cool, dark place and do your best to shake it daily (while infusing it with your healthful intentions and wishes too!) for at least 4 weeks or a full moon cycle.

5. Once enough time has passed, strain out the plant material and store the liquid out of direct sunlight.

6. Start by taking a quarter teaspoon, and if you wish, increase to a teaspoon 1–2 times a day.

**Transition-Time Chai Tea Recipe**

There seems to be a distinct moment when you know the season of fall has arrived. Of course, you may feel it on the equinox itself,
or you may feel it when that first rush of bone-chilling air whirls past you. You may see it in the shift of the leaves as their final burst of life is a miraculous metamorphosis, only to be followed by their ultimate decay and return to the soil. This is the time to focus on strengthening our own internal protection and immunity. Rather than addressing issues once they have already arisen, we can take preventive measures to boost our defenses and ease our spirits into the seasonal shift.

One of my favorite rituals once the weather has turned cool is making tea that warms my insides. A personal favorite that comforts my body and soothes my psyche is the classic tea blend known as *chai*. Chai recipes vary widely, but they always heavily feature warming spices. To this, my favorite version of the ancient Indian tea blend, I have added astragalus. Many warming spices such as clove, black pepper, cinnamon, and ginger, are antiviral, and therefore offer their own cold-fighting benefits, but the addition of astragalus enhances its immune boosting properties and adds a depth and sweetness that I absolutely love.

**Ingredients**

- 4 parts chopped astragalus root
- 1 part clove
- 1 part anise seed
- 1 part cardamom
- 1 part black pepper
- 1 part cinnamon sticks or chips
- 2 parts fresh ginger

**Directions**

1. In a pot on the stove, for every heaping tablespoon of chai blend, add 1 cup of water.
2. Cover and bring to a boil.
3. Turn the heat down and let simmer on low for 45 minutes.
4. Strain the plant material out.
5. Add any type of milk and sweetener that you like, to taste.
6. Smell the powerful spices, and enjoy!
Astragalus Stress Soother Treats

Carol Little, RH

Astragalus is possibly most used in tincture form, but there are lots of other ways to take it. Sometimes, I toss a few pieces of this powerful root into to my soups or winter stews. Or, more often, I use good quality powdered root in my food. The powder is mildly sweet and can be added to smoothies, sauces, soups, or desserts. Why take a capsule, when it is so easy to add astragalus to our meals? Sometimes, I stir a couple of tablespoons into
yogurt in the morning. This adaptogen herb can fit into your day with ease!

**Astragalus Stress Soothers**

Have you heard of Zoom Balls? Years ago, my friend and mentor, Rosemary Gladstar, taught our apprenticeship class about the glorious ritual of making little balls from nut butters and herbs, with specific healing ideas in mind. Since then, I’ve made too many versions to count. These tasty little confections (i.e., tasty herbal medicine) are simple to make, and kids love them! My Stress Soother recipe below is inspired by what I learned from Rosemary. They’re not the same as her original Zoom Balls, but the idea is the same. Would you make these? They ARE tasty!

**Ingredients**

- 1 C nut or seed butter (e.g., almond, cashew, sunflower seed)
- ¼ C tahini
- ½ C local raw honey
- ¼ C carob powder
- 1 tsp cinnamon powder
- ½ C astragalus powder
- ½ C eleuthero powder
- 1 Tbsp licorice root powder

**Optional Ingredients**

- ¼ C sunflower seeds, chia, chopped walnuts, almonds, or other nuts
- Powdered spice herbs like allspice, nutmeg, or cardamom
- Coconut flakes, cocoa powder, or chopped nuts or seeds as ingredients and also for coating the finished treats

**Directions**
1. Combine the nut butters, tahini, and honey in a bowl.
2. Add the carob powder and cinnamon, plus any nuts or other flavor additions. Stir to combine thoroughly.
3. Add the remaining herbal powders.
4. Combine thoroughly.
5. Break off small chunks of the “dough” with your hands and make 1-inch balls. (This can be such a fun project with any small fry in your home!)
6. Set the formed balls aside on a plate or baking sheet covered with parchment paper.
7. Put the [optional] coconut or cocoa onto a plate.
8. Roll the balls gently in the coating material, and press lightly on each ball if you’re using coconut, to allow it to stick.
9. Place the treats in the fridge immediately and leave them for 2-3 hours to allow them to firm up.
10. Store in a container with a good lid.

These little balls are portable. They ‘travel well’ and make a delicious snack for both young and old. The magic of these beloved herbal balls? They are EASY to make and a WINNER, tasty and such a simple way to administer herbs for healing and support!

**Note:** This recipe is meant as a starting point, to offer a guideline. Change the ingredients if you like, get creative. Add other ingredients, based on what you want to achieve. This version features astragalus root powder, which is often combined with eleuthero and licorice root powders, as it is in this case. This combination is quite adaptogenic in nature (helps us rejuvenate from illness and better deal with stressful situations). Want to boost
your memory? Add some gingko or gotu kola powder! Variations are countless. One thing is for sure. This is a wonderful way to include the powers of astragalus in your day!
References

Monograph
1 Borten, Peter, DAOM, L.Ac., *Chinese Herbs: A Digital Materia Medica Compilation*, chineseherbinfo.com/chineseherbinfo.html.


10 Yao-Haur Kuo, Wei-Jern Tsai, Soy-Hwee Loke, Tian-Shung Wu, Wen-Fei Chiou, “Astragalus membranaceus flavonoids (AMF)

11 Wei Li, Y Nan Sun, Xi Tao Yan, Seo Young Yang, Sohyun Kim, Young Mi Lee, Young-Sang Koh, Young Ho Kim, “Flavonoids from *Astragalus membranaceus* and their inhibitory effects on LPS-stimulated pro-inflammatory cytokine production in bone marrow-derived dendritic cells,” *Archives of Pharmacal Research*, 37(2) (2014).


14 “Evidence for Efficacy (Human Data),” http://ip.aaas.org/tekindex.nsf/2a9c4e44835b04ea85256a7200577a64/3697cf76d3f233f185256bf30072d600/Body/M1


Pliny the Elder, *Plinii Naturalis Historiae, Pliny's Natural History* https://www.archive.org/stream/naturalhistory07plinuoft/naturalhistory07plinuoft_djvu.txt


**History**


3 Ibid, pp. 388.


Children’s Health


Miraculous Astragalus


A Glossary of Herbalism

Nina Judith Katz

Do you feel befuddled by all of those terms? Are you curious about what a menstruum might be, or a nervine? Wondering what the exact difference is between an infusion and a decoction? Or what it means to macerate? Read on; the herbalist lexicographer will reveal it all!

Adaptogen n. An herb that enhances one's ability to thrive despite stress. Eleuthero, or Siberian Ginseng (*Eleutherococcus senticosus*) is a well-known adaptogen.

<table>
<thead>
<tr>
<th>Aerial parts n. pl.</th>
<th>The parts of a plant that grow above ground. Stems, leaves, and flowers are all aerial parts, in contrast to roots and rhizomes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative n.</td>
<td>An herb that restores the body to health gradually and sustainably by strengthening one or more of the body's systems, such as the digestive or lymphatic system, or one or more of the vital organs, such as the liver or kidneys. Burdock (<em>Arctium lappa</em>) is an alternative.</td>
</tr>
<tr>
<td>Adj.</td>
<td>Restoring health gradually, as by strengthening one or more of the body's systems or vital organs.</td>
</tr>
<tr>
<td>Anthelmintic n.</td>
<td>A substance that eliminates intestinal worms.</td>
</tr>
<tr>
<td>Anthelmintic adj.</td>
<td>Being of or concerning a substance that eliminates intestinal worms.</td>
</tr>
<tr>
<td>Anti-catarrhal n.</td>
<td>A substance that reduces or slows down the production of phlegm.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>adj.</td>
<td>Being of or concerning a substance that reduces or slows down the production of phlegm.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anti-emetic n.</th>
<th>A substance that treats nausea. Ginger ((Zingiber officinale)) is anti-emetic.</th>
</tr>
</thead>
<tbody>
<tr>
<td>adj.</td>
<td>Being of or concerning a substance that treats nausea.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anti-microbial n.</th>
<th>An herb or a preparation that helps the body fight off microbial infections, whether viral, bacterial, fungal, or parasitic. Herbal anti-microbials may do this by killing the microbes directly, but more often achieve this by enhancing immune function and helping the body to fight off disease and restore balance.</th>
</tr>
</thead>
<tbody>
<tr>
<td>adj.</td>
<td>Being of or concerning an herb or a preparation that helps the body fight off microbial infections.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aperient n.</th>
<th>A gentle laxative, such as seaweed, plantain seeds ((Plantago spp.)), or ripe bananas.</th>
</tr>
</thead>
<tbody>
<tr>
<td>adj.</td>
<td>Being of or concerning a gentle laxative.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aphrodisiac n.</th>
<th>A substance that enhances sexual interest or desire.</th>
</tr>
</thead>
<tbody>
<tr>
<td>adj.</td>
<td>Being of or relating to a substance that enhances sexual interest or desire.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Astringent</td>
<td>A food, herb, or preparation that causes tissues to constrict, or draw in. Astringents help stop bleeding, diarrhea, and other conditions in which some bodily substance is flowing excessively. Some astringents, such as Wild Plantain (<em>Plantago major</em>), draw so powerfully that they can remove splinters. Causing tissues to constrict, and thereby helping to stop excessive loss of body fluids.</td>
</tr>
<tr>
<td>Bitter</td>
<td>A food, herb, or preparation that stimulates the liver and digestive organs through its bitter flavor. Dandelion (<em>Taraxacum officinale</em>) and Gentian (<em>Gentiana lutea</em>) are both bitters. Also called digestive bitter.</td>
</tr>
<tr>
<td>Carminative</td>
<td>A food, herb, or preparation that reduces the buildup or facilitates the release of intestinal gases. Cardamom (<em>Amomum spp. and Elettaria spp</em>) and Fennel (<em>Foeniculum vulgare</em>) are carminatives. Characterized as reducing the buildup or facilitating the release of intestinal gases.</td>
</tr>
<tr>
<td>Carrier Oil</td>
<td>A non-medicinal oil, such as olive or sesame oil, used to dilute an essential oil.</td>
</tr>
<tr>
<td>Catarrh</td>
<td>An inflammation of the mucous membranes resulting in an overproduction of phlegm.</td>
</tr>
<tr>
<td>Compound</td>
<td>To create a medicinal formula using two or more components. An herbal preparation consisting of two or more herbs.</td>
</tr>
</tbody>
</table>
**Compress** n. A topical preparation consisting of a cloth soaked in a liquid herbal extract, such as an infusion or decoction, and applied, usually warm or hot, to the body. A washcloth soaked in a hot ginger decoction and applied to a sore muscle is a compress.

**Decoct** v. To prepare by simmering in water, usually for at least 20 minutes. One usually decocts barks, roots, *rhizomes*, hard seeds, twigs, and nuts.

**Decoction** n. An herbal preparation made by simmering the plant parts in water, usually for at least 20 minutes.

**Demulcent** n. An herb with a smooth, slippery texture soothing to the mucous membranes, i.e. the tissues lining the respiratory and digestive tracts. Slippery elm (*Ulmus rubra*), marshmallow root (*Althaea officinalis*), and sassafras (*Sassafras albidum, Sassafras officinale*) are all demulcents.

adj. Having a smooth, slippery texture that soothes the mucous membranes.

**Diaphoretic** n. An herb or preparation that opens the pores of the skin, facilitates sweat, and thereby lowers fevers. In Chinese medicine, diaphoretics are said to “release the exterior.” Yarrow (*Achillea millefolium*) is a diaphoretic.

adj. Opening the pores, facilitating sweat, and thereby lowering fevers.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digestive n.</td>
<td>An herb, food, or preparation that promotes the healthy breakdown, assimilation, and elimination of food, as by gently stimulating the digestive tract in preparation for a meal. Dandelion (<em>Taraxacum officinale</em>) and bitter salad greens are digestives.</td>
</tr>
<tr>
<td>adj. 1</td>
<td>Concerning or being part of the bodily system responsible for the breakdown, assimilation, and elimination of food.</td>
</tr>
<tr>
<td>adj. 2</td>
<td>Promoting the healthy breakdown, assimilation, and/or elimination of food.</td>
</tr>
<tr>
<td>Diuretic n.</td>
<td>A substance that facilitates or increases urination. Diuretics can improve kidney function and treat swelling. Excessive use of diuretics can also tax the kidneys. Stinging Nettles (<em>Urtica dioica</em>), cucumbers, and coffee are all diuretics.</td>
</tr>
<tr>
<td>adj.</td>
<td>Facilitating or increasing urination.</td>
</tr>
<tr>
<td>Emmenagogue n.</td>
<td>An herb or preparation that facilitates or increases menstrual flow. Black cohosh (<em>Cimicifuga racemosa</em>) is an emmenagogue. Emmenagogues are generally contraindicated in pregnancy.</td>
</tr>
<tr>
<td>adj.</td>
<td>Facilitating or increasing menstrual flow.</td>
</tr>
<tr>
<td>Essential Oil n.</td>
<td>An oil characterized by a strong aroma, strong taste, the presence of terpines, and by vaporizing in low temperatures. Essential oils are components of many plants, and when isolated, make fairly strong medicine used primarily externally or for inhalation, and usually not safe for internal use.</td>
</tr>
</tbody>
</table>
n. 1 A preparation made by chemically removing the soluble parts of a substance into a solvent or menstruum. Herbalists often make extracts using water, alcohol, glycerin, vinegar, oil, or combinations of these. Infusions, medicinal vinegars, tinctures, decoctions, and medicinal oils are all extracts.

n. 2 A tincture.

<table>
<thead>
<tr>
<th>Extract</th>
<th>v.</th>
<th>To remove the soluble parts of a substance into a solvent or menstruum by chemical means.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Febrifuge</td>
<td>n.</td>
<td>An herb or preparation that lowers fevers. Yarrow (<em>Achillea millefolium</em>), ginger (<em>Zingiber officinale</em>), and boneset (<em>Eupatorium perfoliatum</em>) are all febrifuges.</td>
</tr>
<tr>
<td>Galactagogue</td>
<td>n.</td>
<td>A substance that increases the production or flow of milk; a remedy that aids lactation. Nettle (<em>Urtica dioica</em>) and hops (<em>Humulus lupulus</em>) are galactagogues.</td>
</tr>
<tr>
<td>Glandular</td>
<td>n.</td>
<td>A substance that treats the adrenal, thyroid, or other glands. Nettle seeds (<em>Urtica dioica</em>) are a glandular for the adrenals.</td>
</tr>
<tr>
<td>adj.</td>
<td>Relating to or treating the adrenal, thyroid, or other glands.</td>
<td></td>
</tr>
<tr>
<td>Hepatic</td>
<td>n.</td>
<td>A substance that treats the liver. Dandelion (<em>Taraxacum officinale</em>) is a hepatic.</td>
</tr>
<tr>
<td>Hypnotic</td>
<td>n.</td>
<td>An herb or preparation that induces sleep. Chamomile (<em>Matricaria recutita</em>) and valerian (<em>Valeriana officinalis</em>) are both hypnotics.</td>
</tr>
<tr>
<td>adj.</td>
<td>Inducing sleep.</td>
<td></td>
</tr>
<tr>
<td><strong>Infuse</strong>  v.</td>
<td>To prepare by steeping in water, especially hot water, straining, and squeezing the marc.</td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Infusion</strong> n.</td>
<td>A preparation made by first steeping one or more plants or plant parts in water, most often hot water, and then straining the plant material, usually while squeezing the marc. An infusion extracts the flavor, aroma, and water-soluble nutritional and medicinal constituents into the water.</td>
<td></td>
</tr>
<tr>
<td><strong>Long Infusion</strong> n.</td>
<td>An infusion that steeps for three or more hours. Long infusions often steep overnight.</td>
<td></td>
</tr>
<tr>
<td><strong>Lymphatic</strong> n.</td>
<td>A substance that stimulates the circulation of lymph or <em>tonifies</em> the vessels or organs involved in the circulation or storage of lymph.</td>
<td></td>
</tr>
<tr>
<td><strong>Macerate</strong>  v.</td>
<td>To soak a plant or plant parts in a <em>menstruum</em> so as to extract the medicinal constituents chemically.</td>
<td></td>
</tr>
<tr>
<td><strong>Marc</strong> n.</td>
<td>The plant material left after straining a preparation made by steeping, simmering, or macerating.</td>
<td></td>
</tr>
<tr>
<td><strong>Menstruum</strong> n.</td>
<td><em>(Plural, <em>menstrua</em> or <em>menstruums</em>.)</em> The solvent used to extract the medicinal and/or nutritional constituents from a plant. Water, alcohol, vinegar, and glycerin are among the more common menstrua.</td>
<td></td>
</tr>
<tr>
<td><strong>Mucilage</strong> n.</td>
<td>A thick, slippery, <em>demulcent</em> substance produced by a plant or microorganism.</td>
<td></td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Mucilaginous</td>
<td>Having or producing mucilage; <em>demulcent</em>. Okra, marshmallow root (<em>Althaea officinalis</em>), sassafras (<em>Sassafras albidum, Sassafras officinale</em>), and slippery elm (<em>Ulmus rubra</em>) are all mucilaginous.</td>
<td></td>
</tr>
<tr>
<td>Nervine</td>
<td>An herb or preparation that helps with problems traditionally associated with the nerves, such as mental health issues, insomnia, and pain.</td>
<td></td>
</tr>
<tr>
<td>Adj.</td>
<td>Helping with problems traditionally associated with the nerves, such as mental health issues, insomnia, and pain.</td>
<td></td>
</tr>
<tr>
<td>Pectoral</td>
<td>A substance that treats the lungs or the respiratory system.</td>
<td></td>
</tr>
<tr>
<td>Poultice</td>
<td>A mass of plant material or other substances, usually mashed, gnashed, moistened, or heated, and placed directly on the skin. Sometimes covered by a cloth or adhesive. A plantain (<em>Plantago spp.</em>) poultice can draw splinters out.</td>
<td></td>
</tr>
<tr>
<td>Rhizome</td>
<td>A usually horizontal stem that grows underground, is marked by nodes from which roots grow down, and branches out to produce a network of new plants growing up from the nodes.</td>
<td></td>
</tr>
<tr>
<td>Salve</td>
<td>A soothing ointment prepared from beeswax combined with oil, usually medicinal oil, and used in topical applications.</td>
<td></td>
</tr>
<tr>
<td>Short Infusion</td>
<td>An <em>infusion</em> that steeps for a relatively short period of time, usually 5-30 minutes.</td>
<td></td>
</tr>
<tr>
<td>Term</td>
<td>Abbreviation</td>
<td>Definition</td>
</tr>
<tr>
<td>------------</td>
<td>--------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Sedative</td>
<td>n.</td>
<td>A substance that calms and facilitates sleep. Valerian (<em>Valeriana officinale</em>) is a sedative.</td>
</tr>
<tr>
<td>Sedative</td>
<td>adj.</td>
<td>Calming and facilitating sleep.</td>
</tr>
<tr>
<td>Simple</td>
<td>n.</td>
<td>An herbal preparation, such as a tincture or decoction, made from one herb alone.</td>
</tr>
<tr>
<td>Simpler</td>
<td>n.</td>
<td>An herbalist who prepares and recommends primarily <em>simples</em> rather than compounds.</td>
</tr>
<tr>
<td>Spp.</td>
<td>abbr. n.pl.</td>
<td>Species. <em>Used to indicate more than one species in the same botanical family.</em> <em>Echinacea spp.</em> includes both <em>Echinacea purpurea</em> and <em>Echinacea angustifolium</em>, among other species. <em>Plantago spp.</em> includes both <em>Plantago major</em> and <em>Plantago lanceolata</em>.</td>
</tr>
<tr>
<td>Stimulant</td>
<td>n.</td>
<td>An herb or preparation that increases the activity level in an organ or body system. <em>Echinacea (Echinacea spp.)</em> is an immunostimulant; it stimulates the immune system. <em>Cayenne (Capsicum spp.)</em> is a circulatory stimulant. Rosemary is a stimulant to the nervous, digestive, and circulatory systems.</td>
</tr>
<tr>
<td>Sudorific</td>
<td>adj.</td>
<td>Increasing sweat or facilitating the release of sweat; cf. <em>diaphoretic.</em></td>
</tr>
<tr>
<td>Syrup</td>
<td>n.</td>
<td>A sweet liquid preparation, often made by adding honey or sugar to a decoction.</td>
</tr>
<tr>
<td>Tea</td>
<td>n.</td>
<td>A drink made by steeping a plant or plant parts, especially <em>Camellia sinensis.</em></td>
</tr>
<tr>
<td><strong>Tisane</strong></td>
<td>n.</td>
<td>An herbal beverage made by decoction or short infusion and not prepared from the tea plant (<em>Camellia sinensis</em>).</td>
</tr>
<tr>
<td>-----------</td>
<td>----</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Tincture</strong></td>
<td>n.</td>
<td>A preparation made by macerating one or more plants or plant parts in a <em>menstruum</em>, usually alcohol or glycerin, straining, and squeezing the <em>marc</em> in order to extract the chemical constituents into the <em>menstruum</em>.</td>
</tr>
<tr>
<td>v.</td>
<td>To prepare by <em>macerating</em> in a <em>menstruum</em>, straining, and squeezing the marc in order to extract the chemical constituents.</td>
<td></td>
</tr>
<tr>
<td><strong>Tonic</strong></td>
<td>n.</td>
<td>A substance that strengthens one or more organs or systems, or the entire organism. Stinging nettle (<em>Urtica dioica</em>) is a general tonic, as well as a specific kidney, liver, and hair tonic. Red raspberry leaf (<em>Rubus idaeus</em>) is a reproductive tonic; Mullein (<em>Verbascum thapsus</em>) is a respiratory tonic.</td>
</tr>
<tr>
<td><strong>Tonify</strong></td>
<td>v.</td>
<td>To strengthen. Nettle (<em>Urtica dioica</em>) tonifies the entire body.</td>
</tr>
<tr>
<td><strong>Volatile Oil</strong></td>
<td>n.</td>
<td>An oil characterized by volatility, or rapid vaporization at relatively low temperatures; cf. <em>essential oil</em>.</td>
</tr>
<tr>
<td><strong>Vulnerary</strong></td>
<td>n.</td>
<td>A substance that soothes and heals wounds. Comfrey (<em>Symphytum officinale</em>) is an excellent vulnerary.</td>
</tr>
<tr>
<td>adj.</td>
<td>Being or concerning a substance that soothes and heals wounds.</td>
<td></td>
</tr>
</tbody>
</table>
Disclaimer

Nothing provided by Natural Living Mamma LLC, Natural Herbal Living Magazine, or Herb Box should be considered medical advice. Nothing included here is approved by the FDA and the information provided herein is for informational purposes only. Always consult a botanically knowledgeable medical practitioner before starting any course of treatment, especially if you are pregnant, breastfeeding, on any medications, or have any health problems. Natural Living Mamma LLC is not liable for any action or inaction you take based on the information provided here.