

# Root Awakening: Fall Root Harvest for Medicine & Food

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**PLEASE READ:** *The information in this handout has not been approved by the FDA and does not in any way intend to diagnose or prescribe. Always consult with your health practitioner before taking any remedy.*

**Above this, I also recommend that you...**

1. *Research an herb in at least three good sources before ingesting it (see website for sources),*
2. *Listen to your body/intuition to determine if an herb resonates or doesn't resonate with you.*
3. *Take proper steps to ensure that any wildcrafted or cultivated plant is what you think it is, AND*
4. *Check with your pharmacist for herb-drug interactions if you take prescriptions.*

**Dig into the deep medicine of autumn** as we explore some of the most important and common herbal roots in the garden and wild. Maria will teach you harvesting and processing techniques, how to turn them into remedies, and the uses and safety concerns for various roots including dandelion, burdock, yellow dock, valerian, and ashwagandha.

## HARVESTING & PROCESSING

### Roots

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**When** ~ Most medicinal roots are harvested in fall, once the plant has begun to die back. They are sometimes also harvested in the spring before energy returns to the leaves and flowers. If the plant is a biennial, we generally harvest it in the fall of the first year or the spring of the second year—ie: once the plant has some age to it but before it gives all its energy to the second year flower (burdock, yellow dock, etc). Many perennials get stronger roots as time goes on, for example ginseng.

Be mindful, though, of slow-growing native perennial roots since they may be much older than you realize. Perhaps even older than you are! Trilliums have an estimated life span of 70 years, ginseng of 60 years, lady's slipper for 40 years. These plants do not bounce back from harvest. Is that medicine worth losing a plant that old? These native perennials deserve our respect and honor. On the other hand, weedy species—often biennials—like burdock, yellow dock, dandelion, Queen Anne's lace and blackberry roots can generally be harvested without too much concern for harming the species. Some are downright invasive. No one will mind if you hack away at a Japanese knotweed or barberry, and then covet the root for medicine.

**How** ~ Dig the root up with a garden fork, shovel, or a stick designed to help pull the dirt away from the root to unearth it. Return the soil to good condition, and if you are leaving behind tops, chop them up and spread them out – You want the land to look relatively undisturbed once you're done. Scrub your roots clean under cold water. A potato scrubber works well. Dry thoroughly with a towel, and chop it up into smaller pieces with clippers or a knife to dry or otherwise process into medicine. Some roots are impossible to break up once dry. Roots may need to be dried in a dehydrator or open oven on a low setting.

**Wildcrafting 101:** Check out my tips at <http://wintergreenbotanicals.com/virtual-herb-walk/#wildcraft>

**Recommended Books & Guides:** <http://wintergreenbotanicals.com/recommended-reading/>

But my favorites are Newcomb's, New England Wilflower Society's, and Dwelley's for wildflowers and Audubon, Peterson's, and Dwelley's for trees (and shrubs).

## SELECTED HEALING ROOTS OF AUTUMN

### **Dandelion leaf & root (*Taraxacum officinalis*)**

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Both parts of this plant have bitter flavors and slight detoxification actions, which lend themselves to digestion and liver blends. Bitter teas and foods stimulate digestion by encouraging more digestive juice production: saliva, stomach acid, enzymes, bile production, and bile excretion. They indirectly stimulate peristalsis and, thus, can be moderately helpful for constipation (indirect laxative). Both parts of the plant are also diuretic, though in different ways. This happy, persistent weed is one of our first edible greens to poke through post-winter dirt. **Use:** Spring and early summer **leaves** are bitter but delicious (more so than in fall) and make a nice addition to spring salads, stir fries, sautés, soups, and vegetable juices. Strong flavors like garlic, toasted sesame oil, lemon juice, and fresh orange juice stand up to the bitterness of the greens to create great-tasting dishes. Dandelion leaf is one of our best natural volume diuretics, meaning it makes you pee more. It is also high in potassium, important when on any diuretic because increased urination leaches potassium from the body. It is used solo or in formulas for high blood pressure, edema, and to stimulate liver and kidney detoxification. Dandelion leaf is rich in other minerals, like calcium and magnesium, which makes it a nutrient-rich choice for food and tea. It combines well with nettles, alfalfa, peppermint, spearmint, and red clover in tea—you may not want to use a lot of dandelion, though, due to its bitter flavor. Dandelion **root** is high in inulin, a type of fiber common in daisy-family plants. The root can be eaten but is usually just used in tea, providing a pleasant bitter, chocolate-y flavor to tea. It is most nutritious dried raw, but many people like to gently roast the dried chopped root. The resulting tea is similar to coffee in color and flavor. It is drunk for pleasure, to regulate blood pressure, blood sugar, liver health, edema, and arthritis and blends well with burdock, chicory root, and possibly also cinnamon bark. It may moderately reduce cholesterol by stimulating bile. It is a mild digestive stimulant and mild laxative. My teacher Michael Moore said that the inulin in dandelion, burdock, and chicory root is particularly helpful as a sodium-leeching diuretic (whereas the leaves are a volume diuretic). It appears to do this by inhibiting sodium reabsorption in the kidneys. He says that other inulin-rich roots do not work the same. Michael also used a slurry tincture (1 oz chopped fresh root in 2 oz 50-95% alcohol, blended further in the blender, left unstrained) by the spoonful for allergies. The root is strongest when harvested in autumn, after a few frosts. (Inulin levels in the root go from 2% in spring to 40% in the fall.) However, you can harvest it at any time if you are impatient. Our winter freeze increases the medicinal properties of dandelion root. In my southwestern herb class, our final field trip brought us to 10,000 feet to harvest winter-frozen dandelion. (I left them to my warm-climate classmates and headed home to NH that day.) The **flowers** are surprisingly sweet and not bitter. You can use them in cooking, baked goods, fry in tempura, or infuse them in olive oil (to use topically for muscle pain and acne, reportedly). **Cautions:** Dandelion is contraindicated in gallbladder disease, bile duct inflammation, acute GI inflammation, and intestinal blockage.

### **Burdock root (*Arctium lappa. A. minor*)**

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Burdock can be used somewhat similarly to dandelion, tastes somewhat similar, and thus is often used in formula with it. Burdock tastes less bitter, more sweet, and slightly woody. It is delicious sliced thinly or into matchsticks and sautéed with sesame seeds, soy sauce, and a little honey. It also makes a pleasant earthy tea. You can buy the fresh root in natural food stores, or in Asian markets as “gobo.” You can also harvest the root of this common weed in the spring of the second year or the fall of the first year plant. Be warned, it’s a bugger to dig. Like dandelion root, burdock is diuretic and a mild liver and digestive stimulant. It is often used for skin conditions including chronic skin eruptions, acne, psoriasis, eczema, boils, and sties. Many herbalists and systems of traditional medicine consider the liver and the skin to be closely linked; work on the liver, and skin conditions are expected to first break out and then clear up. Burdock root is also used to regulate lymphatic fluid (the “back alley” garbage system for sorting toxins,

immune system trash, and fat) and improve excretion of toxins. Burdock flower essence is used for “grounded release” and for cleansing on physical and emotional/etheric levels to rejuvenate the brain, clear distractions, and help you focus and be more centered. It’s also used for people who have a bristly outlook on life and to support those with addictions (food, drugs, alcohol...) because it supports patience, kindness, and endurance. **Cautions:** Not recommended during pregnancy. To be safe, it should not be used in gallbladder disease or bile duct obstruction unless under the guidance of a practitioner.

### **Yellow Dock (*Rumex crispus*, *R. obtusifolius*)**

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This is another common weed. You’ll find it in yards, along roads, and in abandoned fields. The biennial produces curly leaves similar to horseradish (broad dock, a potential substitute, has wider leaves like burdock). In its second year, it puts up seedy flowers that turn to rust as summer goes on – this will help you find stands and can also serve as a reminder for its iron-rich purposes. The root will have a yellow hue. **Use:** This bitter, yellow root is a digestion and bowel stimulant. It has both laxative and binding properties, and is often recommended as a gentler laxative than senna or cascara. Herbalists also use it for the liver, including improved fat absorption, chronic skin conditions like acne, and liver congestion. It has a modest amount of iron and also may improve the release of stored iron from the tissues into the bloodstream. While you could drink it in tea (1 tsp per cup hot water, simmered, or in a blend), it’s rather nasty tasting. Most people prefer liquid extract (tincture) or pill. Vinegar and syrups may be better for the iron-rich uses. It blends well with blackstrap molasses to improve the flavor and increase the iron/nutrient content. **Cautions:** High doses can cause rebound constipation due to the herb’s tannin content. It is rich in oxalates; do not use if you have a history of oxalate kidney stones unless under the guidance of a practitioner.

### **Valerian (*Valeriana officinalis*)**

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Valerian is a classic sleep herb, well known in natural food store supplement aisles, but you may not realize that it’s a lovely and easy-to-grow herb for the garden. The flowers stretch tall (sometimes taller than me!) into white-pinkish-purpleish clusters of tiny flowers with a sweet, pleasant floral scent – quite unlike the stinky feet/skunky scent of the roots. Valerian is easy to grow almost everywhere but prefers rich soil in a sunny spot with moderate moisture. It self seeds RAMPANTLY in good soil, so you may want to purposely plant it poorer soil to keep it in check... though those babies are easy for making medicine. Be sure to plant valerian towards the back of a bed because it gets so tall. This fragrant garden heliotrope has stinky, earthy, sweet-smelling roots that are harvested in the spring or fall. It is one of our more useful sedative herbs, best known for insomnia. The research is limited, and many of the studies combine it with other herbs like hops and lemon balm. However, herbalists rely on it as a muscle relaxer and CNS depressant. It is used in restlessness, emotional stress, pain, insomnia, anxiety, nervous palpitations, nervous irritation, cardiovascular arrhythmias, high blood pressure, ADHD, menstrual cramps, sciatica, jerking, backache, and shingles. Its action seems to be partly due to volatile oils and alkaloids, as well as amino acids like arginine, GABA, glutamine, and tyrosine. I find it most useful as a simple for insomnia. It appears to work better for people who are slight, nervous, and tend to be cold. General herb doses. Teaspoon to tablespoon doses for extreme pain. The flower essence is used for deep peace, sleep, anxiety, and pain and is more broadly useful (less tweaky) than the root extract with no concern for drug RX. Try It As a fresh root tincture primarily, or flower essence. Maybe as a tea (stinky and not as effective once dried). The hydrosol sometimes works, sometimes doesn’t. **Cautions:** Larger, hot people may find it agitating rather than relaxing. Not recommended to combine with sedative drugs, barbiturates, antidepressants/mood meds, pain meds (ie: sedative types), or alcohol. May aggravate depression.

## **Ashwagandha (*Withania somnifera*)**

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Popular in Ayurvedic (Indian) medicine for a variety of conditions. Considered a “relaxing adaptogen” meaning that it appears to both relax and improve energy, but not stimulate (as ginseng might). Useful for anxiety and nervousness. It is a nervine and nervous system restorative, particularly useful when recuperating from PTSD and trauma. Strengthens immunity and vital force. It is believed that if you take it daily for a year, you’ll feel stronger and have greater vitality for the next 10 years. It may increase thyroid production and help balance hypothyroid conditions. have found it reduces the immunosuppressive action of some drugs and restores immune health more quickly. Often used in formulas for people with chronic pain, perhaps due to anti-inflammatory action. May be helpful in fatigue-related disorders as well as nervous system-based diseases like multiple sclerosis, chronic fatigue, Lyme, and fibromyalgia. Appears to improve the action of reproductive, nervous, respiratory, and digestive systems. Appears to be helpful for bacterial or fungal infections, as well as inflammation. It is often called “the Ginseng of India” though it is not considered as stimulating as ginseng. (It is also in the nightshade family, not the aralia/ginseng family.) Research supports its use for male fertility, improving testosterone levels and sperm health, as well as libido, anti-stress, and possibly even weight loss in women. It is traditionally prepared in ghee (clarified butter) or decocted in milk, which may help drive it to the fat-rich nervous system and brain; however, western herbalists tend to use it as tea, tincture, capsules. You can use typical doses or even bump it up to 1/2 teaspoon of powder, a teaspoon of tincture per dose. If you would like to cultivate ashwagandha, treat it as an annual or try bringing it indoors in winter. Its preferred growing conditions are similar to its relative tomato: hot sunny weather, some watering but good drainage, good-quality soil. Harvest the roots after one year in the fall if you’re not bringing it in.

**Cautions:** Generally considered to be safe; however, it is not recommended during pregnancy. Be cautious if you’re sensitive and react to nightshades (potatoes, tomatoes, peppers) as this is in that family. Also be cautious in hyperthyroid disease or when combining this with hypothyroid meds like Synthroid as overstimulation of the thyroid may occur.

### **“Bitter Berberines”:**

## **Goldenseal (*Hydrastis canadensis*), Goldthread (*Coptis*), & Barberry (*Berberis*)**

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These herbs come from different plant families but have a common primary constituent: berberine. This bright yellow alkaloid concentrates in the roots and has potent antimicrobial and astringent properties. It is the basis for goldenseal’s claim to fame as an herbal antibiotic (along with goldenseal’s similar constituent, hydrastine, but this is controversial). All the herbs are used for boggy, inflamed membranes and bacterial, fungal, and protozoa infections. Small doses are used to stimulate and tonify tissues, especially in the GI. High doses are used for infection, internally and topically. In the case of allergies, these herbs help to dry up weepy eyes and nasal passages. They may help with fungal and bacterial infections behind sinusitis. They can also be added to a neti pot wash for allergies and sinusitis, or as an eye wash for conjunctivitis. Really, berberine is not a systemic antibiotic but instead is antimicrobial on contact. This includes use in the nasal passages (neti or nasal spray), eyes (eye wash), skin (topical wash or infused oil), and most famously for the digestive tract (tea, tincture, or capsule). When taken internally, it also has bitter, alterative, and digestion-enhancing effects, as well as almost immediate drying, almost anti-histamine like effects. Most commonly taken as capsules or tincture. Tea is possible but will taste disgusting. Berberine is BITTER, stains yellow, and is hard to disguise. A squirt of glycerine or regular tincture can be put into a neti pot. Choose organic when buying goldenseal or cultivate your own because it is an ecologically threatened plant. Our local *Coptis*, goldthread, is also at risk of being over harvested; but Chinese *Coptis* is a larger, cultivated plant from Asia. Oregon grape (*Mahonia*) and barberry (*Berberis*) are less threatened sources of berberine. Barberry is the only invasive one of the bunch, growing in thorny dense thickets with small, oval berries apparent in fall and winter, small creamy white flowers in spring. The berries are popular amongst birds, who have done well to spread this out-of-control landscape plant. It is just becoming problematic in New Hampshire but is rampant in areas of Massachusetts. Don’t feel bad digging up this plant, but please do not plant it in your yard. Watch for and

remove spring seedlings, which have a unique heart/spade-shaped leaf and yellow root. For all of these plants, the roots are the primary part used but leaves and stems hold similar, albeit weaker, properties. Leaves will extract better in oil than roots. **Cautions:** These plants may lower blood sugar and blood pressure, particularly in high doses. Do not use berberine-rich plants while pregnancy or nursing. Long-term use of berberine is controversial due to its antibacterial effect. For ecological/ethical reasons, use only organic cultivated goldenseal (which when properly priced can cost \$100-300/lb) or seek out invasive stands of barberry. Goldenseal is the preferred berberine plant for allergy and immune complaints, but the others are worth using as substitutes.

## Extras...

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### Immune:

- **Astragalus Root** (*Astragalus membranaceus*): This is a great long-term immune tonic for auto-immune disease and any time you want to prevent infection. It's not recommended in an acute infection. Wait for four years before harvesting the root. It's great in tea and soups as well as tinctures, capsules, etc., and it blends well with medicinal mushrooms, adaptogens, and spices. CULTIVATED
- **Echinacea** (*Echinacea* spp): Best as needed when the immune system needs a boost – at the first sign of an infection, when you're feeling run down, or you know you're at a greater likelihood of infection (i.e.: traveling, your spouse or kids are sick). Taken in relatively high doses of 1/2 to 1 teaspoon of fresh root or fresh whole plant tincture every hour or so until the symptoms subside. It's also a good lymph tonic and helps with "battle cleanup" of infections and is traditionally used for bacterial infections and sepsis. Best as a fresh root tincture or secondarily as a fresh whole plant tincture, though other preparations like teas and capsules are available and may still help. CULTIVATED
- **Mullein Leaves & Root** (*Verbascum thapsus*): All parts of mullein (a biennial) hold value, and in autumn you can still find happy leaves from first year plants. Be sure that you do not have lamb's ear, comfrey, or foxglove leaves, which can bear some resemblance (foxglove being deadly!). The leaf is wonderful for dry, irritated lungs and coughs, impending respiratory infections, etc., and it blends well with elecampane, cherry bark, and other lung remedies. The root is a lesser-known remedy but can be harvested (leafy first year plants). I do not have personal experience with the root yet, but it has a reputation for toning bladder tissue, healing Bells Palsy, and moistening and lubricating the joints. More details at <http://www.herbcraft.org/mullein.html> WILD or CULTIVATED
- **Elecampane Root** (*Inula helenium*): Balsam-ous expectorant for many lung concerns and digestion CULTIVATED
- **Garlic & Onions Bulbs** (*Allium* spp): Pungent antimicrobial roots for the immune system and cardiovascular tonics CULTIVATED or Sensitive WILD
- **Horseradish Root** (*Armoracia rusticana*): Pungent antimicrobial and circulatory stimulant for digestion and sinus drainage CULTIVATED/Somewhat Invasive

### Liver:

- **Burdock Root** (*Arctium lappa. A. minor*), like dandelion, stimulates detoxification to help the liver, lymph, and kidneys cleanse the body, blood, and skin. Also diuretic, which helps with water retention and possibly also high blood pressure and kidney issues. Burdock has a sweeter, more pleasant flavor than dandelion and more of an affinity for moving lymph. It is a nice tonic and food herb; you may even find it fresh in natural food stores (as burdock) and Asian markets (gobo) in the produce aisle. WILD
- **Chicory Root** (*Cichorium intybus*): Similar to but weaker than dandelion & burdock. Roasted and used as a coffee substitute. WILD/Somewhat Invasive
- **Blackberry Root** (*Rubus* spp): Astringent for diarrhea and in formula chronic, weepy/boggy GI issues. WILD

## Pain, Relaxation & Connective Tissue

- **Japanese Knotweed Root** (*Polygonum cuspidatum*) This “new” herb, may be helpful for Lyme, acting as an anti-inflammatory and immune modulator. It’s very high in the antioxidant resveratrol. WILD/Invasive
- **Solomon’s Seal Root** (*Polygonatum biflorum* and other species), Helpful for muscular-skeletal problems with ligaments, tendons, muscle injury, etc. Learn more at <http://www.herbcraft.org/solseal.html> WILD/Semi-sensitive & CULTIVATED/Easy to Grow
- **Valerian Root** (*Valeriana officinalis*): Aromatic sedative for sleep, CNS sedation, skeletal muscle relaxation CULTIVATED/Somewhat Invasive
- **Cramp & Viburnum Bark** (*Viburnum opulus*) & *Viburnum* spp: Smooth muscle relaxer for uterine muscles, cramps. Spring or fall. WILD or CULTIVATED

## Skin & Gut

- **Comfrey Root** (*Symphytum officinale*, *Sx uplandicum*): This controversial but easy-to-grow garden plant is slimy, soothing, and promotes rapid healing of tissue and bones when applied internally or externally. Unfortunately, it can be over-eager in its healing – it doesn’t fight infection and could seal one in, it may encourage proud flesh scars, and you would want to be sure a bone was set properly before taking comfrey. But, the greatest controversy lies in the toxic pyrrolizidine alkaloids (PAs) that can be present in all species and parts of comfrey. In general, there will be more pesky PAs as you go from old leaves to young leaves to roots, and these PAs pose a rare but real risk of cumulative liver damage. I would not use roots internally ever, but they are a valuable topical remedy. The healing allantoin is best extracted with heat and water, but you can use a decoction tincture method to capture it in a preserved form to use directly on the skin or mix into creams and liniments. CULTIVATED/Somewhat Invasive
- **Marshmallow Root** (*Althea officinalis*): Think of this mucilaginous (slimy) root for soothing mucus membranes and irritated tissue anywhere inside or outside of the body, especially the GI tract, skin, and throat. CULTIVATED or WILD

## Urinary

- **Joe Pye Weed/Gravel Root** (*Eupatorium purpureum* & *maculatum*): Traditionally used for cystitis & UT/prostate irritability, subacute calcium/oxalate urinary gravel (with caution since it may not work!) WILD

“At risk” & “to watch” plants to be mindful of: Goldenseal, black cohosh, trillium, lady’s slipper, ginseng, spikenard, bloodroot, blue cohosh, wild echinacea (not *purpurea*), gentian, goldthread, mayapple, stone root, partridgeberry... For more, visit [www.unitedplantsavers.org](http://www.unitedplantsavers.org). Cultivation, [www.newfs.org](http://www.newfs.org).

## Basic Herbal Medicine Techniques

### Drying & Storing Your Herbs

It is generally not necessary to clean leaves and flowers before drying—simply pick off icky parts. (If necessary wash gently in cold water, put through the salad spinner, and towel/air dry.) Roots should be scrubbed with a potato scrubber. They may be chopped for better drying. On warm, sunny days, loosely place the herb in a brown paper bag, fold shut, and leave in the car for 1 or more days until dry (check daily). Keep in mind that it will be more difficult

and will take longer to dry herbs this way in fall. A dehydrator may work better or hanging herbs near the woodstove (or someplace warm and dry). Roots and berries may dry better in a dehydrator or on a cookie sheet in the oven on the lowest setting. Store dried herbs in glass in a cool, dark, dry place. Leaves and flowers should last at least 6 to 12 months. Berries, barks, and especially roots may last up to a couple years.

### **Herbal Teas: Infusion (Steep)**

The infusion method is best for delicate parts of a plant, leaves and flowers. When you make tea from a teabag, you're making an infusion. Use 1 tsp to 1 Tbsp of dried herb per cup of water. Cover and let steep for 5-20 minutes, strain, and drink. Larger amounts of herb and longer steeping times make stronger tasting teas, less herb and time makes a lighter tea.

### **Herbal Teas: Decoction (Simmer)**

The decoction method is best for harder parts of herbs, roots, bark and seeds. These parts of the plant often make a weak tea if only allowed to infuse; simmering/decocting gets their properties out faster. Use 1 tsp to 1 Tbsp of dried herb per cup of water. Simmer for 5 to 20 minutes, strain, and drink. Larger amounts of herb and longer steeping times make stronger tasting teas, less herb and time makes a lighter tea.

### **Herbal Honey – Hot Process**

Chop up your fresh or dry herb. If the herb is very juicy, you may want to wilt the herb in a hot location (out of direct sun) for a day. Per 1/2 cup of chopped herb (volume), add 2 cups of honey (volume). Bring to a gentle boil, shut off, and let cool. Repeat at least once and up to 3 times each day for 3 days. After the last heating, pour the warm mixture through a strainer and into jars. This works well for tasty and aromatic herbs, such as lemon balm, anise hyssop or mint, as well as those used as expectorants or cough/cold remedies such as bee balm, thyme, ginger, fresh spring pine branches. Should be shelf stable for up to one year. Watery honeys will go bad more quickly.

### **Herbal Honey – Cold Process**

Loosely pack your jar with chopped fresh or dry herb. Cover with honey. Let sit for about one month, and strain. You may want to warm it slightly before straining. Push the herb against the strainer with a spoon to remove as much honey as possible. Should keep for about one year on the shelf. Watery honeys will go bad more quickly.

### **Fresh Herb Tincture (1:2, 40-50 or 95% alc)**

Chop up fresh herbs or roots, and stuff them in a mason jar until you can't fit any more. Fill the

jar to the brim with whole grain alcohol or high proof vodka or brandy. A day later, top the jar off again. Leave the jar in a dark place for one month or more. Strain it out with a fine mesh strainer and muslin or cheesecloth to squeeze out the last bit. Most herbs do well with a fresh tincture: lemon balm, echinacea, valerian... Should keep for up to 10 years on the shelf.

### **Dry Herb Tincture (1:5, 40-50% alcohol)**

Powder your herb in a food processor if it isn't already in powder form. Per 1 oz (weight on a kitchen scale) of herb, add 5 ounces of 80 or 100 proof vodka or brandy. (Do NOT use whole grain alcohol unless you dilute it with distilled water.) Combine your ingredients in a mason jar and shake your mixture as often as possible, aiming for 2xs/day. Let sit a month or more, then strain the mixture with cheesecloth, then again through a coffee filter-lined strainer. This is most often used for herbs that are primarily available dry: cinnamon, chocolate, Chinese herbs. Cherry bark should only be used dry (semi-toxic fresh). Should keep for up to 10 years on the shelf.

### **Decoction Tincture Method**

This is a variation on a dry tincture. Some herbs, especially roots, extract better with heat (ginseng family), others do better with more water ("slimmers" like comfrey root – for topical use - and high polysaccharide herbs and mushrooms). Simmer your roots for 1-3 hours in a little water. When done, pour the hot mixture into a mason jar and add alcohol, cap, and let sit (macerate) for at least 1 month, shaking daily (once it has cooled). Ultimately you'll want at least 30% alcohol to prevent your formula from growing mold and bacteria. Keep this in your measurements. For example, per 1 ounce herb (weight), simmer in 3 ounces of water, then add 2 ounces of whole grain alcohol. Or, per 1 ounce herb (weight), simmer in 1 ounces of water, then add 4 ounces of high proof vodka. Should keep for up to 10 years on the shelf.

### **Glycerite - Two Methods**

Glycerine is a popular "solvent" for herbs that is alcohol free and incredibly sweet yet sugar/carb free. Vegetable glycerine is often derived from soy or coconut. It's not quite as good of a

solvent and has a shorter shelf life than alcohol extracts. If exposed to contaminants, it could get funky, too.

- **Simmered Still Glycerite:** Learned this cool method from Steven Horne. Stuff your herbs in a mason jar as you would a regular tincture (1:2 fresh or 1:5 dry) and cover it with 70% glycerine 30% water except leave some headspace in jar. Gently screw on a canning lid, submerge it in a pot of cold water, bring it to a simmer and simmer for 20 minutes or up to a few hours. Remove from heat, let cool, remove from the water, then strain it out. Dose is 1 ml to 1 teaspoon.
- **Standard Glycerite:** Simply use 100% or 70% glycerine and make your extract as you would a tincture.

#### **Herbal Vinegar (alcohol-free)**

Use about the same basic technique as a fresh or dry tincture, but use vinegar instead. Plastic cap! Vinegar eats metal. Should keep for up 2 years on the shelf.

#### **Herbal Cordial**

First you'll generally need to make simple syrup (simmer 2 cups sugar with 1 cup water until dissolved), but you can also substitute maple syrup or honey. Loosely fill your jar with fresh plant and/or fruit – or fill 1/3 to 1/2 way if using dry material. Cover with equal parts sweetener and really good quality vodka. Shake and taste daily. Strain when it tastes good, which could be just a few days or a month or more.

#### **Combo Methods**

Feel free to combine half honey with half another solvent like vinegar or alcohol. The method would be the same as a cold process honey, vinegar, or tincture (keeping in mind the plastic cap if using vinegar). Oxymels (vinegar and honey) make a nice tonic, and combining alcohol and honey is like crossing a syrup, elixir, and cordial.

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Visit the Links page of [www.WintergreenBotanicals.com](http://www.WintergreenBotanicals.com) for Local & Online sources for *herbs, supplies, informative articles... upcoming classes, consults, and to buy my book!*

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## Quick Guide to Common Wild Medicinals in New Hampshire

<b>Antioxidant Fruits</b>	<b>Mild Astringents</b>	<b>Digestion</b>	Goldthread Rt/Lf
Autumn Olives	<b>Uterine &amp; GI Tonic</b>	Artemisia	Barberry Rt/Lf/Twg
Blackberries	Bidens spp Herb	(w/caution)	Ground Ivy Lf
Blueberries	Cinquefoil Leaf	Blue Flag	Lobelia (w/caution)
Cranberries	Purple Loosestrife	(w/caution)	Hemlock Tree
Dewberries	Red Raspberry Leaf	Malva/Marshmallow	Mullein Lf/Flwr
Elderberries (cooked)	ROSE Petals & Leaves	Pineapple Weed	White Pine
Grapes	Strawberry Leaf	Wild Mint	Needles/Resin
Hawthorn Berries	(Partridgeberry)		Usnea Lichen
Raspberries		<b>Wound/Skin</b>	
Rosehips	<b>Strong Astringents</b>	<b>Healers</b>	<b>Heart Tonic</b>
Strawberries	<b>Diarrhea &amp; Topical</b>	Chickweed	Hawthorn
Serviceberries	Blackberry Root	Cleavers	Berry/Lf/Flwr
	Canadian Fleabane	Elder Lf (topical/bruises)	Dandelion Lf/Root
<b>Nutritious</b>	Pearly Everlasting	Goldthread Rt/Lf	Yarrow Lf/Flwr
See "Antioxidant	White Oak Bk(strong!)	Jewelweed (poisonivy)	
Fruits"	Witch Hazel (tpcl)	Plantain	
Dandelion Leaf		Alder Leaf & Bark	<b>Blood Sugar</b>
Horsetail	<b>Liver &amp; Lymph</b>	Self-Heal	<b>Balance</b>
Lambsquarters	<b>Tonic/Detox</b>	St. John's Wort	Blueberries & Lf
Purslane	Alder Bark/Catkin/Twig	Flwr/Bud	
Red Clover Flowers	Artemisia (w/caution)	Sweet Fern (poison ivy)	<b>Mood/Relax</b>
Sheep & Wood	Burdock Root		Aralia spp
Sorrel	Chicory Root	<b>Antifungal/bacterial</b>	Root/Berry
Stinging Nettle Leaf	Cleavers Greens	<i>Topical &amp; internal</i>	Blue Vervain
	Dandelion Rt/Lf	Goldthread Lf/Rt	Leaf/Flwr
	Sassafras Root/Lf	Barberry Lf/Rt/Twg	Skullcap Leaf
	Wild Sarsaparilla	Thuja (safest topical)	St. John's Wort
	Root	Oak Bk (safest topical)	Flwr/Bud
	Yellow Dock Root	Usnea Lichen	
<b>Tasty Tea</b>			<b>Women's Health</b>
Rose Petals	<b>Diuretic</b>	<b>Bug Repellent</b>	Partridgeberry
Red Raspberry Leaf	Dandelion Leaf	Yarrow Lf/Flw	Queen Anne's Lace
Wintergreen Leaf	Horsetail	Sweet Fern	Seed/Flower
Sassafras Root/Lf	Juniper Needle/Berry		Red Clover Flower
Wild Mint Leaf	Nettle Leaf		Red Raspberry Leaf
		<b>Diaphoretics</b>	(Trillium Root)
<b>Pain Relievers</b>	<b>Kidney/UT Support</b>	<b>(Fever)</b>	
Black Birch Bark	Joe Pye Weed	Black Elder Flwr	<b>Men's Health</b>
Bunchberry Leaves	Goldthread Rt/Lf	(dried)	Autumn Olives
(dried)	Dandelion Leaf	Boneset Lf/Flwr	Nettle Root
Elder Leaves (topical	Nettle Leaf	Yarrow Lf/Flwr	Yellow Pond Lily Rt
only)			
Wintergreen Leaves	<b>UT Infections</b>	<b>Cough Suppressant</b>	<b>Most Deadly!</b>
Solomon's Seal Root	Blueberry Leaves	Wild Cherry Bk (dry)	Amanita Mushrooms
St. John's Wort (esp	Cranberries	White Pine	False Hellebore,
topical)	Juniper		Aconite
Viburnum spp Bark	Needle/Berry	<b>Immune/Resp/Allergy</b>	Foxglove
	Uva Ursi Leaves	Aster Lf/Flwr	Poison/Water
	(Mayflower Leaves)	Alder Bk/Catkin/Twig	Hemlock
		Elderberry (cook/ dry)	
		Goldenrod Lf/Flwr	