Plant Profiles & Notes

Wild Blossoms Apothecary

Sarah Naciri
# Table of Contents

ASHWAGANDHA ................................................................. 3

ASTRAGALUS ...................................................................... 5

BURDOCK .......................................................................... 9

CALENDULA .................................................................... 13

CHICKWEED ..................................................................... 15

CLEAVERS ....................................................................... 17

COMFREY ....................................................................... 19

DANDELION ..................................................................... 21

ELEUTHERO ..................................................................... 23

FENNEL ........................................................................... 25

GOLDENROD .................................................................... 27

HOLY BASIL ..................................................................... 30

JUNIPER .......................................................................... 33

LEMON BALM .................................................................. 39

MINT ............................................................................... 41

MOTHERWORT .................................................................. 43

MUGWORT ....................................................................... 45

MULLEIN .......................................................................... 48

NETTLE ............................................................................. 51
Ashwagandha

*Adaptogen, rejuvenative, aphrodisiac, antioxidant, tonic, anti-inflammatory, sexual enhancer, antitumor, nervine, sedative, mild astringent, immune amphoteric, antispasmodic, diuretic*

**Botanical Name:** *Withania somnifera  
Family:** Solanaceae (nightshade family)

**Common Names:** Winter cherry, asgandh(Hindi)

**Part Used:** Root

**Energetics:** bitter, sweet, warm, dry

**Location/Cultivation:** Ashwagandha is native to the drier subtropical regions of India, Pakistan, Sri Lanka, and parts of Africa. Easily cultivated as an annual in temperate climates—can be planted indoors like tomatoes and then set out in a garden with well-drained soil and full sun. Roots are gathered in autumn, cleaned and dried.

**Systems:** reproductive, endocrine, muscular, nervous, respiratory

- This Ancient Ayurvedic herb is often referred to as the “Indian ginseng” as it holds a place in the Ayurvedic pharmacology similar to ginseng in Chinese medicine (yet it is far less expensive). Over 4,000 years of traditional use in India.

- The Hindi name for this plant, asgandh, refers to its horse sweat-like odor. It is believed that this herb gives users the stamina, strength, vitality and sexual energy of a stallion.

- Most adaptogens are stimulating; ashwagandha is unique in that it is a calming adaptogen. Incredible rejuvenative and soothing adaptogen used for prolonging life, stimulating the mind, and enhancing vigor.

- Enhances endocrine function, especially helpful to re-regulate the thyroid, testes and adrenal glands. Few herbs have a direct effect on the thyroid function, yet ashwagandha root was found to stimulate the thyroid (useful for hypothyroidism) in human and animal studies.

- Considered a food and tonic medicine for improving energy, memory and learning, enhancing libido, and preventing premature aging. Ashwagandha normalizes healthy whole body function when challenged by stress; supports adaptation to stress and increases resistance to disease.
- Very effective for fertility challenges, reduced levels of energy, fatigue, general debility, reduced sexual energy, nervous tension, anxiety, cloudy thinking, stress-induced insomnia and nervous exhaustion.

- Used clinically in India as part of protocols for cancer (it suppresses tumors and prevents depletion of white blood cells), chronic fatigue immune deficiency syndrome, and autoimmune diseases such as rheumatoid arthritis.

- Rich in iron; healing for iron-deficient anemia when taken as a powder in milk mixed with molasses.

- Useful for neck and back pain, restless leg syndrome, and the chronic muscle pain of fibromyalgia.

- Nourishes the brain, bones and endocrine system; regenerates hormonal system.

- Traditionally uses include malnutrition in children, paralysis, coughs, edema (accumulation of fluid), impaired cognitive function, asthma, gastric ulcers and fevers.

- Aids exhaustion, adrenal exhaustion, chronic fatigue, insomnia, arthritis and rheumatism, glandular swelling, anemia, infertility, gynecological disorders, memory loss, loss of muscular energy, tissue deficiency, multiple sclerosis, weak eyes, skin afflictions, difficulty breathing.

- Healing for all conditions marked by weakness and deficiency (in children, elderly, people debilitated by chronic diseases, as well as those suffering from overwork, lack of sleep or nervous exhaustion).

- Induces general feelings of well-being and vitality!

- In a human trial performed in India, ashwagandha wine was given to thirty patients with anxiety neurosis. Moderate improvements were noted in symptoms such as headaches, fatigue, anorexia, and irritability. Most profound improvement was noted for “nervousness.” In another clinical study, forty-six patients were given ashwagandha root powder for rheumatoid arthritis. One-quarter of the patients had complete remission, significant improvement occurred in ten patients, and eleven patients showed mild improvement.
Preparation/Dosage: With its distinct taste and odor, ashwagandha blends nicely with ginger, cinnamon, sarsaparilla, cardamom, and other spices commonly used to make chai. In India, the root is powdered and mixed with warm milk for a rejuvenating drink (milk decoction). A medicated ghee or medicated oil is also a wonderful way to consume. Tincture or capsules are convenient for modern life.

Tincture (1:5): 30–40 drops, 3 times daily
Decoction: Take ½ tsp. dried root in 8 oz. water, decoct 10 minutes, steep for 30 minutes. Tale 4 oz. three times per day.
Capsules: One 400–500 mg capsule, twice per day.

Safety: Use cautiously if you are sensitive to plants in the nightshade family; do not use the powder internally if you have hemochromatosis (excess iron). Avoid using this herb if you have hyperthyroidism. This herb is regularly used in India as a tonic in milk during pregnancy but because other reports mention that it is used to cause abortion in Africa and the Sind region of India, is it best to avoid its use during pregnancy. Drug Interactions: Ashwagandha can enhance the effect of barbiturates. Be sure to check with your healthcare provider before use.

Astragalus

Antiviral, antimicrobial, antibacterial, anticancer, antifungal, anti-inflammatory,
antioxidant, immune enhancer, Immune tonic, diuretic, mild adaptogen, antiperspirant, heart tonic, hepatoprotective, Qi Tonic

Botanical Name: *Astragalus membranaceus*  
Family: Leguminosae  
Common Names: milk vetch, Huang qi (Chinese), kibana-ogi (Japanese), hwang-gi (Korean)  
Parts Used: root  
Taste/Energy: sweet, slightly warm, moist  
Location/Cultivation: Perennial with long fibrous root stock; plant native to Asia and primarily harvested in China. Requires full sun and sandy soil with low nitrogen levels; possible to cultivate on Cape Cod. Root is thinly sliced and dried, and closely resembles a yellow tongue depressor.  
Active Against: *Staphylococcus aureus, Salmonella spp., Proteus mirabilis*

- Huang qi (Chinese) means “yellow leader”; roots are yellow in color

- **Raises and strengthens spleen qi and spleen yang:** useful for lack of appetite, fatigue, weak or low metabolism, edema, prolapse of internal organs and wasting conditions

- **Strengthens lung qi.** According to Chinese Medicine, the lungs help to create *wei qi*, the protective energy that helps prevent illness caused by external pernicious influences. Deficient *wei qi* causes people to sweat too much or not enough and to get ill more easily and more often. By strengthening *wei qi*, excessive sweating, menopausal sweating, night sweats may reduce.

- Immune-enhancing and balancing; astragalus contains immune-stimulating polysaccharides

- Astragalus is the primary herb used in Chinese Medicine to tonify the immune system. By enhancing immune system, astragalus helps to prevent colds, influenza, bronchitis, pneumonia, and other infections

- Increases white blood cell count and release of antibodies

- **Supports the adrenal glands**

- Used for *qi and blood deficiency* caused by loss of blood or childbirth
- Healing for human papilloma virus (HPV), cervical cancer, genital herpes, vaginal warts, HIV and AIDS

- Astragalus has tumor-inhibiting activity!

- Studies show that astragalus enhances the body’s own natural killer cell activity, stimulates T-cell activity and restores immune function in cancer patients with impaired immune function

- Astragalus increases the number of stem cells in the marrow & lymph tissue and stimulates their maturation into active immune cells

- May increase effectiveness of chemotherapy and other radiation therapies; known to reduce side effects and immunosuppression caused by radiation therapies

- Astragalus protects liver from a variety of liver toxins

- Improves cardiac blood flow: useful for critical diseases such as stroke, mild congestive heart failure, heart inflammation, high blood pressure, high cholesterol, kidney disease and kidney failure, liver disease, hepatitis B and C, hyperthyroidism

- Reduces blood sugar levels; healing for diabetes and diabetic neuropathy; improves kidney function and overall circulation

- Wound healer and burn healer; traditionally use to treat leprosy and festering sores; helps to expel pus (particularly useful for boils and carbuncles)

- Traditionally used for indigestion, diarrhea, gas, bloating, colic, menstrual disorders, irregular menstruation, asthma, diseases with chills and fevers, coughing with phlegm

- Very useful medicine for childhood diseases

- Strengthens tendons, bones and muscles

**Preparations**

**Tincture:** average adult dosage, 40-80 drops, 2-3 times daily

**Tea Decoction:** Add 2 tsp. of dried cut/sifted root to 12 oz. of water; slowly decoct for 30 minutes and allow to steep for at least another 30 minutes; drink 3-4 cups daily.
- Delicious medicine as tea or cooked in soups, grains, beans, broths, etc.; cook grain in a strong astragalus tea

- Combines well with other hepatoprotective herbs such as milk thistle, schizandra berry and turmeric root

- Combines well with nephroprotective (protects the kidneys) herbs such as cordyceps and nettles

- As a preventative for tick-borne diseases, Stephen Buhner recommends consuming 1000mg of astragalus in high-tick season (spring-fall)

**Simple Astragalus Broth Recipe:** 2 quarts water or vegetable broth, 12 slices dried astragalus, 10 cloves fresh garlic, digitata kelp seaweed, vegetables. Place all ingredients in a pot and gently simmer for 2–3 hours. To use: If you feel like you are getting sick, drink many cups of broth. As a preventative, enjoy a cup every day. Add fresh garlic if you like.

**Astragalus Rice Recipe:** 2 c. brown rice, 4 c. water, 8 slices dried astragalus (add kelp, butter, sea salt, whatever you prefer)

**Safety Note:** Safe for long-term use yet large overdose may suppress the immune system. In Traditional Chinese Medicine, tonic herbs such as astragalus should not be taken when one has an acute infectious illness such as colds, flu, bronchitis or pneumonia because it may “feed” the illness. Astragalus may increase various medications and counteract with immunosuppressive medications. Top herb to restore immune system; no toxicity ever reported. Check with health care providers to find out about possible adverse interactions with pharmaceuticals.
Burdock

_Alterative (blood purifier), antibiotic, antifungal, diaphoretic, diuretic, antipyretic, digestive bitter, anti-inflammatory, mild laxative_

**Botanical Name:** _Arctium lappa_  
**Family:** Asteraceae/Compositae

**Common names:** Lappa, Great Burr, Beggar’s Buttons, Cockle Buttons, Thorny Burr, Burr seed, Clotbur, gobo (Japanese), goboshi

**Parts Used:** roots and seeds

**Energy/Taste:** Root—sweet, bitter, pungent, warm, oily, acrid  
Seed—sweet, bitter, pungent, warm, diffusive

**Wildcrafting:** Look for the Eurasian biennial Burdock in meadows, untended gardens, parking lots, backyards, urban parks, etc. No poisonous look-alikes in the wild. First- and second-year plants often grow together. Burdock grows coast to coast throughout the northern half of North America. Its leaves are rough, coarse, toothless, and wedge-shape with wavy edges, growing approximately 2 feet long and 1 foot broad, and resembling elephants’ ears; each leaf grows from a purplish-green leafstalk up to 1 ½ feet long and ¾ inch thick. The infamous taproot is only pencil-size when Burdock is a baby plant, yet matures up to 4 feet long and 3 inches wide. Harvest this biannual fall of the first year or spring of the second. Dig up the taproot with a spade or fork when the soil is moist and soft. Endurance required! Clean root under cold running water with a scouring pad. Enjoy the root steamed, sautéed, or cooked in soups, sauces, stews, curries. The single central flower stalk forms during the second year mid-to late spring, growing 2 to 9 feet tall. The flower stalk is edible: peel away the tough skin and enjoy a tender, celery-like core that tastes like artichoke hearts (lovely cooked). Cut off the stalk late in the spring before flowers appear, peel it, parboil it for one minute to dispel bitterness and add to soups, stews, casseroles, etc. One can do this with long leafstalks as well. Italians dip the peeled, parboiled flower stalks in eggs and breadcrumbs, and then fry them. Once the burdock blooms, the inner core of the stalk becomes too tough to eat. The Burdock leaves are edible yet intensely bitter—better to leave them for goats and deer. Burdock’s long-stemmed composite flowers are 1 to 1 ½ inches across and resemble old-school shaving brushes. Flower centers are pink to purple in color and prickly bases are green. Flower heads then become globular, bristly, clinging brown burrs. The seeds are harvested just after the end of the second year, before the plant is completely dead. Collect them in the autumn, when the burrs are brown and dry. Crush burrs in a bag with a hammer to free seeds.
TAPROOTS
- Powerfully nutritive: burdock root contains vitamin C, vitamins B1, B6, B12, vitamin E, potassium, sulfur, silica, manganese and biotin

- Provides inulin, a sugar that does not elicit rapid insulin production, making it helpful and healing for people with diabetes or hypoglycemia

- Matthew Wood writes:
  In addition to water, the body needs oil. Burdock increases bile secretion to digest oily foods better, increases oil uptake and liver processing of lipids, and distributes lipids to the skin, hair, tissues, adrenals, and steroids and hormonal system. (www.woodherbs.com)

- Since it is bitter, sweet and oily, it is suited for dry/atrophic conditions

- Bitters stimulate secretions of bile; improves gallbladder function and promotes better absorption of fats and oils through small intestines

- Used for liver dysfunction, sluggish liver, liver stagnation and urinary tract disorders

- General detoxifier of blood and lymphatic system

- Indicated for dry stool and constipation and poor emulsification of fats

- In American Indian Medicine, Burdock would be classified as Bear Medicine. The name Articum from the Greek arctos, meaning Bear and lappa meaning clutched. Artcium lappa meaning clutched by the Bear.

- Matthew Wood writes: “The oily bear medicines usually stimulate the gallbladder, liver, thyroid and adrenocortical functions, encouraging the digestion and metabolism of fats and proteins. The metabolism of the bear, which swings greatly from winter hibernation to summer feeding, is dependent on these organs for storage and utilization of fats and proteins” (Earthwise Herbal, 104–105).

- Use when skin is dry and flaky or scaly and/or expressing acne and boils. Sometimes the sebaceous glands get blocked due to a lack of oil moving through them, resulting in acne, pimplles, boils, eruptions, etc.

- Indications: acute and chronic skin conditions such as rashes, eruptions, eczema, psoriasis, etc.; fever with excessive oily sweating and worry; profuse underarm sweat;
edema; toxins in the blood; lymphatic congestion; kidney inflammation/kidney infection; frontal headache with dry sinuses and dry lungs; respiratory conditions with dry mucosa; allergies, sinusitis, bronchitis; lack of secretion in the upper GI (use seeds); lack of secretion in the lower GI/constipation (use root); liver and gallbladder congestion; gallstones; retention of water in people who are generally dry; swelling in upper thighs and across belly; swelling in upper eyelids with bags under eyes.

- Makes a mucilaginous tea and tincture, which is soothing and tonifying for the stomach muscles and mucous membranes, thus strengthening digestion and aiding in elimination of toxins from the digestive tract.

- Antimicrobial action makes it very useful for colds, flu, sore throats

- Demulcent action soothes the upper respiratory tract’s mucous membranes

- Diaphoretic action makes one perspire, which stimulates immune system and aids detoxification

- Diuretic action stimulates kidneys to eliminate excess fluids and toxins; useful for chronic edema and water retention

- Antibiotic and diuretic actions make it perfect remedy for urinary tract/bladder infections

- Use during pregnancy for all its liver support (hormonal balance), nutritive power and ability to balance all systems. Helps prevent water retention and jaundice in babies.

- Use for swollen prostate in men, sciatica pain, arthritis, bursitis, carpal tunnel syndrome

- Clears congestion, reduces swelling, and dispels toxins

- By healing the liver and gallbladder: anger, aggression, volatility, resentment will hopefully ease

- Powerful action on the SKIN (due to its strong influence on liver, lymph and blood). Used for all skin diseases (internally and externally), including hair loss, dandruff, itchy scalp, sores, psoriasis, eczema, boils, bruises, burns, bites and skin lesions

- Helps restore the “primal blueprint of health” (Wood, EarthWise Herbal, 105).
SEEDS
- An infusion of seeds soothes external sores/wounds and cleanses the skin

- Internally: a tea infusion soothes kidneys, all mucous membranes, and promotes urine elimination

- Internally: useful for treating sore throats; helps erupt rashes and other eruptive skin diseases (such as measles); effective medicine for hives, mumps, boils

- Seeds have a strong diuretic and detoxifying action: useful diuretic for kidney stones, bladder and kidney infections

Preparations
Tea: Fresh or dried roots can be decocted for tea or broth; seeds can be infused
Tincture: Fresh or dried roots extract well in alcohol. Use 30–60 drops, 1–3 x daily

- Combines well with Yellow Dock for tea, tincture or syrup

- EAT IT: fresh or dried burdock root is delicious and highly nutritious for steaming, sautéing, cooking in soups, stews and broths!

- Make burdock oil by infusing roots in oil (olive, coconut, grapeseed, etc) in sun for 4–6 weeks; double-boiler method also an option for oil infusion

- Poultice of burdock leaves chopped up and mixed with clay, honey, or healing oil is indicated for bruises, swellings, inflamed surfaces and injuries

Safety Note: Widely used as a food. May cause allergic reactions in people allergic to Asteraceae plants. May interfere with drugs that are diuretic or lower blood sugar. Be sure to check with a healthcare provider before use.
Calendula

Anti-fungal, anti-inflammatory, diaphoretic, astringent, alterative, antiseptic, antispasmodic, vulnerary (wound healer)

**Botanical Name:** *Calendula officinalis*  
**Family:** Asteraceae

**Common Names:** Pot Marigold

**Parts Used:** Vibrant yellow and orange blossoms

**Energy:** bitter, pungent, cooling

- Powerful **vulnerary**: healing the body by promoting cell repair

- Soothes the skin (with external application), mucous membranes and digestive tract (with internal use)

- **Powerful Topical Wound Healer!** Use externally (infused oil, salve or tea wash) for bruises, burns, sores, skin ulcers, cuts, wounds, acne, inflammation, minor infections, sunburn, insect bites, eczema, psoriasis, diaper rash, cradle cap, herpes sores, gum ulcers; cleans wounds well

- Use in ear drops for ear infections; poultice of flowers for insect bites and swelling

- Strong tea makes an incredible and cleansing hair rinse

- Use internally for lymphatic drainage and clearing lymphatic congestion—increases elimination of waste products from the body

- Use internally for gastrointestinal issues such as stomach/bowel ulcers, cramps, indigestion, intestinal inflammation, colitis, and diarrhea

- Healing for yeast overgrowth in gut (small & large intestines)

- Increases bile flow and healing for liver and gallbladder diseases

- Diaphoretic: promotes sweating to break fevers

- Use to relieve menstrual cramps and regulate menstrual cycle

**Safety Note:** No known side effects; do not use during pregnancy or while breastfeeding. May increase the effects of sedative drugs. Calendula is a member of
the Aster (Asteraceae) family, which may cause allergic reactions in some people. If you are allergic to chamomile or other Aster plants, use calendula with caution. Always check with your healthcare providers before consuming.
Chickweed

Tonic, diuretic, expectorant, coolant, antioxidant, blood cleanser, wound healer, emollient, demulcent

**Botanical Name:** *Stellaria media*  
**Family:** Caryophyllaceae

**Common Names:** chickweed, starwort, stitchwort, starweed, mouse ear, adder’s mouth, chicken-weed

**Energy/Taste:** cooling, bitter, sweet (PK-, V+)

**Cultivation/Native Origin:** Native to Europe and naturalized in many parts of North America. Cool weather annual weed commonly growing in temperate regions worldwide. Found in moist, cultivated soil in gardens and lawns. Blooms June–August; self-seeds.

**Parts Used:** aerial parts of the plant

**Appearance:** Genus *Stellaria* refers to chickweed’s tiny, delicate, star-shaped flower. Five petals are deeply incised. Blossoms open in the sun and close on cloudy, gray days and throughout night. Light-green, oval leaves grow in opposite pairs about an inch apart along the smooth, branching stem. A single line of fine white hairs grow along one side or the other of the thin stems, alternating at the node of each pair of leaves. At night, the half-inch long leaves close in on each other to protect the developing buds. Grows from a slender tap root.

- Delicious food and valuable medicine! Young shoots and leaves are edible!

- High nutritional content. Rich in protein, vitamins and minerals, especially calcium, magnesium, silica, potassium, copper, iron and Vitamins A, C, B−6, B−12. Contains saponins, soap-like components, which dissolve excess fat from the body and aid in the absorption of vitamins and minerals.

- Highly esteemed for its cooling, emollient and demulcent properties, making it very useful for skin irritations, eye inflammation and kidney disorders. Cleanses kidneys and gallbladder of waste; moisturizes dryness, draws out toxins, and detoxifies bowels.

- Useful for malnourished, anemic or convalescent conditions

- Use to cool hot conditions of digestive and respiratory systems and to clear away fever, infection and inflammation
- Expectorant which relieves congestion of lungs; useful for bronchitis, coughs, hoarseness, asthma, whooping cough

- Aids digestion and absorption of nutrients; balances intestinal flora; useful for yeast overrun; use for constipation and stomach ulcers

- Useful for urinary system, specifically for cystitis; mild diuretic indicated for water retention

- External poultice or fresh plant for rashes, infections, inflammations, ulcers, boils, abscesses, diaper rash, psoriasis, swelling, eczema, sores, scabs, itching, insect bites, blisters; dissolves warts and cysts; use external poultice for muscle cramps, tendonitis, and rheumatism; use poultice and eyewash for inflamed eyes and conjunctivitis

- Eaten regularly, chickweed improves thyroid function, promotes weight loss, and heals reproductive cysts

**Preparations:** Fresh, tender leaves are delicious and nourishing eaten fresh in salads. Chickweed can also be juiced (delicious when blended with pineapple juice), steamed or cooked in soups. A great raw treat to nibble on in the garden. Light tea infusion is soothing and cooling. Make fresh poultices for skin. Dried plants useful for oil infusions and salve-making.

Eat fresh, poultice fresh, juice fresh, and tincture fresh plants. Be sure to dry plants before infusing into oil to avoid oil rancidity.

- Tea formula useful for infection-fighting/cystitis remedy:
  - 2 parts cleavers
  - 2 parts fresh or dried cranberries
  - 2 parts uva-ursi
  - 1 part chickweed
  - 1 part marshmallow root

**Safety:** Extreme over-consumption could result in nitrate poisoning; no known drug interactions. Be sure to check with your healthcare provider before use.
Cleavers

*Diruetic, alterative, anti-inflammatory, mild laxative, vulnerary*

**Botanical Name:** *Galium aparine*  
**Family:** Rubiaceae

**Common names:** Bedstraw, bort, goosegrass, catchweed, stickyweed, stickybudy, sticky willy, stickyjack, robin-run-the-hedge

**Parts used:** aerial portions

**Energy/Taste:** cool, bitter, astringent  
(PK-, V+)

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- **Incredible TONIC for Lymphatic System**

- Strong affinity with lymphatics, kidneys, urinary and nervous system; helps body eliminate excess fluids and aids with detoxification/elimination

- Stimulates lymphatic system: useful for lymphatic congestion and lymphatic conditions where there is warmth/heat and inflammation and lymphatic swelling

- Indicated for urinary infections, urinary gravel/stones, cystitis and other urinary conditions where there is pain

- Blood purifier as well as an effective diuretic

- Medicinal poultice for external application for inflammation, cancerous growths and tumors, wounds, ulcers, skin conditions. Use tea infusion internally to help clear skin and externally to wash face for sunburn, freckles, psoriasis, eczema and various skin diseases

- Assists in the penetration and breakup of fibrous tissue and calcifications in the body. Cleavers have the ability to work calcifications out of the tissues (muscles, lymph and kidneys)

- Healing for fibrocystic breasts with cysts/fibrous breast tissue

- In American Indian (Native American) herbalism, cleavers are considered Deer Medicine, a category associated with the nerves. Beneficial for inflammation of nerve endings, oversensitivity of nerve endings, and tickling and itchy skin
- Indicated for edema, swelling of hands and feet; bladder infections with heat, fever and straining; cloudy urine; inflamed prostate; cancer

**Preparations**

**Tea:** enjoy infusions with fresh or dried cleavers

**Tincture:** use fresh or dried

**Juice fresh!**

**Safety:** No known side effects or adverse reactions; safe for all ages—children, pregnant and nursing women. Be sure to check with your healthcare provider before use.
Comfrey

Vulnerary, wound healer, anti-inflammatory, expectorant, emollient, demulcent, lubricant, analgesic, nutritive tonic

Botanical Name: Symphytum officinale  Family: Boraginaceae
Common Names: Knitbone, Common comfrey
Parts Used: leaves and roots
Energy: sweet, astringent, cooling

- Comfrey leaf has been used since Roman times, dating back thousands of years; it has been utilized in folk medicine throughout Europe and North America and has been widely cultivated

- Comfrey's genus name, Symphytum, means to unite/to bring together

- Comfrey is an amazing WOUND HEALER! Promotes CELLULAR REGENERATION! Activates the healing of damaged tissues! Rich in allantoin, a constituent which encourages cell regeneration, and soothing mucilage.

- A common ingredient in salves, poultices, infused oils and ointments

- One of the best herbs for torn ligaments, strains, bruises, pulled muscles, fractures, and any injury to the bones or joints. Also useful for minor cuts and scratches. Very healing for burns

- Use both roots and leaves in salves and ointments; use leaves for compress and root/leaves for poultice

- Make tea with comfrey and nettles for a magical hair rinse

- Use whole leaves as a fertilizer and mulch in the garden

- Use Comfrey with Respect—it is a speedy wound healer and should not be used on deep wounds or lacerations. It could possibly heal the top layer of the skin before the bottom later. AVOID COMFREY WHEN INITIALLY TREATING DEEP SKIN WOUNDS.

*Be Aware: Even though comfrey root and leaf has been used traditionally in Greek medicine and by European physicians for centuries for bronchial and lung diseases, a controversial debate exists today over the safety of internal consumption. Studies have found traces of PLAs (pyrrolizidine alkaloids) in the plant, which can be harmful to the liver in high doses. However,
studies were never conclusive. Many herbalists continue to use comfrey internally. A large body of traditional use supports its safety and efficacy. I personally use it internally. Common comfrey, the plant most often used for medicinal purposes, contains only negligible amounts of those alkaloids. In fact, one laboratory study of three different sources of comfrey found no pyrrolizidine in one sample, and only negligible amounts in the other two. Still, many herbalists recommend that comfrey preparations should not be taken internally because of the possibility of liver disease and damage. Comfrey should not be used by pregnant or nursing women. It is important to understand that the part used, species, and time of harvest all come into play when determining safety of comfrey. The Symphytum genus contains about 35 species, all of which can be used interchangeably, although pyrrolizidine alkaloid content varies between species and are highest in Russian comfrey (S. x uplandicum) and prickly comfrey (S. asperum).
Dandelion

Tonic, diuretic, stimulant, laxative, alterative, cholagogue, stomachic

Botanical Name: *Taraxacum officinale*  Family: Asteraceae
Energy/Taste: cooling, bitter, sweet
Parts used: root, leaves, blossoms

- Used for all heated liver conditions and stagnant bile; purifies and cleanses blood, liver, gallbladder and pancreas; use for liver disease, liver congestion and gallbladder congestion. By enhancing bile flow and aiding liver function, dandelion is healing for jaundice, hepatitis, cirrhosis, gallstones.

- Indicated when heat descends deep into tissues, thickening fluids, slowing down drainage, inflaming the deeper tissues, and even infecting the bones. Use when bile is thick or there is a lack of bile secretion, constipation from lack of bile in intestines, or anemia from lack of bile production.

- As a specific herb for the liver, dandelion also benefits the female reproductive system by helping to regulate and normalize hormone production.

- Indicated for toxic blood skin conditions: acne, abscesses, eczema, boils, psoriasis, etc.

- Use root and leaf for breast congestion, breast hardness, mastitis, breast cancer, PMS, menopausal issues attributed to poor liver function/liver not breaking down extra hormones. Leaf is highly effective for menstrual bloating, PMS, breast tenderness (associated with water retention).

- Also indicated for inflammation of muscles, tight or swollen muscles, and rheumatoid arthritis with deformation of fingers

- Dandelion leaf is a diuretic that does not deplete potassium from body; specifically healing for kidneys and urinary tract; may cause weight loss due to water removal

- Healing for urinary and kidney stones and gravel, water retention, edema and cardiorenal syndrome
- Lowers cholesterol (increases good HDL cholesterol), lowers triglycerides, lowers blood pressure, balances blood sugar (for hypoglycemia and diabetes)

- Healing for anemia, indigestion, stomach irritation, heartburn, rheumatism and joint pain

- Improves beneficial bacteria in intestines; both the root and leaf provide essential nutrients; rich source of vitamins A and C, iron, calcium, and potassium, as well as other trace minerals

**Preparations**
- Dandelion leaves are more diuretic; roots are more cholagogue; flowers act more on the heart

**Tea:** Decoct roots, infuse leaves

**Tincture:** Fresh or dried

**Flowers:** wonderful for making cordials, meads, wine; makes delicious fritters.

- Eat leaves fresh or cooked! Each cup of dandelion greens provides 7000–1300 I.U. of Vitamin A

**Safety Note:** Rare side effects may include skin allergy, stomach upset, and diarrhea. Be sure to check with your healthcare provider before use.
Eleuthero

Adaptogen, anticholesterolomic, immune tonic, anti-aging, anticancer, hormone balancer, antispasmodic, antirheumatic, anabolic

**Botanical Name:** *Eleutherococcus senticosus*  
**Family:** Araliaceae

**Common Names:** Siberian ginseng, Ci wu jia (Chinese), ezoukogi (Japanese)

**Parts Used:** Root and stem bark

**Taste/Energetics:** Sweet, slightly bitter, slightly warm

**Location/Cultivation:** Grows throughout Siberia, Korea, northern China and northern Japan

-Eleuthero is one of the most well-researched adaptogens

-Equally appropriate for men and women, young people or the elderly

-Strengthens life force and body/mind resistance to stress, depletion and disease

-Heals and nourishes adrenal and pituitary glands; aids liver, kidneys, digestive and respiratory systems

-Enhances mental alertness, performance and concentration

-Increases energy, stamina, strength and focus

-Very useful for stressed out people who work long hours and may not receive adequate sleep or nutrition. Perfect adaptogen for physicians with long shifts, people with night jobs, students pulling “all nighters”

-Improves quality of sleep, dream-disturbed sleep and insomnia

-Enhances immunity and improves detoxification!

-Used in Traditional Chinese Medicine to strengthen the qi, spleen and kidneys. Symptoms of deficient spleen qi include fatigue, chronic low-grade diarrhea, lack of appetite, and abdominal bloating.
- For athletes: increases endurance and stamina, enhances mitochondrial activity, speeds recovery and prevents immune-depletion from excessive training. Combines well with rhodiola and/or schizandra for enhancing athletic performance.

- *Anabolic*, meaning it helps to build muscle and prevents the breakdown of muscles as one ages

- Hormone balancer. Healing during menopause, especially when used with black cohosh and licorice root

- Retards cancer cell growth in breast, ovaries, stomach, mouth and skin

- Protects the body during radiation and chemotherapy

- Balances high or low blood pressure, lowers LDL cholesterol and triglyceride levels, lowers blood glucose (diabetes).

**Preparations/Dosage**
- Tincture (1:4): 60–100 drops, three to four times per day

- Decoction: Add 1–2 tsp. dried powdered root to 12–16 oz. water. Decoct slowly for 20 minutes, steep for one hour. Drink up to three cups per day.

**Safety Note**: May cause overstimulation or insomnia in sensitive people. If you experience insomnia, cease consumption or consider taking only before noon. Eleuthero is NOT recommended for those with high blood pressure or epilepsy (seizure disorder). Do not use during pregnancy or while breastfeeding, with children or infants. Drug Interaction: Reports of eleuthero interacting with digoxin. Be sure to check with a healthcare provider before use.
Fennel

*Antispasmodic, antimicrobial, carminative, stomachic, expectorant, mild stimulant, mild diuretic, galactagogue, analgesic*

**Botanical Name:** *Foeniculum vulgare*  
**Family:** Umbelliferae

**Parts used:** Primarily the seeds, yet leaves and flowers useful as well

**Energetics:** sweet, pungent, cooling and warming

VPK= (Vata, Pitta, Kapha =)

- Well-known carminative and digestive aid; stimulates digestion, regulates appetite; relieves flatulence, vomiting, nausea, cramping and abdominal pains caused by coldness

- Excellent for digestive weakness in children and elderly

- Opens blockages in liver, spleen and gallbladder; increases flow of bile

- Blood cleanser which neutralizes toxins and poisons in blood (spider or snakebite)

- Use for respiratory and minor viral diseases, including fever, chills, colds, asthma, bronchitis, chronic coughs, wheezing, shortness of breath

- Mild diuretic: healing for urinary infections and kidney stones

- Used by early Greek physicians to increase and enrich milk supply in nursing mothers (galactagogue action); nursing mothers can drink 2 to 6 cups of fennel tea daily to increase flow and enrich milk

- Anti-acid which neutralizes excess acids in the stomach and intestines and clears uric acid from joints

- For infants: relieves colic by expelling gas from system and soothes teething discomfort

- Warm fennel tea wash for conjunctivitis (pink eye) and other eye inflammations

- Strengthens *agni* (digestive fire) without aggravating *pitta*
Safety Note: Safe in normal doses; overdose can cause muscle cramps and hallucinations; avoid with ciprofloxacin. Check with your healthcare provider before consuming.
Goldenrod

Anticatarrhal, antihistamine, anti-inflammatory, antiseptic, astringent, carminative, diuretic, diaphoretic, vulnerary (wound healer)

Botanical Name: Solidago canadensis (Canadian), S. virga-aurea (European)—genus encompasses approximately 100-120 species; species can be used interchangeably
Family: Asteraceae
Common Name: woundwort
Taste/Energy: bitter, pungent, astringent; warm, dry, aromatic
Parts Used: aerial parts of the plant (leaf, stem and flower) and roots (roots stronger diuretic action)
Appearance/Location: This blooming, herbaceous perennial presents itself along roadways and throughout open meadows, fields and prairies in all parts of the world. Bright golden yellow flowers light up the landscape during late summer and autumn attracting pollinators and beneficial insects. Depending on location, goldenrod flowers anytime late July–October. Each plant grows 1-5 feet in height; leaves express as lance-shaped and alternate; bright golden flowers appear as panicles at the end of the stem. Most species are native to North America; a few species are native to South America and Europe.

-Used for millennia as medicine and plant dye

-Powerful ally for upper respiratory system, sinus pathways, kidneys, urinary system and digestive system

-Indicated for sinus infections + chronic or acute bronchitis, especially when blood is emerging from lungs during expectoration (ulcers in lungs)

-Astringent quality tones mucus membranes of respiratory and urinary tract; astringent nature makes it a useful plant for wounds, diarrhea, bleeding, ulcers, hemorrhoids

-Use as gargle for laryngitis and pharyngitis to decrease inflammation

-Ragweed, a fellow member of the Asteraceae family, causes seasonal allergies (itchy red puffy eyes, runny nose, etc.) for many; goldenrod serves as an allergy-supportive herb, with its antihistamine and anticatarrhal actions, growing alongside ragweed

-Anticatarrhal action: thins mucus and fluids for easeful passage
- Ally for common seasonal allergy symptoms: itchy, watery, puffy, burning eyes; itchy, runny nose

- Diuretic action: stimulates kidneys for greater activity during times of stress or illness

- Role of kidneys: removal of metabolic wastes, environmental toxins, and drug by-products

- Goldenrod indicated for kidneys when pain and tenderness in kidney area exists; pain extends from kidneys to abdomen, bladder and down limbs; urine is dark, scanty, thick

- Helps the body excrete larger protein particles (7Song)

- Exhausted kidneys may express with dry, irritable skin and dark, odorous, scanty urine (general lack of fluid to excrete waste) or limb swelling and copious, light urine; skin on legs is dry and scaly with scabs/crusted skin; goldenrod opens pores on the skin on the legs and scalp (Matthew Wood)

- Healing for early stages of bladder or urinary tract infections; diuretic action helps the kidneys flush bacteria and toxic congestion as well as tone mucous membranes, which helps to prevent infection from traveling deeper into tissues

- Astringent action: strengthens and tones tissues to avoid further pathogenic intrusion

- Bitter, warm and pungent taste/energy: stimulates digestive secretions; traditionally used as a carminative; ideal tonic for a “cold stomach,” flatulence, stomach pain, diarrhea, or stomach cramps/spasms; leaves best as stomach tonic

- Both cooling and warming/stimulating due to flavonoids within plant; traditionally used on infected wounds that need to be cooled off and stimulated

- Cherokee internal uses: flatulence, colic, fever, flu, tuberculosis, amenorrhea, neuralgia

- Cherokee external uses: open wounds, rheumatism, headaches; root traditionally used for burns
SPECIFIC INDICATIONS: (as written by Matthew Wood in The Earthwise Herbal: The Complete Guide to Old World Medicinal Plants, p.470)

- Tired, worn out, can’t process the issues of life, feet tired; “Where’s the nearest chair?”
- Allergies; conjunctiva red, glazed; eyes watering, nose itching; specific for cat allergies
- Acne in sheets of small pimples on face
- Enlarged, wet, boggy tongue
- “Cold stomach,” inactive digestion, flatulence after meal
- Urine dark, scanty; or clear, copious
- Dry, scaly skin, or edema and swelling
- Old, purulent conditions of the lungs, mucosa, and skin
- Exhausted, tired lower back, tired feet, exhausted kidneys
- After acute disease clears, when the urine gets dark and scanty, the kidneys are exhausted and incapable of completing the cure
- Bladder irritation, early stages, with bacterial infection, sweat
- Edema of the legs with sores and purulence
- Dry, scaly patches on the scalp and legs
- Old, inflamed, purulent, gangrenous wounds

Preparations:
- Roots, leaves, and flowers used
- Leaves are ideally harvested before flowering
- Flowers harvested in fall and extracted fresh in organic alcohol for respiratory and kidney issues

Dosage recommendations:
- Tea: infusion of dried leaves and flowers; 3–4 oz., 1–4 x per daily
- Tincture: 2–4 ml, 3 x daily

Safety: Safety during pregnancy is unknown so best to avoid. People with impaired or compromised livers or kidneys should be cautious. Check with your healthcare provider before use.
Holy Basil

Adaptogen, antibacterial, antiviral, antioxidant, anti-inflammatory, expectorant, carminative, galactagogue, diaphoretic, nervine, antispasmodic, antidepressant, antioxidant, immune amphoteric

Botanical Name: Ocimum tenuiflorum, O. sanctum, O. gratissimum
Family: Lamiaceae
Common Names: Tulsi (Hindi), tulasi (Hindi), surasa (Sanskrit), sacred basil
Parts Used: aerial parts of herb
Taste/Energetics: Pungent, sweet, warm
Systems: respiratory, nervous, digestive
Location/Cultivation: Holy basil is found throughout the lowlands of India as well as in Sri Lanka, Pakistan, Bangladesh, southern China, Thailand and Malaysia. At least three types of holy basil: Sri or Rama tulsi (green-leafed variety); Krishna tulsi (dark-green to purple leaves); Vana tulsi (green-leafed forest variety that often grows in the wild).

- In India, where the herb originates, Holy Basil is revered as a plant sacred to Lakshmi, goddess of wealth, fortune, beauty and prosperity and wife of Vishnu, the all-pervading one, the god who preserves and protects life. Also sacred to Vishnu and Krishna, Holy Basil is known to strengthen faith, compassion and clarity.

- Classified as a rasayana and considered one of India’s most powerful herbs for over 3,000 years. Rasayana herbs are said to slow aging, be revitalizing and restorative, and prevent disease. Rasayana herbs restore balance to the body’s systems.

- Daily consumption of Holy Basil helps maintain the balance of the chakras (enter centers of the body). It is believed to possess sattva (energy of purity) and capable of bringing on virtue and joy in humans.

- Commonly referred to as Tulsi, meaning "the incomparable one"—Tulsi opens the heart and mind, bestowing the energy of love and devotion (bhakti). A long history of being used to increase energy and vitality; herb for longevity and well-being—balances the mind, nerves and emotions; lifts the spirits and promotes clarity of thought.

- Traditionally used to improve memory, treat coughs, colds, indigestion, upset stomach, vomiting, nasal congestion, asthma (with black pepper), fatigue, and excessive bronchial mucus and bronchitis.
- Indicated for cardiovascular issues, hypertension, diabetes, stress, and age-related illness; aids digestion by increasing digestive enzymes; healing for indigestion, gas, diarrhea, dysentery, vomiting, urinary infections, headaches.

- Free-radical scavenger; protects from pollutants and toxins; blood-cleanser and poison antidote.

- Radioprotective: protects against the damaging effects of ionizing radiation

- Nourishes the adrenals, heart and central nervous system; improves energy, relieves fatigue, protects the liver, helps with nicotine withdrawal and elevates mood.

**TULSI: THE VITALIZER!**

- Expectorant for respiratory mucus conditions, chest congestion, wet cough; use for colds, flu, sore throat, viral and bacterial infections, asthma, allergies, fever, earache.

- Strengthens the heart, lowers blood glucose, triglycerides, and cholesterol; regulates menstruation, relieves pain, and works as a laxative for sluggish bowels.

- Recent studies show that holy basil reduces excess immune response in allergic asthma and allergies. Useful for people with allergies to animal dander and mold. Enhances antibody production.

- Enhances cerebral circulation and memory! Combines well with other cerebral stimulants (rosemary, bacopa, gingko) to help people with poor memory, attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD, “brain fog.” Also helpful for women experiencing cloudy thinking/lack of clarity during menopause.

- Cousin to Sweet Basil (Ocimum basilicum). Tulsi is easy to grow! Absorbs positive ions and energizes negative ions! In India, Holy Basil plants are often grown inside and out, as it is known to have a purifying influence and repels flies/other insects.

**Preparations/Dosage**

**Tea:** make infusion with fresh or dried tulsi. Makes a delicious tea—often mixed with peppermint, spearmint, lemon balm, nettles. Also makes tasty chai tea! Other methods of making Tulsi medicine: medicated ghee, tincture, or cough syrup. Fresh basil juice is used externally for fungal infections on the skin. Add 1 tsp. dried leaf to 8...
oz. hot water, steep, 5–10 minutes (longer for more strength). Drink 4 oz.–8 oz. up to three times daily.

**Tincture:** 40–60 drops, three times per day.

**Safety Note:** There have been contradictory animal studies showing that holy basil might be toxic to embryos. Until conclusive information exists, so AVOID during pregnancy. Not recommended for infants or toddlers. Holy basil is reported to have antifertility effects and should be avoided by women trying to get pregnant. **Drug Interaction:** Holy basil might enhance CYP-40 activity, thus speeding up the elimination of some medications. Be sure to check with your healthcare provider before use.
Juniper

Antibacterial, Anticatarrhal, antifungal, anti-inflammatory, anti-microbial, antioxidant, antirheumatic, antiseptic, antiviral, carminative, digestive, diuretic, hypoglycemic, hypolipidemic, radical scavenger, stomachic

Family: Cupressaceae (cypress family)
Genus: Juniperus (There are approximately 50-67 species in this genus; all of them used medicinally in similar ways)
Part Used: berry and needles (bark, wood, and root also have active medicinal constituents)
Energy/Taste: sweet, bitter, sour, tangy, citrus-like, highly aromatic
Location/Appearance: Generally-speaking, two most common types of Juniper: an evergreen tree growing up to 50 ft. tall (sometimes appears to resemble shrub) with needles that have an overlapping growth (resembling needles of cedar or cypress trees); the second type is a low-growing, spreading shrub, Juniperus communis (Common Juniper), which has prickly, sharp, scale-like needles that are blue-green in color (needle color and shape resemble that of pines, firs, spruces); there are three needle-like leaves per node. Trunk and branches of both types have a reddish-look, with outer bark peeling off in strips. After fertilization of flowers, both species produce “berries,” which are actually small, spherical seed cones. The berries are first green in color and then turn purplish-blue after a frost. Juniperus communis is a circumpolar species of the northern hemisphere. In New England, Juniperus communis takes the form of a low-spreading shrub. Various species can be found in the Arctic, tropical Africa (as south as Zimbabwe), Pakistan, Tibet, Australia, and mountains of Central and South America. Highest-known Juniper forest occurs at an altitude of 16,000 feet in Tibet and Himalayas. This versatile plant grows in a variety of challenging conditions and is highly adaptive and resilient. Berries propagate from their seeds. Creeping juniper also exists.

Cape Cod: Cape Cod Commission for Conservation lists the Juniper species of Cape Cod (Trees & Shrubs for Coastal Environments): Juniperus virginiana (Eastern red cedar); Juniperus communis (common pasture juniper); Juniperus horizon (creeping juniper).

- All evergreens, including Juniper, have been used in every culture for cleansing and purification! Traditionally used as a steam inhalant in sweat lodges and saunas, as an antiseptic cleaning agent for surgical and hospital procedures, to burn for smudging
and emotionally/energetic cleansing, and in a variety of ways to help prevent and heal illness.

- Contains an incredible amount of Vitamin C; new spring growth of the evergreens is very citrus-tasting and a delicious source of Vitamin C

- Extensively used by Indigenous cultures of Americas for diarrhea, colds and flu, ulcers, throat infections, scanty menses, tuberculosis, respiratory infection, cough, general disinfectant and as a wash for skin infections and wounds

- Healing for low stomach acid; stimulates production of stomach acid

- Effective remedy for gas, poor appetite, gastrointestinal bacteria and parasites; inactivates *H. pylori* bacteria that causes stomach ulcers; antimicrobial effects against food-poisoning organisms

- Diuretic for water retention and to flush kidneys

- Healing for urinary tract infections (UTI), kidney infections, urinary and kidney stones, gout, Rheumatism

- Lowers blood sugar; Increases insulin production in body for better sugar utilization

- Use externally for skin rashes, burns, sunburn, minor wounds, scrapes, fungal and parasitic skin infections, skin inflammation, neuralgia

**Ayurveda:**
- *Hapusha* in Sanskrit; berries are mainly used for medicine (leaves and wood sometimes used)

- Considered *aromatic, carminative, stimulant, emmenagogue, digestive, stomachic, potently antibacterial, and diuretic*; used for coughs and pulmonary disease, fever, gonorrhea, arthritis, amenorrhea, tuberculosis, and for improving digestion and appetite

**Traditional Chinese Medicine:**
- Approximately 23 species of Juniper in China and numerous subspecies
Traditionally used for treating bleeding from coughs, for colds, hemorrhage, convulsions, detoxification of the blood, hepatitis, sweating, chronic obstructive pulmonary disease, spleen deficiency, and any condition where congestion and overproduction of phlegm are present.

**Preparations:**
- Gather needles, bark, and wood at any time. Berries should be purplish before you use them for medicine—wait for frost!

- Constituents are readily soluble in alcohol; solubility in water varies depending on what part of the Juniper is used.

- Berries must be tinctured in alcohol or eaten whole.

- Needles are best tinctured in alcohol yet will provide some of medicine with water extraction; monoterpenes best extracted in alcohol.

- **Tincture of berries:** 1:5, 75% alcohol; dosage, 5–20 drops, up to 3x daily.

- **Infusion:** chopped or powdered needles prepared as infusion with hot water; drink 4–6 cups, 3–6x daily.
- A strong tea decoction of juniper (all parts) has been used traditionally to sterilize cooking utensils, surgical equipment, hands, kitchens, bathrooms, etc.

- A strong decoction can be used as a wound wash to prevent or cure infection; decoct one ounce of herb per quart of water, boil for 20–30 minutes, turn off heat and allow to steep 8–12 hours.

- For gastric issues, eat 1–5 whole berries daily for two weeks.

- Powder and use on wounds to prevent or cure infection.

- **Steam:** Use in sweat lodge or sauna; boil 4 ounces of needles in 1 gallon of water, pour the tea on stones and inhale steam. One can also inhale steam as it boils (put face over steaming pot and cover head with a cloth) for bronchitis, bronchial congestion, cough, lung inflammation, and other pulmonary complaints.

- **Essential Oil:** Very useful for upper respiratory infections and congestion.
- Make a nasal spray for sinus and upper respiratory infections by combining 8–12 drops of essential oil in distilled water in 1-ounce spray bottle; use spray 4–6x daily as needed (shake well before use); use essential oil in diffuser for helping to prevent or treat respiratory infections; moderate amounts of essential oil can be mixed in water for use as steam inhalant or in sweat lodge/sauna.

- Hair rinse (use infusion or decoction) for hair loss

- Commonly used to make gin, flavor meat, and added to pickling recipes

Safety Note: Often one hears or reads that Juniper may cause kidney irritation and is contraindicated in kidney disease. Herbalist Stephen Buhner, phytomedicalist Kerry Bone, and other herbalists have been researching the emergence of this belief; these herbalists discovered that scientists administered large doses of Juniper essential oil to animals during studies in the latter part of the 19th century. From then on, the word was out that Juniper irriated and harmed the kidneys. Contrary to this belief, recent studies with rats show that Juniper actually possesses kidney-protecting effects. The Eclectics used the berries to treat kidney disease and inflammation. Do not directly ingest essential oil; essential oil is very effective and safe used as a steam inhalant. Diabetics and people with hypoglycemia should exercise caution with long-term use—Juniper lowers blood glucose levels. If diabetic, closely monitor blood sugar levels. Do not use long-term in conjunction with pharmaceutical diuretics. People with excess acid stomach disorders such as gastroesophageal reflux disease (GERD) should avoid Juniper. Do not use Juniper for longer than four weeks at a time; do not exceed dosage. Not for use when trying to become pregnant, during pregnancy or while breastfeeding. Be aware that Juniper may cause miscarriage (abortifacient actions). Check with your healthcare provider before use.

Active Against

Alcohol extracts of juniper show activity against 57 strains of 24 bacterial species in the following genus:

- Acinetobacter
- Bacillus
- Brevundimonas
- Brucella
- Enterobacter
Escherichia
Micrococcus
Pseudomonas
Staphylococcus
Xanthomonas

**Antimicrobial specifics:**
Acinetobacter baumannii
Actinomyces bovis
Aspergillus fumigates
Aspergillus niger
Bacillus brevis
Bacillus cereus
Bacillus megaterium
Bacillus subtilis
Caenorhabditis elegans
Candida spp. (Alcohol extracts of juniper has shown to inhibit 11 Candida species)
Clostridium perfringens
Cryptococcus neoformans
Enterococcus faecalis
Escherichia coli (E. coli)
Fusobacterium necrophorum
Geotrichum candidum
Hansenula anomala
Helicobacter pylori
Klebsiella oxytoca
Klebsiella pneumoniae
Leishmania donovani
Listeria monocytogenes
Micrococcus flavus
Micrococcus luteus
Microsporum gypseum
Mycobacterium spp. (including M. tuberculosis, even resistant strains, such as H37rv)
Plasmodium falciparum
Proteus mirabilis
Proteus vulgaris
Pseudomonas aeruginosa
Rhodotorula spp.
Salmonella typhi
Serratia marcescens
Shigella dysenteriae
Shigella sonnei
Staphylococcus aureus (including resistant strains)
Staphylococcus epidermis
Staphylococcus intermedius
Streptococcus durans
Streptococcus faecalis
Streptococcus mutans
Streptococcus sanguinis
Trichophyton mentagrophytes
Trichophyton rubrum
Yersinia enterocolitica

*Juniper is also active against various cancer cell lines, SARs virus, herpes simplex 1
Lemon Balm

*Antiviral, antiseptic, antidepressant, antispasmodic, antioxidant, calmative, diaphoretic, mild sedative*

**Botanical Name:** *Melissa officinalia*  
**Family:** Lamiaceae  
**Common Name:** Sweet Melissa  
**Parts used:** leaves and flowers  
**Energetics:** sweet, sour, pungent, cooling

- Originally from Southern Europe and now widely cultivated worldwide
- Beautiful and fragrant member of the Mint family; one of nature’s best nervine herbs
- Lemon balm leaves and flowers contain volatile oils, tannins and bitters that have a relaxing, antispasmodic effect on the stomach and nervous system
- Calms and rejuvenates nervous system
- Used primarily as antidepressant and calmative; use for stomach distress, nervous indigestion and gas, general exhaustion, insomnia, nervousness, emotional upset, mild depression, seasonal affective disorder, tension, anxiety, agitation; promotes calm alertness and sense of well-being
- Contains antiviral properties: useful for cold sores, colds, flus, viral infections, shingles. Children respond very well to Lemon Balm.
- Diaphoretic: induces sweating to break fevers (best to drink tea when fever is present)
- Clears mucus from lungs: useful decongestant for colds, flu, sore throats, minor viruses
- Antihistamine: reduces congestion and allergic reactions
- Also used as a heart and circulatory tonic; lowers blood pressure

**Preparations**

**Tincture:** Lemon balm is a super tasty tincture in alcohol or glycerin. Enjoy 30–60 drops, 2–3 times daily
**Tea:** Enjoy sun-tea infusion, hot or cold water infusion. Makes delicious tea and can be served with lemon and honey. Wonderful addition to fruit/herb popsicles for kids.

– For a nervine tonic, blend equal amounts of lemon balms, oat tops, and chamomile. Blends well with any nervine; lovely addition to blends with its enjoyable flavor. Kids tend to love lemon balm.

**Safety Note:** While it’s generally considered safe for most people, large amounts of lemon balm may inhibit thyroid function. Be aware if you have hypothyroidism (underactive thyroid) or if you are taking thyroid medication. May also interact with synthetic sedative medications. Be sure to check with healthcare providers before consuming.
MINT

*Stimulant, antispasmodic, anti-inflammatory, carminative, diuretic, diaphoretic, nervine, analgesic*

**Botanical Name:** *Mentha spicata*  
**Family:** Lamiaceae

**Energy/Taste:** cooling, pungent

**Parts Used:** leaves and flowers

- Peppermint is more stimulating, whereas spearmint is more relaxing and has powerful diuretic action

- *Sattvic* nature: calms mind and nurtures spirit

- Nourishes the brain and increases cranial and cerebrospinal fluid

- Calming, relaxing, refreshing, uplifting; helps to relieve emotional and mental tension, stress, and congestion

- Mild, soothing action on nerves and digestion, which helps relax the whole body

- Improves Digestion! Healing for indigestion, stomachaches, headaches, gas, hiccups, diarrhea, nausea, vomiting, and abdominal cramps; improves bile flow; may break-up gallstones; gentle enough for babies’ and children’s colic and indigestion

- Mild, cooling diaphoretic for colds, flus, detoxification; for colds and respiratory complaints, combines well with fresh ginger; expectorant for coughs with phlegm; use for dry cough

- Clears toxicity; inhibits bacterial growth; cleanses the breath after sickness/vomiting

- Spearmint heals urinary inflammation and helps dissolve urinary gravel

- Use externally as poultice for insect bites, herpes sores, mouth and gum sores, dandruff, eczema, chapped hands, poison ivy

- Essential oil repels mosquitoes, ants, other insects and mice

- For headache and migraine, dilute peppermint oil in carrier oil and rub onto forehead/temple
- For infants, use highly diluted mint tea with chamomile

- For colds/flus, mint combines well with ginger and elderberry

Preparations
Tea: infusion wonderful drunk hot or cold (also possible to make sun tea); a delicious addition to fruit/herb popsicles or smoothies/juices. Love adding mint leaves into salads and dressings.

**Lymph Congestion Tea**
2 parts calendula
2 parts cleavers
1 part mullein
1 part spearmint

**Women’s Tonic Tea**
2 parts lemon balm
2 parts nettle leaf
2 parts spearmint
2 parts raspberry leaf
1 part milky oat tops or oat straw

**Safety Note:** Not for use with gastroesophageal reflux disease (GERD), gallbladder disease or severe liver disease. Check with your healthcare providers before consuming.
Motherwort

Antispasmodic, cardiac tonic, sedative, hormone balancer, emmenagogue, astringent, carminative, diuretic, antirheumatic

**Botanical Name:** *Leonurus cardiaca*

**Common Names:** Lion’s ear, Lion’s tail, Throw-wort

**Parts Used:** leaves and stem (aerial portion)

**Energy/Taste:** bitter, acrid, aromatic, cooling (PK-, V+)


-A tonic for the female reproductive system! Used to heal amenorrhea (absent menstruation) and delayed menstruation by its strong emmenagogue properties. Also healing for menopausal complaints (hot flashes and mood swings), PMS, menstrual cramps (specifically cramps connected with scanty menstruation). The amphoteric qualities of Motherwort make it both a sedative and a stimulant herb—helpful for menstrual stress and tension.

- Motherwort contains concentrations of leonurine and stachydrine, chemical constituents that promote uterine contractions. Motherwort stimulates the uterus; aids in preventing uterine infection; eases labor contractions and labor pains; prevents hemorrhage during labor and after delivery; speeds recovery post-childbirth. Generally not recommended for menstrual cramps associated with heavy bleeding.

-Healing for heart disease: strengthens and tones heart, reduces heart palpitations, dilates the blood vessels, relaxes coronary arteries, increases blood flow to the heart, lowers blood pressure, and prevents blood clots; useful for cardiac edema. Motherwort contains concentrations of Glycosides, which have the effect of lowering blood pressure, thereby reducing stress on the heart.

-In ancient China, Motherwort was used to promote longevity due to its heart-strengthening abilities. A Chinese legend describes a sage who drank motherwort tea everyday and lived to be 300 years old.

- Quiets the nervous system; calms nervousness, anxiety, worry. Healing for depression, anxiety, nervous disorders, insomnia, tremors and convulsions. Indicated when a rapid, fluttering, or pounding heartbeat (palpitations) is present with anxiety.
or nervousness. Provides pain relief: commonly combined with skullcap and/or valerian

- Healing for hyperthyroidism and swollen thyroid; healing for neuralgia and rheumatic complaints

**Preparations**

**Tea:** use aerial parts of plant for infusion  
- combines well with hawthorn for heart medicine  
- combines well with nervines

**Tincture:** Use fresh or dried herb  
- Eat one or two leaves of fresh motherwort daily—enjoy the bitterness in a salad with other wild greens

**Safety Notes:** Due to its ability to stimulate uterine contractions, it is not recommended during pregnancy, except during the last few days, when it is used to stimulate labor. Effective and safe during the actual labor. Check with your healthcare provider before use.
Mugwort

Antifungal, antiseptic, anti-inflammatory, antibacterial, uterine stimulant, emmenagogue, hemostatic, antispasmodic, antioxidant, nerve tonic, bitter tonic, mild narcotic

Botanical Name: Artemisia vulgaris  Family: Asteraceae
Common Names: cronewort (wisdom of elder women), common Artemis
Parts Used: leaves
Energy/Taste: bitter, acrid, slightly warm (VK-, P+)

-Mugwort is a member of Artemisia, a powerful genus of herbs.

-Rosemary Gladstar writes:

“Ruled by the Goddess Artemis, this family has an illustrious past. Artemis, Goddess of the moon, childbirth and war, has been immortalized as a voluptuous blond. In fact, she was a woodland nymph who ran wild and free with the creatures of the woods, and was a protector of wild things, not the huntress she was later made out to be. Her plants were the fragrant herbs that grew freely in the hillsides. She used these aromatic plants for healing the wounded animals, aiding women at childbirth, and caring for the injured warriors who fled to the woodlands” (Herbal Healing for Women, 249).

-Mugwort is one of the most common and widely used of the genus Artemisia. Common names for other species in the Artemisia genus: wormwood, sagebrush.

-Supreme systemic healer

-A bitter tonic: digestive aid and liver stimulant. All bitter herbs stimulate gastric juices/bile production and aid digestion. Take before or after meals with other bitter herbs to alleviate sluggish digestion, constipation and gas.

-Strengthens nerves! Due to its nervine and bitter properties, it was one of the original herbs used in brewing beer. Its name: the herb (wort) of the cup (mug).

-Respected for its beneficial effects on the female reproductive system. A uterine stimulant which helps to bring-on suppressed or delayed menstruation. Strong emmenagogue: one of the best herbs to use when menstruation has been absent for a long time (amenorrhea). Ruled by Artemis, goddess of the moon, mugwort stimulates
the natural rhythms in women. Excellent for young women who are just entering their moon cycle. **Helps to regulate cycle; allows blood to flow more freely and eases cramps.**

- During pregnancy: warms the womb and pacifies fetus; used to turn breech-positioned fetus to normal birth position and **stimulate uterine contractions**; used to induce abortion early in pregnancy.

- Use internally and externally as a preventative and curative of parasites and worms; use externally for abscesses and all pus-filled infections, fungal skin conditions, skin tumors

- Stops bleeding, heals wounds and sores, clears toxins through the skin

**Preparations:**
- Used by acupuncturists in a method called *moxabustion (aka Moxa)*. The dried, aged and powdered herb, which has a cotton-like consistency, is rolled into a cigar using tissue paper. One end is burned and held near the site of a painful area to increase circulation, stimulate flow of energy and provide pain relief. Instead of needles, the burning cylinder of mugwort is held over particular acupuncture points.

- Smudging: burn dried mugwort alone, or mix with other herbs such as white sage, thuja leaves or osha root; the smoke is used to purify the spiritual, energetic and physical environment and uplift the spirits.

- Chew fresh leaf as digestive bitter and to counter fatigue

- Place fresh leaf in shoes for sore feet

- DREAM MEDICINE: with its connection with Artemis and moon energy, mugwort is affiliated with the dream world. Drink mugwort tea, take as tincture or place dried herbs in a dream pillow to induce dreams, increase dream intensity, promote lucid dreams, and improve dream recall.

- Drink a cup of mugwort tea or enjoy tincture before meditation to tune-in, listen more profoundly, connect. A great teacher helping us to remember...

**Tea:** Mix with other herbs such as lemon balm (sweet Melissa) and lavender to counter its bitter taste
Tincture: use fresh or dried
Eat it fresh! Dry mugwort for burning/smudging! Infuse it in apple cider vinegar; infuse it in oil for internal/external use.

Make a dream pillow: fold a piece of 8” by 8” fabric in half, and then sew two its sides together, leaving one side open for stuffing. Use soft and beautiful fabric! Stuff your pillow with a mixture of: 4 parts mugwort, 1 part lavender, 1 part hops, 1 part chamomile, 1 part rose. Sew the pillow closed and place it next to your head at night.

Safety Note: Overuse or very large doses can be toxic. Possible allergy with contact. Not for use during pregnancy or while breastfeeding. Be sure to check with your healthcare provider before use.
Mullein

*Anti-inflammatory, antibiotic, antihistamine, expectorant, demulcent, relaxant, vulnerary, sedative, antispasmodic*

**Botanical Name:** *Verbascum thapsus*  
**Family:** Scrophulariaceae  
**Common Names:** velvet mullein, Moses' blanket, feltwort, flannel  
**Parts Used:** leaves, flowers and roots  
**Energy/Taste:**  
- **Roots** — neutral and drying  
- **Leaves** — cool, sweet, bitter, moistening  
- **Flowers** — cool, neutral

**Origin/Location/ Appearance:** Originally from Europe and temperate Asia, mullein species have spread all over North America. Grows in rich garden soil as well as gravelly roadsides. Loves sunlight! A biennial plant, meaning it takes two years for mullein to complete its life cycle. In its first year, a large basal rosette of silvery, hairy green leaves appear. During its second year, the plant sends up a long flower stalk. The bottom of the stalk leaves grow alternatively, becoming smaller with height. Stalk may grow up to six feet high—a beacon in the summer and fall when bright, yellow flowers appear. Flowers have five petals and five stamens.

**Mullein Leaf:** mild relaxant and demulcent for lungs
- Soothes sore lungs, bronchial inflammation and dryness, and alleviates dry coughs; thins and expels mucus (expectorant) and relieves respiratory congestion

- Usefulness for coughs, respiratory and bronchial infections, asthma, colds, flu, fever, sore throat, hay fever

- Native Americans smoked mullein medicinally and ceremonially (expectorant actions when smoked)

- Glandular tonic: use for glandular imbalances; combine mullein with echinacea and cleavers

- Healing for migraines, diarrhea, colic, cramps and convulsions

- External use for ringworm, burns, sunburn, frostbite, bruises, eczema, warts, boils, gum and mouth ulcers

* [Mullein] is particularly used for dry, irritable, tickly coughs – the tickle sensation is usually evidence of inflammation conjoined with water stuck in the mucosa or skin.*
It is indicated in old coughs where the velvety carpet of the lungs, the hairs, are inflamed or worn down, so to speak. There may be tightness preventing full inspiration, tightness in the throat or voice box, or tightness in the sinuses and a feeling of tightness in the brain.


**Mullein Flowers:**
- The stalk of the mullein plant is full of beautiful, fragrant and bright yellow flowers that make healing oil for ear infections.

**Mullein Roots:** Harvest during the fall of the first year plant or the spring of the second year plant. It is not ideal to harvest the roots after the plant has gone to flower or seed.

- Mullein root used for arthritis, rheumatism, fractures, back pain

- Matthew Wood describes mullein’s root action in his book The Earthwise Herbal: A Complete Guide to Old World Medicinal Plants: “It releases synovial fluid into the bursa and disperses internal fluids into the surrounding tissues, lubricating joints, muscles, bones, and ligaments. It is thus a remedy for complex fractures, where the bone needs to be lubricated to be returned to its place. It is also indicated in spinal dryness, inflexibility, and pain, and nerve pain along pinched or irritated nerve tracts.”

- Mullein root strengthens bladder muscles for urinary incontinence issues (incontinence from stress, pregnancy, menopausal and childhood incontinence)

**Preparations:**
- Tea (flowers)
- Nourishing Infusion (leaves)
- Decoction (Roots)
- Tincture (all parts)
- Infused Oil (flowers)
- Smoke (Leaves)

**Safety:** Considered safe, no known warnings or drug interactions; raw leaves may cause skin irritations. It is important to harvest mullein from healthy, clean soil and resist the temptation to harvest from roadside areas as mullein’s roots draw and store heavy metals and other pollutants from deep in the soil. Be sure to check with your healthcare provider before use.
Garlic–Mullein Flower Oil for Ear Infections (relieves pain and eliminates infection)
Recipe from Rosemary Gladstar, *Herbal Recipes for Vibrant Health*:

- Two to three tablespoons chopped garlic
- Two to three tablespoons of mullein flowers
- Organic extra virgin olive oil

Place the garlic and mullein flowers in a double boiler or small saucepan. Add just enough olive oil to cover the herbs. Warm for 20 to 30 minutes over very low heat.

Strain well using fine mesh strainer and cheesecloth. Store in a tightly covered glass jar in the refrigerator.

To use, warm oil in a teaspoon held over a candle or stove burner. Warm only to body temperature (room temp).

Suction oil into a dropper and instill 3 or 4 drops into the ear. Massage the outer ear and around the base of the ear after applying.

Administer the warm herbal oil every 30 minutes or as often as needed. Any excess oil will drain out on its own within a few minutes.
Nettle

*Antihistamine, anti-inflammatory, diuretic, analgesic, anti-asthmatic, astringent, hemostatic, galactagogue, expectorant, nutritive, tonic, rubefacient*

**Botanical Name:** *Urtica dioca*  
**Family:** Urticaceae

**Common Names:** Stinging nettles

**Parts Used:** Leaves, seeds, roots and young tops

**Energy/Taste:** cool, sweet, slightly bitter (PK−, V+)

**Appearance/Location:** One may come across a large patch of stinging nettles in a forest, along a river, or in a meadow, backyard or pasture. Nettle is a perennial plant that spreads steadily, growing 3–7 feet tall with greenish-golden flowers.

- Healing benefits for nearly every major body system — lymph, glandular, respiratory, skin, urinary, and cardiovascular

- Stems and leaves are covered with very fine hairs which contain histamines, acetylcholine, and formic acid. One will feel the sting from simply brushing-up against the plant. Intentionally brushing areas of the body with nettle creates intense physical stimulation. This practice, known as urtication, is used to activate stagnant energies, stimulate the lymphatic system, increase circulation, and relieve pain and inflammation of joints (effective rubefacient). The stinging element dissipates when dried or cooked.

- Nettles contain an abundance of chlorophyll, calcium, chromium, magnesium, zinc, as well as generous amounts of highly-assimilable iron, manganese, niacin, phosphorus, potassium, protein, riboflavin, selenium, silicon, thiamine, and vitamins A, C, E and K.

- Nettles help the body fight a variety of infections by tonifying the lymph, lungs and blood circulation

- As a tonic, enjoy nettle tea each day: effective against low energy and fatigue; removes dampness and brightens chi

- Taken internally, nettles are known for their ability to **restore and re-energize adrenal glands**. Excellent tonic for the kidneys, offering relief from chronic urinary infections, strangury (stopped urine), gravel/stones, and any kind of kidney distress/inflammatory condition. Drink the tea cool as a diuretic for such urinary/kidney-related issues.
- A reproductive tonic for both men and women

- Regular consumption of nettle provides relief from allergies and hay fever, increases libido, boosts immune system, helps ease arthritic/joint aches and pains, aids swollen lymph glands and nerve inflammation, and helps to maintain healthy blood sugar levels

- Warm tea useful for asthma, mucous conditions of the lungs, diarrhea, dysentery, and hemorrhages

- Menopausal women find a superb friend and ally in nettles. This calcium-rich herb nourishes and steadies nerves, strengthens bones, prevents osteoporosis, ensures a healthy heart, and eases depression and mood swings. Most importantly, nettles support healthy functioning of the adrenals, which are stressed during menopause.

- Growing children benefit tremendously from nettle. This herb helps to build strong bones, teeth, muscles, and the brain, and also enhances focus, awareness and concentration.

- Mineral-rich nettle is one of the most nourishing tonics in the plant kingdom!

- Native Americans referred to nettle as green-gold and cultivated it in Mexico approximately 8,000 years ago. Nettle has traditionally been spun into thread and woven to make durable cloth. Also used to create paper.

Preparations
Tea: Use fresh or dry nettles for nourishing tea infusions. Enjoy 3–6 cups of infusion daily.
For any liver disorder: take nettle tea, tincture or capsule form
To tone nervous system: combine nettle in a tea with lemon balm, oat tops, chamomile and other nervines
For urinary health/treating edema: drink several cups combined with dandelion greens
For low energy/sexual dysfunction: combine nettle with milky oat tops and raspberry leaf
Tincture: Tincture fresh or dried; take 30–60 drops 2–3 x daily or as needed
To decrease prostate enlargement/prostate inflammation: combine nettle tincture with saw palmetto
COOK fresh nettles! Replace spinach/swiss chard in a recipe with NETTLES. Steam or sauté.
INFUSE fresh nettles in vinegar or oil; wash hair and scalp with a potent tea infusion (fresh or dry)
Nettle seeds can be collected in autumn—nourishing herbal stimulant!

Safety Note: Nettles are very safe for consumption. May increase the potency of diuretic drugs and heart medications. Do not consume nettles once they have flowered (mineral concentrations too high, especially silica, which may stress kidneys). Be sure to check with your healthcare provider before use.
OAK

Astringent, antiseptic, diuretic, antiviral, antibacterial, anti-inflammatory, expectorant, febrifuge, tonic, anti-tumor

Botanical name: White Oak, *Quercus alba*; European Oak, *Quercus robur*; Northern Red Oak, *Quercus rubra*; Black Oak, *Quercus velutina*; over 400 species in genus *Quercus*

Family: Fagaceae (Beech)

Cape Cod Common Species: Scrub Oak, White Oak, Black Oak

Location: Native to the Northern Hemisphere; North America has largest number of oak species

Appearance: Many deciduous species are marcescent— not dropping leaves until spring. In spring, a single oak tree produces both male flowers and small female flowers. Fruit is called an acorn with a cup-like (cupule) structure; each acorn contains one seed and takes 6–18 months to mature. Acorn and leaves contain tannic acid, which works to protect trees from fungi and insects. White Oak is a slow-growing, open branched native of eastern US; grows 60–120 feet, produces round-lobed leaves with non-bristly tips and white underside. Bark is light gray and shallowly fissured in broad, scaly plates. Acorns are about an inch-long and egg-shaped. White oak favors well-drained, moist soils. Black oak leaves are red in autumn, 4–9 inches long and three to five inches wide, elliptical, and narrow with seven to nine lobes. Young trees have gray and smooth bark, and older trees have black, thick, and furrowed with rough deep ridges. Inner bark is yellow and orange, and powdered inner bark produces a gold or orange dye. Black oaks favor dry, sandy, rocky, or clay soils.

Some oak specimens are over 450 years old. One large oak tree can produce 1,000 pounds of acorns per year. Oak species have been greatly defoliated over the latter half of the 1900s by gypsy moths.

Wild-harvesting: Forage young branches, twigs, and the trunks of saplings in early spring. Inner bark is best gathered in spring from roots protruding through the ground. Gather acorns in the autumn and discard any acorns with insect holes to avoid contamination.

Word Meaning: The Gaelic word for oak is *duir*, from which is the word *door*. A door protects one from outside influences and elements and also serves as a gateway. The Latin for oak is *quercus*, from the Celtic *quer* (fine) and *cuez* (tree). The word druid
may have been derived from the Celtic derw (oak) and ydd (a part of), which combine to form Derwydd.

**Practical Uses:** Very dense hardwood considered finest building material because of its strength and flexibility; stellar source of heating fuel. Acorns are a nutrient–dense food and were used as a staple food by Native Americans. Acorns can be extremely bitter; acorns produced one year tend to have a mild, neutral flavor whereas the ones produced every two years tend to be better. Species which produce acorns with large caps tend to be more bitter. All acorns need to be leached in a running stream for days (placed in basket or sack) or boiled repeatedly in water before they can be eaten and made into flour.

- Used for ceremony, food, medicine and building for as long as humans have been on the planet Earth.

**Spiritual Realm:**
- Oak trees are ruled by the sun, associated with the element FIRE, and bestow qualities of protection, healing, fertility, sexual potency, and financial success; Oak trees represent strength and endurance
- Strong trunk channels the forces of Earth and Sky
- The Seneca tribe perceived the oak as a tree of strength and reserved power—a tree that symbolizes structure, stability, awareness, reliability, sincerity, self-discipline and high ideals.
- Considered sacred by Romans, Greeks, and Druids

**Medicinal Actions:** Astringent, antiseptic, diuretic, antiviral, antibacterial, anti-inflammatory, expectorant, febrifuge, tonic, anti-tumor

**Parts Used Medicinally:** Inner bark, leaves, acorns
**Energetics:** bitter, astringent
** Constituents:** Tannins, saponins, and minerals
- Tannins are responsible for antiseptic properties; tannins bind with proteins present in tissues and create a barrier to protect body from harmful pathogens
- Tannins strengthen tissues and blood vessels
- Tannins reduce inflammation and irritation of skin and mucous membranes

- Bark contains B12, iron, and potassium

- Acorns provide 125 calories per ounce and are rich in polyunsaturated fats, B6, copper, manganese, and potassium

**Preparations**

**Tincture:** Fresh bark extraction, 1:2; dried bark extraction, 1:5

**Tea Decoction:** Use one teaspoon of inner bark per cup of water, simmer for twenty minutes covered, and enjoy 3 cups per day during times of need

**For enema or douche:** simmer one tablespoon of bark in one quart of water for thirty minutes, strain and cool until tea is lukewarm, and use the fluid for enema or douche

**Wash:** apply directly to skin or make a compress with tea

**Oak Leaves:** employed as first-aid remedy to promote wound healing; can be softened by immersing them in boiling water or steaming until limp; if water is not available, simply crush or chew; apply them topically to affected area for antiseptic, soothing poultice to reduce swelling, irritation, or bleeding

**Oak Flower Essence:** useful for people who experience despair and despondency yet keep trying; for people who never give up hope, enjoy helping others, and may overwork themselves; balancing for people who are patient, strong, courageous and reflect stability and perseverance. Flower essence encourages perseverance in the face of difficulty.

**Medicinal Uses:**
- Powerful, pure astringent: works to shrink, tone, or heal tissues
- Indicated for tissue relaxation with loss of tone, prolapse, outflow of fluids, loss of minerals
- For wounds and skincare: soothing, reduces swelling, prevents infections, and strengthens tissues

**Specific Indications** (thanks to Matthew Woods’ *Earthwise Herbal*)

**Mind/Senses/Nerves/Emotions:**
- People who struggle against adversity
- Alcoholism; people who struggle with addictions

Hair:
- Darkens and strengthens
- Dandruff and hair loss (tea used for hair wash)

**Teeth/Mouth/Gums:**
- Bark whitens the teeth
- Thrush in children (bark tea)
- Gum disease, dental caries, bad breath, canker sores, bleeding gums, oral infections, gingivitis, toothache, weak gums, loose teeth, easily cavitated teeth, mouth sores, mouth ulcers, herpes demineralization of teeth (as mouth wash or gargle)

**Respiration:**
- Swelling and puffiness under eyes
- Excess mucus and mucus congestion
- Sinus congestion, postnasal drip
- Mucus in the stomach causing indigestion
- Early stages of tuberculosis

**Heart and Circulation:**
- High blood pressure
- Heart palpitations
- Blue, black knobby varicose veins in the legs surrounded by yellow infiltration
- Healing and shrinking varicose veins (internally and externally)

**Digestion:**
- Lack of appetite
- Indigestion
- Hemorrhoids
- Intestinal prolapse
- Lack of tone
- Diarrhea, dysentery
- Intestines may be atonic, “relaxation of the bowels,” diarrhea
- Internal hemorrhages (tea used for enema, douche, or wash)
- Metabolism low
- Eliminating worms and parasites
- Tonic for Spleen Qi; healing for swollen spleen
- Healing prolapsed organs
- Improving stomach’s ability to secrete and absorb

**Kidneys/Bladder:**
- Kidneys not concentrating the urine resulting in clear, copious urine
- Ulceration of bladder, bloody urine, cystitis (UTI)
- Kidney stones caused by buildup of uric acid in bloodstream
- Bladder damage

**Female System:**
- Vaginitis (use douche)

**Muscular/Skeletal:**
- Osteoporosis
- Hernia (use a poultice)

**Lymphatics:**
- Sore throat, tonsillitis, swollen glands in throat (use tea as gargle)
- Lymphedema after surgical removal of glands
- Swollen spleen; pain in the spleen

**Endocrine:**
- Goiter
- Aids sluggishness of system

**Skin:**
- Bleeding (external compress)
- Eczema, irritation of the skin (use ointment from acorn extract)
- Laxity or swelling of tissues
- Putrid, foul, gangrenous ulcers (use external wash and compress)
- Skin irritations, rashes, cuts, scrapes, abrasions, and sores (tea used as a wash)
- Burns and bruises (external wash)
- Acne (external wash)
- Drying and healing poison ivy (external wash)
- Bee stings/bug bites (external wash or paste—mixture of tincture, clay, water)
- Healing and shrinking varicose veins (internally and externally)
- Ulcers (finely powdered bark)

**Additional:**
- Antidote to poison
- Treating fevers (substitute to Quinine)
- Nose bleeds (finely powdered inner bark used as snuff)

**Safety Note:** Generally considered safe yet do not take for more than two weeks at a time; use for acute conditions. Long-term usage may cause kidney damage, liver damage, nausea, stomach complaints. Children, pregnant women, breast-feeding mothers should avoid using white oak bark. Not recommended for people with pre-existing kidney or liver disease. Leaves and acorns of the oak tree are poisonous to cattle, horses, sheep and goats in large amounts due to tannic acid. Acorns are edible for humans after leaching of the tannins. Check with your healthcare provider before use.
PINE

Antibacterial, antifungal, anti-inflammatory, antimicrobial, antiseptic, antioxidant, circulatory stimulant, decongestant, expectorant, pectoral, immune stimulant

Botanical Name: Pinus rigida (Pitch Pine), Pinus Canadensis (The Eastern Hemlock), Pinus nigra (Black spruce), Pinus strobus (White Pine), Abies balsamea (Balsam Fir)
Family: Pinaceae; over 100 species in Genus Pinus
Cape Cod Species: Pitch Pine, White Pine

Appearance/Habitat: These tall, straight, resinous evergreens retain green needles year-round. Two groups of pines—softwood pines and hardwood pines. Softwood pine needles are bundled in groups of five, whereas hardwood pine needles are found in groups of two or three. Pitch pines are a pioneer conifer of Cape Cod woodlands, specially adapted to the windy peninsula and sandy, acidic, well-drained soil. They are drought-tolerant and fire-adapted species. Pitch pines dominate the Cape Cod landscape and cast shade on smaller trees and shrubs, including scrub oaks. In some places, Pitch pines have declined in abundance, allowing for shade-tolerant black and white oaks to thrive. Found from central Maine south to northern Georgia and as far west as western Kentucky. The beautiful softwood White Pine is native to eastern North America and grows throughout Cape Cod. Found along the Eastern seaboard from New Brunswick to Georgia, west to the Great Lake region and Appalachians. White Pine needles are long, slender, bright green, 2–5 inches long, and grow in bundles of five. Young trees have smooth, brownish–gray bark which becomes rough, heavily-grooved and light brown as the tree grows and ages. Cones are 4–7 inches long, narrow, yellowish–brown in color, and often covered in resin. Pines can reach heights of 180 ft. White Pines commonly reach 200 years in age and can grow to be over 450 years old. Pines are tolerant of virtually every soil type in New England—wet, boggy, sandy, or dry.

Practical Uses: Softwood timber used for firewood, lumber, furniture, construction, paneling, musical instruments, toys, household implements, etc. Many parts of the Pine Tree are useful for medicine, food, firewood, caulking boat seams, winter decorations, pine-needle basketry, and woodland-bathing.

Wild-Harvesting for Medicine: Pine needles available year-round (whenever they are green). Needles and twigs may be harvested together. For sustainable foraging practices, collect dropped branches from the forest floor after a storm. Inner bark from young trees is best collected May–June. Young male cones and pollen are available in the spring and summer.
Parts Used for Medicine: Needles, Inner Bark, Sap/Resin, Pollen, Nuts

Energy/Taste of Needles: Warm, Dry, Slightly Sweet, Bitter, Pungent + Sour

Constituents: Vitamin C (needles), essential oils (including terpenes, monoterpenes, sesquiterpenes), flavonols, resin, starch, many different acids, etc. White Pine contains Shikimic acid, which is known to reduce severity and duration of flu.

Medicinal Uses/Preparations:
- White Pine was widely used by Native American Indians and adopted into practice by early settlers. In Europe, pine oil and pine products have been used since Middle Ages
- Can be chewed, brewed into tea, made into syrup and tincture, infused into oil for a salve, prepared as a vinegar, made into pine tar soap

- Both stimulating and anti-inflammatory—indicated when there is inflammation and tissue depression/poor oxygenation; stimulation increases oxygenation

Pine Needle Tea/Inner Bark Tea:
- High in Vitamin C (5x as high as oranges)
- Vitamin C deficiency negatively impacts adrenal glands, immune function, and integrity of tissues
- Use for cold, flu, cough, respiratory conditions, sinus congestion, respiratory infection, bronchitis, laryngitis, and immune support
- Use at the onset of infection (cold or flu) to stop infection from travelling deeper
- Used in respiratory infections where phlegm is viscis, hardened, yellow/green
- Use when infection is deep in the bottom of lungs or in sinuses
- Especially useful when respiratory or bronchial complaints are wet and cold
- A tea of needles and swings is helpful for expectoration and removal and thinning of mucus from lungs
- Twigs and needles make a healing STEAM for lung congestion
- White Pine can stimulate coughs (so if cough is dry and spasmodic, white pine may exacerbate condition)
- Historically has helped to keep people clear of scurvy
- Acts on digestive tract, kidney, and skin as antiseptic
- Healing for kidney and bladder imbalances
- Needles contain an abundance of life-enhancing antioxidants
Traditional Chinese Medicine uses Pine as a tonic for Qin Qi, Chest and Lung Qi

- **Warming circulatory stimulant: make healing bath salts**
- Pour boiling water over crushed pine needles to make a light, delicious infusion
- Simmer fresh needles to make a stronger decoction

- **Pine Needle Syrup:**
  - Natural decongestant and expectorant
  - Antiseptic, antibacterial properties in conjunction with decongestant and expectorant actions makes it perfect medicine for colds, cough, sinus congestion, excess mucous, allergies, bacterial infections

- **Pine Needle Vinegar/Tincture:**
  - Preserve all the vitamins found in fresh pine needles by soaking them in apple cider vinegar for 6 weeks. Fill wide-mouth ball jar with fresh pine needles and pour room-temperature raw apple cider vinegar over pine needles (make sure they are completely covered). Cover with a parchment paper and a plastic lid, and make sure you label with date and ingredients.
  - Young needles can be tinctured fresh or dried—best fresh, 1:2 ratio.

- **Pine Sap/Resin:**
  - Pine sap, like many resins, is potent antimicrobial and antibacterial
  - Resin is important source of turpentine (pine tar and turpentine used externally)
  - Pine sap increases the effectiveness of coughs, kills bacteria, opens bronchioles and improves breathing, making it very useful for respiratory infections such as bronchitis or bacterial pneumonia
  - Sticky sap can be used to cover wounds, splinters, boils, sore muscles, cuts and swelling, blisters, burns, sores, as well as eczema and psoriasis. Collect hardened sap and heat gently until it is pliable.
  - American Indians use pine sap as a patch to keep a wound clean and to pull toxins/impurities to surface (used on gunshot wounds to pull out bullet)
  - In regards to splinters, Michael Moore explains, “the abietic resins stimulate topical circulation, increase inflammation, and noticeably speed up the foreign body response; pus and fluids build up much more quickly than if unattended, and the splinter will usually pop out the next day.”
- Pine resin is an effective insect repellent; sap can also be used as adhesive glue.
- Pine's resin is adhesive and antiseptic, making it useful for drawing out mucus; for pulmonary purposes, make strong tea by boiling inner bark slowly to release resins or simply chew the pitch.
- To make pine resin/sap tincture, be sure to use organic pure grain alcohol. 100-proof vodka is 50% water — pine will not extract well with this. Use pure grain alcohol! Cover the sap with high-proof grain alcohol; cover jar with parchment paper and a tightly-fit lid; allow to extract for 4–6 weeks; be sure to label with name and date.
- Collect pine saps from wounds of trees or scrape it off pine cones.

-Pine Sap Honey:
- Gently heat raw honey and sap together, stir and encourage the two ingredients to merge; do not boil honey. One can simply add pine needles to raw honey without heating and allow it to sit for several weeks to infuse.

-Pine Sap Salve & Pine Needle Salve:
- Pain-relieving and anti-inflammatory properties as well as antiseptic, antimicrobial, antibacterial, and antifungal make the sap and needles ideal for a oil/salve
- Infuse sap and needles in carrier oil (olive oil, sweet almond oil, grapeseed oil, coconut oil, etc.) with heat — sun infusion or use a double-boiler method on the stovetop. Follow Salve-Making Instructions.

-Pine Pollen Medicine:
- Pine pollen has high levels of androstenedione, which raises testosterone levels.
- Ingest the pine pollen (place under tongue) or tincture the pollen
- Be aware that while the pine pollen is flying off of the trees and coating everything, other trees are pollinating as well — birch, oak, cedar, and sycamore. Some people are actually allergic to the other tree pollen rather than just the pine pollen.

- Inner Bark/Pine Cones/Pine Nuts:
- The cambium of the pine, found between the bark and the wood, can be eaten raw, boiled, added to soups or stews, or roasted and made into flour.
- The inner bark is soft, moist, white, and high in Vitamins A and C.
- The inner bark can also be fashioned as an antiseptic band-aid for wounds (cuts, scrapes, etc.) Wrap inner bark around the wound and fasten with cloth or tape.
- Inner Bark should be boiled and the soft part stripped out and pounded in mortar, and then sufficiently moistened with alcohol and applied to burns or sores.
- Young male pine cones, known as *microsporangiate strobi*, can be boiled and eaten. Male pine cones are small, soft and papery whereas female cones are tough and woody.
- Pine nuts: 95% of the pine nuts commercially available are from China and Korea
- Most pine nuts are coming from the pinon pines, *Pinus monophylla* or *Pinus edulis*, which grow throughout Colorado, Utah, Arizona and New Mexico.

-Pine Oil:
- Used in aromatherapy: stimulates discharges from mouth and nose; increases circulation in the capillary bed resulting in greater oxygen exchange
- Increases oxygen uptake in cells and carbon dioxide release: cleansing!
- Clears out old mucus

-Pine Cleaners:
- To make a simple, antiseptic liquid cleaner: use a pine needle-infused vinegar and add a little castile soap, essential oils (such as Tea Tree, Peppermint, Lavender, Lemongrass, Lemon, Cinnamon, Orange peel, Rosemary, Juniper, or other essential oils). Store in a spray bottle and use on surfaces.
- Homemade ‘PineSol’ for Wood floors and furniture: Mix together 1 tbsp. liquid castile soap (Bronner’s), 4 cups warm water, 15 drops pine essential oil, sprig of rosemary.
- Conventional PineSol cleaner contains toluene—a chemical that has been linked with birth defects, hormonal imbalances, cancer, and other health complications.

-The Spirit of Pine:
- Inhale the incredible pine scent and allow your heart to be uplifted with the healing, magical gifts of the PINE! Enjoy making pine needle baskets, wreaths, tassels
- The Iroquois Confederacy, the people of the Great Peaceful Nations, honor the “Great Pine of Peace”
- Pine trees carry a message of thoughtfulness and concern for future generations and a hope of peace for all beings. When Native American tribes would gather, it was custom to plant a pine tree, the tree of peace.
- Native people taught Europeans to eat the pine needles and drink pine tea to ward off disease and death
Eclectics learned of medicinal properties from indigenous people, including the Algonquin, Chippewa, Ojibwe, and many more

**Specific Indications** (from Matthew Wood’s *EarthWise Herbals*):

**Constitution/Complexion:**
- Gray oxygen–poor complexion (smoker’s gray complexion)

**Mind/Senses/Emotions:**
- Calms the nerves; flower essence used for people who tend toward self-blame and guilt

**Respiration:**
- Colds and flus
- Old sinus infections with viscid mucus which is difficult to expel
- Chronic bronchitis and lung infections with stuck, viscid, green mucus
- Bronchial complaints that are wet and cold in nature
- Strep throat, tonsillitis, laryngitis
- Asthma

**Digestion:**
- Hemorrhoids (bark, external use)
- Dyspepsia

**Urinary:**
- Edema
- Diuretic: promotes urination

**Muscular/Skeletal:**
- Chronic rheumatism and neuralgia
- Bones and joints

**Skin:**
Sap or salve on a wound cleans it, seals it, and draws out impurities and foreign objects (splinters and bullets)
- Ulcers
- Sores, burns (external poultice of bark)
- Scurvy
- Promotes perspiration
Safety Notes: Strong tea should not be taken for kidney inflammation as pine stimulates kidneys. Frequent use may irritate kidneys. Pine oil may irritate skin and mucous membranes. Large doses of pine oil may cause central nervous system depression. Needles, bark, and branches of many familiar pine trees are toxic for cows, sheep, goats, and horses—potentially causing premature births and abortions. Avoid tea in HIGH DOSES during pregnancy. Be sure to check with your healthcare provider before use.
Plantain

Diuretic, astringent, vulnerary, expectorant, demulcent, antiseptic, anti-inflammatory

Botanical Name: *Plantago major*, *P. lanceolata*; its cousin, *Plantago psyllium* is the common psyllium husks
Family: Plantaginaceae
Common Name: Plantain, ribwort, white man’s footprint
Energy/Taste: bitter (drains heat from tissues), astringent, sweet, mucilaginous (these tastes indicate an action and affinity for the mucosal membranes of the body and the digestive system), cooling
Origin: Originated from Europe—now widely naturalized throughout the world
Parts used: leaves and seeds

-One of the most critical plants to have on-hand, especially in an herbal first aid kit and in the home apothecary; very interesting to find a plant that is equally astringent and mucilaginous, revealing a unique combination of drying and moistening properties!

-The astringency and vulnerary actions come from the presence of tannins. The mucilage/polysaccharide content gives plantain its moistening properties, which helps to coat, soothe and cool inflamed and irritated tissues. The flavonoids promote a cooling and anti-inflammatory effect as well.

-Plantain is a highly effective diuretic; used in flushing treatments for the kidneys and urinary tract and treatment of urinary tract infections

- Plantain enhances secretions and stimulates the activity of the mucosa; cleanses and disinfects mucosa; tones the mucous membranes and also helps to soothe, cool and moisten membranes

-Astringency: helps to staunch bleeding in cuts, scrapes, and other types of bleeding wounds. Topically, can also stop bleeding internally

-Vulnerary medicines: heals wounds and tissues externally as well as internally, specifically in the digestive system

-Demulcent: a great demulcent remedy for treating dry conditions in the mucous membranes lining the urinary tract, respiratory and digestive systems
- Best in fresh preparations of the plant as compared to dried leaves; dry preparations more astringent

- It contains a wide variety of polysaccharides which are responsible for its demulcent properties

- **Inflammation-Modulating**: a powerful and effective remedy for treating inflammatory conditions in the organ systems, specifically the skin, the urinary, respiratory and digestive systems

- **Antiseptic**: plantain contains a handful of constituents which have antiseptic properties, making it beneficial in the treatment of infections

- **Moistening Expectorant**: a highly effective expectorant for the lungs, specifically used for dry coughs (contraindicated in a predominantly wet cough)

**Urinary Tract:**
- Diuretic, demulcent, antiseptic, and inflammation-modulating actions make it a beneficial remedy for the treatment of urinary tract infections

- Indicated when there is an excess of irritation, heat, dryness and bleeding. Plantain cools the heat and inflammation, soothes the irritation, moistens the dryness, astringes any bleeding, assists in drawing out and clearing infection, and provides antiseptic action.

- For blood in the urine, Plantain combines well with Yarrow (*Achillea millefolium*) to staunch blood flow and heal the tissues. If infection is present, plantain combines well with Uva-Ursi (*Arctostaphylos uva-ursi*) and Echinacea (*Echinacea angustifolia*).

**Respiratory System:**
- Demulcent expectorant and antiseptic for the treatment of respiratory infections

- An effective soothing, moistening expectorant remedy for a dry irritable cough

- When mucous membranes are lacking in their production of mucus to coat, soothe, and protect the membrane, they may easily become dried out, inflamed and irritated.

- Healing for bronchial infections such as pneumonia; indicated when the trachea and bronchi are irritated and dry cough is present
- Plantain cools and moistens the mucosa

**Digestive System:**
- Vulnerary action makes Plantain one of our great healing remedies for the digestive system, including ulcerations, inflammations, infections, and leaky gut syndrome.

- Leaky gut is simply a wound in the gut lining. The lining is a semi-permeable membrane; when gut is “leaky,” more substances/toxins enter the circulatory system and the lymphatic system.

- Any vulnerary herb that treats the skin topically will heal the gut wall, which is essentially our inner skin. Other vulnerary herbs, such as Calendula (*Calendula officinalis*), St. John’s Wort (*Hypericum perforatum*), Comfrey (*Symphytum officinale*), and Yarrow (*Achillea millefolium*) also heal leaky gut.

- The combination of astringency/vulnerary actions help to heal and tonify the lining of the gut.

- The soothing demulcent action, as well as the antiseptic quality, helps to alleviate any possible flora imbalances or infection.

- Also healing for colitis, ulcers, inflammation from ingestion of intolerance or allergenic foods, parasites/worms and other digestive infectious agents, and diverticulitis.

**Teeth, Mouth, and Gums:**
- Healing for dental problems, especially infection and nerve pain; astringent, demulcent, antiseptic, and drawing actions are highly beneficial for dental issues.

- Remedy for ulcers or canker sores; plantain cools down the heat and irritation, soothes the tissues, and heals the ulceration within the mouth. For canker sores/ulcers: best to hold the tea in the mouth, or chew on the fresh leaves and hold them against the ulceration.

- For Dental Infections/Toothache: chew up leaves and place against infected area.

- The astringency will help to heal the tissues; the drawing capacity will help remove dampness and stagnation; inflammation will be reduced, and plantain will even provide a mildly numbing effect upon the nerves.
- Plantain combines well with Goldenseal (Hydrastis canadensis), Myrrh (Commiphora molmol), and Spilanthes (Spilanthes oleracea) for the treatment of dental infections and general maintenance of the teeth and gums; for acute toothache, combine with St. John’s Wort (Hypericum perforatum), Kava-Kava (Piper methysticum), and Clove (Syzygium aromaticum)

FIRST-AID REMEDY:
- Plantain the ability to both tonify and astringe tissues while at the same time moistening, softening, soothing and cooling tissues

- The cooling and inflammation-modulating effects are especially useful for tissues which are irritated, inflamed, bleeding and worn down from too much metabolic activity

- Plantain is truly unique in its action as what Matthew Wood calls a “drawing agent.” Plantain has the ability to “suck out” dirt, splinters, stingers, infection, venoms and poisons from the skin. This makes it a most important first aid remedy and should be the first plant used in any type of venomous snake bite, poisonous spider bites (brown recluse, black widow etc.), tick bites, mosquito bites, poison ivy or poison oak rashes and bee stings

- If used immediately upon bite or sting, plantain may prevent the venom from entering the circulatory system and triggering a systemic immune system response.

- Mixing bentonite clay and plantain infusion or chew-up plantain is a perfect combo for drawing out venom, stingers, and reducing inflammation

- Applied topically, plantain has the ability to draw-out infection, bring fresh blood to the surface, stimulate local immunity, detoxify the area, and provide antiseptic cleansing

**Preparations:**
- Tea infusions (hot or cold), tincture, spit poultice, liniment (soaking clean cloth in strong tea and wrapping afflicted area), oil infusion

- Plantain can be used simply as fresh leaves that have been chewed up into what is called a “spit poultice,” or the fresh leaves can be pounded to a pulp and applied topically
Safety Note: No known contraindications with Plantain leaf, although some people do have allergic reactions from the ingestion of psyllium husks. Always check with your healthcare providers before consuming.
Red Raspberry Leaf

_Astringent, tonic, antispasmodic, pregnancy regulatory, hemostatic_ (herb for regulating blood), _mild alterative, anti–abortifacient, anti–inflammatory_

_Botanical Name:_ *Rubus idaeus, R. strigosus*  
_Family:_ Roseacea (Rose)

**Energy/Taste:** cooling, drying, bitter, astringent  
**Origin:** *R. idaeus* is the cultivated variety found in most herb stores—native to Europe and Northern Asia; *R. strigosus* is the wild variety, considered more potent—native to North America.

- Highly nourishing reproductive tonic; provides nutrients that tone and strengthen the entire genitourinary system; enhances fertility in women and men.

- Rich source of iron and niacin; healing for anemia (often combined with nettle); among the richest sources of manganese, a trace mineral used by body to produce healthy connective tissue and an important factor in energy metabolism; high in calcium, phosphorus, potassium, vitamins B, C, E; leaves contain large amount of tannins, which are responsible for astringent properties (astringent defined as the act of causing tissues to contract or tighten).

- Safe, traditional healing remedy for pregnancy and childbirth. Prepares the body for birthing! Recognized as a powerful uterine tonic by indigenous people throughout the world.

- The presence of fragarine, an alkaloid found in rich concentrations in the leaf, contributes to the plant’s potency as a pregnancy tonic. Fragarine, in combination with other constituents, serves to tone and relax the pelvic and uterine muscles and helps uterine muscles contract smoothly and uniformly.

- Reduces morning sickness, used to prevent miscarriage, relaxes and tones the uterine muscles, and prepares uterus for childbirth; aids in providing efficient contractions during childbirth and easy expulsion of placenta; reduces bleeding and hemorrhaging after birth; tones pelvis before and after childbirth; promotes baby’s bone and skin development.

- Recommended for use during the entire nine months of pregnancy. Increases breast milk supply and enriches breastmilk!
Use for irregular and/or excessive menstruation. Regulates menstrual cycle; eases menstrual cramps; decreases menstrual flow. The high concentration of minerals and vitamins makes it a superb nutritive tonic for use during all the cycles of womanhood. Eases spasms (menstrual cramps/legs cramps); eases intestinal inflammation.

Use tea as a gargle for sore throat and sore/infected gums; use as tea infusion or tincture for diarrhea and dysentery.

General hemostatic for bleeding (nose bleeds, coughing of blood, blood in urine and stool, bleeding from trauma); hemostatic herbs generally decrease kapha (fluids) and increase vata (dryness).

Preparations (dried or fresh)

**Tea:** Drink several cups of infusion daily to experience toning effects

**Tincture:** use 20–30 drops, 2–4 x daily as tonic

**Safety Note:** Lowers blood sugar levels (diabetics be aware). Check with health care providers to find out about possible adverse interactions with pharmaceuticals.
Reishi

Adaptogen, antioxidant, anti-inflammatory, anti-allergy, antibacterial, antifungal, antihistamine, antiviral, anti-tumor, anti-tussive, cardiotonic, blood-sugar balancing, expectorant, hypotensive, hepatoprotective, immunostimulant, immunomodulator, longevity tonic, nerve, pectoral

**Botanical Name:** *Ganoderma lucidum, G. tsugae, G. oregonense, G. resinaceum, G. capense*

**Family Name:** Ganodermataceae

**Common Names:** Ganoderma, Ling Zhi (Chinese), Mannentake (Japanese), Linh Chi (Vietnamese), Hemlock Varnish Shelf, Ten-Thousand Year Mushroom.

- Ganoderma means “having lustrous or shiny skin”
- The Chinese name Ling zhi is derived from the pictographs for “shaman praying for rain” (ling) and “tree fungus” or “substance used to concoct an elixir of immortality” (zhi)
- Another translation of Ling Zhi: “soul/spirit mushroom”
- Ling translation: spirit, soul, spiritual, sacred, miraculous

**Taste/Energy:** sweet, bitter, meaty, salty, warming

**Part Used:** Fruiting Body of Mushroom

**Constituents:** phytosterols, terpenes, protein (adenosine, a component in the ATP cycle), antioxidants, fatty acids (palmitic acid, oleic acid, linoleic acid), polysaccharides (beta-glucan as well as 100 different types of polysaccharides), triterpenoids (ganoderic acids—at least 119 types), ergosterols

**Description:** Ling zhi (*G. lucidum*) mushroom is native to Asia. North American species include *G. applanatum* and *G. tsugae*. Reishi is a shelf mushroom that may fruit for many consecutive years on the same tree. Reishi is saprobic, meaning it grows and thrives off of dead or decaying matter. In our area, reishi is most commonly found on dead or dying Eastern Hemlocks (*Tsuga candensis*), as well as Spruce and Fir trees. In Northeastern US, reishi may also be found growing on decaying deciduous trees (Maple, Oak, Elm, Willow, Sweetgum, Magnolia and Locust). In the northeast, *G. lucidum* is most often found on Maple trees, and in the southeastern and southwestern US, reishi is most often found on decaying Oak trees. Various species of reishi grow in Asia, Europe, North America, and in the Amazon rainforest. All members of this family can be used interchangeably.
Appearance: A shiny, brownish-reddish cap appears small and knobby as reishi begins to fruit. It then fans out and becomes kidney-shaped. Reishi often has white margins with orange color on the edges. Fading colors from red to orange to white often exist. Caps range in size from 4–24 cm across. Stems of mushroom are attached to tree; sometimes no stems are present. The underside pore surface of Reishi is white when young and fresh and fades to reddish-brown with age. Reishi is shaped like a saucer and may be found in various colors (purple, green, black, brown, white, red) depending on type and location.

Collection: Reishi grows from early summer into the autumn months. Harvest reishi when the underside is a pure white color. Cut the fresh mushroom into thin slices to dry. Be aware that older reishi may have insect damage.

Ecological Note: Hemlocks are slowly being decimated by the Wooly Adelgid beetle. As the Hemlocks decay, more reishi are fruiting on the decaying host, yet in time reishi may become more rare as the Hemlocks disappear.

MEDICINAL USES:
- Long history of use in Traditional Chinese Medicine, Japanese medicine, and Korean medicine
- Recorded history of use dating back 2,000 years; folk use for at least 4,000 years
- Known as the King of all medicinal mushrooms, reishi is well known for its immune-enhancing properties. Safe to take daily over a long period of time, reishi is one of the most revered herbs in the medicine systems of East Asia, earning it the nickname The Mushroom of Immortality.

Heart Tonic:
- A Cardiovascular Tonic for the physical and spiritual heart
- Indicated for hypertension
- Shown to lower blood pressure and lower elevated levels of cholesterol
- Indicated for congealed blood; inhibits clot formation
- Known to reduce cardiac pain (angina) and arrhythmia
- In Traditional Chinese Medicine, Reishi is used to nourish the heart and known as a Shen Tonic.
- The heart holds the Shen, which is translated as “Spirit.” The Shen is the seat of the spirit, which resides in the heart. Shen encompasses a person’s mind/consciousness and emotional balance. Disturbances of Shen produce what the western world considers mental health issues: anxiety, depression, moodiness, insomnia/night terrors, manic depression, schizophrenia.
- Calms the spirit and the nervous system

**Immune-Enhancing/Stimulating/Modulating:**
- **Beta-glucan** works to strengthen communication and balance/modulation of immune system
- Remember: beta-glucan and other polysaccharides are water-soluble
- Strengthens the immune system by stimulating production of monocyte, macrophage, natural killer cells, T cells and tumor necrosis factor
- Regulates excessive immune system response (allergies and autoimmune disease).
- Reishi has anti-viral, antibacterial, and antifungal properties
- Amazing tonic for post chemotherapy/radiation treatment to restore immune system
- May be used as a safe adjunct therapy alongside conventional cancer treatment
- Some studies in animals show anti-tumor effects
- Contains polysaccharides that have been shown to stimulate an incredible increase in cancer-fighting compounds
- Combines well with Astragalus root

**Respiratory Tonic:**
- Reishi has a strong affinity for the lungs
- Expectorant actions work to thin and expel mucus. Mucus is a result of inflamed mucous membranes.
- Healing for chronic asthma, bronchitis, pneumonia, and COPD
- Increases the oxygen-absorbing capacity of the alveoli in the lungs

**Altitude Sickness:**
- Increases oxygenation in the blood; take 7-14 days before encountering increased elevation

**Blood-Sugar Balancing:**
- Useful for metabolic syndrome (prediabetes), diabetes and hypoglycemia
- If using insulin, be sure to work closely with herbalist and physician

**Hepatoprotective:** Protects the Liver

**Anti-inflammatory:**
- Study shows Reishi to be as effective as prednisone
- Terpenes are steroid-like compounds with anti-inflammatory action. Remember: terpenes are best extracted in alcohol or very, very strong water decoction.
Adaptogenic:
- Supports adrenal health and adrenocortical function; rebuilds adrenal cortex
- Improves resistance to stress and disease
- Positive impact on neuroendocrine system and immune system
- Reishi’s adaptogenic effects are mild and cumulative
- Healing for nervous exhaustion and adrenal burnout

More Uses:
- Tonic to the parasympathetic (rest, relax, digest, sleep, dream) side of the nervous system and to the adrenal cortex that supports parasympathetic function
- Healing for people with deficient qi and blood, manifesting as fatigue, weakness, shortness of breath, dizziness
- Healing for immune-deficiency diseases, chronic fatigue, and recovery from debility and surgery
- Healing for nerves and muscles; pain and spasms
- Healing for chronic degenerative conditions

Preparations & Dosage

Tincture: Make Double Extract (combination of alcohol extract and strong tea decoction)
Dosage: 1-2 teaspoon, 1-4x/day depending

Tea Decoction: Add 1-2 oz. dried cut/sifted mushroom to 32 oz. water, slowly decoct for 1-2 hours or until water is reduced by 1/2 (16 oz. left for consumption). Drink 3-4 cups daily. Enjoy slices of reishi in soups, broths, beans, stews.

Syrup: 1 tbsp., 3-6x/day

Safety Note: No known side-effects. A super safe herb for children, pregnant folks and elders. Caution for people taking immune-suppressive drugs following organ transplant, hip/knee replacement surgeries, etc. Be sure to check with a healthcare provider before use.
Sage

Anti-inflammatory, antibacterial, antihistamine, astringent, antispasmodic, estrogenic, antimicrobial

Botanical Name: *Salvia officinalis*  
Family: Lamiaceae (Same family as mint, rosemary, basil, catnip, oregano)

Common Names: garden sage, common sage, culinary sage

Parts Used: leaf

Taste/Energy: pungent, oily, astringent, aromatic, warming

Location/Appearance: Member of the Mint family and native to the Mediterranean region. Numerous varieties and species—many have similar properties to that of *officinalis*. The great white sage, *Salvia apiana*, native to California, is more stimulating and warming and less astringent. Sage is a perennial evergreen with leaves that are green, gray, and purple in color; leaves are withered and have a velvet-like texture when rubbed; leaves contain fixed and volatile oils (including thujone), tannins and bitters.

*Salvia* comes from the Latin *salvus* meaning “safe” and *salvere* meaning “to be well”

Regulation of Fluids:

- Regulates and balances all fluids in the body—sweat, urine, blood, lymph, milk

- Useful for mothers who are weaning children from breastfeeding and working to decrease milk production

- Sage useful for people who experience night-sweats and lose fluids from excessive perspiration; sage works as an antiperspirant from people who excessively sweat and as a perspirant, stimulating sweat production for those who are blocked-up and seldom sweat.

Properties of Sage Change with Method of Preparation:

- Hot tea brings out aromatic qualities; hot tea used as stimulant and diaphoretic to increase sweating, salivation, and internal secretion

- Cold tea will decrease internal secretions, sweating, salivation, milk (lactation) production and mucus production.

- Lukewarm tea is astringent and bacteriostatic (beneficial for sore throats)
Bile and Absorption of Lipids:
- Mildly stimulates gallbladder to release more bile and thus improve digestion and absorption of fats and oils; bile supports the eliminative function of the bowels
- Increased absorption of fats and oils helps combat drying and aging; healthier lipid content supports strong, supple, water-retaining skin and strong tendons

Respiration, Throat & Gum:
- Healing for canker sores, swollen glands, hoarseness, throat irritation and inflammation
- Soothes sore throat, tonsillitis and laryngitis, pain while swallowing
- Useful for fever, especially when sore throat is present
- Clears congestions
- Dry, ticklish throat; dry, irritable cough; weak and spasmodic weak reflexes
- Muscular tension and pain in the upper body, shoulders, and chest associated with lung conditions and continuous coughing

Digestive System:
- Mildly stimulates gallbladder to release more bile and thus improve digestion and absorption of fats and oils; bile aids the eliminative function of the bowels
- Low appetite
- Excessive digestive mucosa or lack of secretion
- Indigestion with weakness and debility
- Difficulty digesting fats and oils
- Chronic diarrhea
- Dysentery
- Parasites
- Gallbladder colic

**Kidney and Bladder:**
- Bladder infection (cystitis)
- Increased secretion of urine

**Female:**
- Excessive or deficient sexual desire
- Infertility
- Dryness; lack of vaginal secretion
- Amenorrhea: absence of menstruation
- Morning sickness/nausea during pregnancy
- Pregnancy: to prevent premature delivery
- Breast cysts
- Dries-up breast milk (contraindicated during lactation)

- Highly important herb for menopausal women: specific for the transition from fertility levels of estrogen to post-menopausal levels; helps body switch from ovarian (fertility levels of estrogen) to adrenal production (maintenance levels)
- Effective for menopausal night sweats and hot flashes
- Specifically indicated when women are drying-out during menopause (drying of tendons and skin); vaginal dryness
- Reduces lactation, sexual desire, appetite (all controlled by hypothalamus)
- Healing for yeast infection
- Helps to rebuild strength and vitality
Male:
- Balancing for excessive or deficient sexual desire, sexual debility, or spermatorrhea (presence of sperm in urine)

Indicated for:
- People with dryness of hair, skin, mucosa, tendons; drying up of secretions
- Children, elderly, debilitated people, sensitive constitutions
- Those who are prone to colds, flus, cough that typically begin with dryness and sore throat
- People with withered, dry skin and withered tendons

Skin:
- Healing for insect bites, wounds, bleeding, cold sores, herpes
- Dry, weathered skin (like a sage leaf)

Muscular and Skeletal:
- Weak, dry tendons
- Pain in limbs and joints (worse from cold and damp); arthritis
- Epilepsy, shaking trembling
- Calms convulsions and shaking (homeopathic dose)

Other:
- Insomnia: drink a cup of warm tea at bedtime
- Sage helps to protect nervous system when the body is dealing with viral or bacterial disease
- Flu with intermittent fever and chills
- Exhausting night sweats (drink cold sage tea)

Preparations
Tea:
- A tea infusion is pleasant and quite effective
- Hot tea brings out aromatic qualities; hot tea used as stimulant and diaphoretic to increase sweating, salivation, and internal secretion

- Cold tea will decrease internal secretions, sweating, salivation, milk (lactation) production and mucus production.

- Lukewarm tea is astringent and bacteriostatic (beneficial for sore throats)

- Make a strong infusion and use it as a gargle for sore throat, throat irritation or inflammation, or any infection in mouth.

- **Tincture**: fresh sage leaves, 1:2; dosage: 3-30 drops, 1-3 x day
  - **Tincture**: dried sage leaves, 1:5, 50% alcohol; dosage: 30-60 drops as needed

- Delicious culinary herb — enhances flavor of food and helps the body to digest fatty meats

- Use white sage to smudge (burn a bundle of dried leaves) — energetically-clearing physical environments, chakras, etc.

**Safety Note**: Not recommended for prolonged dosage (longer than three weeks); do not use during lactation unless mother desires to dry-up milk.

**RECIPE**: A Concentrated Decoction for Colds and Flus
From Stephen Buhner’s *Herbal Antibiotics*

1 ounce dried white or culinary sage
3 cups cold water
Pinch of cayenne
Wildflower honey
Juice of one lemon

Combine sage and cayenne in water. Bring to boil, then reduce heat and simmer, uncovered, until liquid is reduced by half. Let it cool enough that you can work with it. Strain the liquid and press sage to extract as much liquid as possible. Add wildflower honey to taste; add juice
of one lemon. Store in the refrigerator. Take 1 tablespoon or more as often as needed at the onset of throat or upper respiratory infection.
Saint John’s Wort

*Anti-inflammatory, vulnerary, antiseptic, astringent, antibacterial, antiviral, diuretic, sedative, nervine, trophorestorative, bitter tonic*

**Botanical Name:** *Hypericum perforatum*  
**Family:** Hypericaceae  
**Common Names:** amber touch-and-heal, goatweed, barbe de Saint-Jean  
**Parts Used:** aerial part, especially yellow flowers  
**Energy/Taste:** astringent, slightly sweet, oily, slightly pungent and bitter

- Bright, yellow, five-petaled flowers! Little holes cover small leaves, hence the name “*perforatum*”—these holes are tiny glands which work to produce essential oils. Oil glands secrete deep, red oil.

- References St. John the Baptist; comes into bloom around Summer Solstice and St. John’s Day, June 24

- A nervous system trophorestorative: acts as a tonic to deeply balance, restore and nourish the nervous system

- Helps ease anxiety, tension, neuralgias, seasonal affective disorder, and mild to moderate depression

- As bitter tonic: influence on stomach, intestines, gallbladder and liver

- Herbalist Matthew Wood states that St. John’s Wort has an affinity with the solar plexus (the chakra above our navel) and the nerves of digestion. This area of the body governs digestion and assimilation of nutrients. The solar plexus is bright yellow, called Manipura, meaning “Jewel City.” This chakra is associated with power of will, fire and transformation, gut instinct/intuition. This area also governs the adrenal system. The solar plexus is our stabilizing center, our core chakra. St. John’s Wort benefits the organs that correspond to the solar plexus, such as liver, gallbladder, and kidneys.

- Liver tonic and cholagogue: stimulates bile flow which aids digestion and assimilation

- Diuretic helping to eliminate remove waste thru urination; tonifies urinary system
- Astringency and antimicrobial properties help to re-balance gut/digestive tract — useful for diarrhea and dysentery
- Antiviral, expectorant, and anti-inflammatory: soothes discomfort during infections/illness, especially cold/flu

- Wound medicine! Healing for wounds related to impaired nerves (sciatica, shingles, etc.) and atrophied nerve tissues. Heals tissues and restores nerve function. Indicated for painful issues such as neuralgias, sciatica, Bell’s palsy, head and spine trauma, pinched nerves, as well as injuries to any area that is rich in nerve endings.

- As a vulnerary (wound healer) and anti-inflammatory, St. John’s Wort (used internally and externally) heals and soothes pain of burn, cuts, wounds, insect bites, varicose veins, bruises, strains and muscle pain.

- Vulnerary powers make it useful for healing a leaky gut

- Effective for earaches (antiviral and analgesic); make ear oil with garlic and mullein flowers

- Healing for shingles, herpes and other viral infections

- Antispasmodic action helps to relax muscle spasms, including spasms in lungs (spasmodic coughing), digestive or reproductive organs (cramps)

- Helps relieve physical tension and pain

- Use during menopausal transition to help soothe emotions, mood swings, irritability, anxiety; also soothing during PMS and painful menstruation; use when tension and exhaustion are present

Preparations:
- Enjoy tea, tinctures, cordials, oils and salves
- Best preparations of St. John’s Wort are made from fresh plants!
- Infuse fresh plants (when flowering) in oil. Use topically to ease nerve pain, sore muscles, to heal damaged nerve endings, and to heal wounded skin.
- Whole-plant preparation is always preferred: many phytochemicals work synergistically and in concert with one another!

Combines well with:
- Chamomile for nervous stomach due to stress/emotional turmoil
- Lemon balm for depression/SAD
- Passionflower during times of exhaustion/stress/anxiety
- Hops and Valerian for insomnia/difficulty sleeping
- Arnica for topical use/pain
- Garlic and Mullein flowers in ear oil for infections/ear pain

**Tincture:** Make from flowering tops; take 40–60 drops, 3–4 times daily

**Tea:** If only dry herb is available, infuse 2–3 tsp. of herb per cup of water for at least 30 minutes; drink 2–3 cups daily

**Safety Note:** This plant stimulates liver detoxification so please check with your healthcare provider before taking with prescription drugs; may cause photosensitivity; do not use during pregnancy. Check with a healthcare provider before use.
Sassafras

*Analgesic, anodyne, aromatic, antiseptic, antifungal, astringent, carminative, stimulating diaphoretic, dentrifice, disinfectant, emmenagogue, detoxifier, febrifuge, blood-thinner*

**Botanical Name:** *Sassafras albidum*  
**Family:** Lauraceae (Laurels)

**Other Common Names:** Winkauk, cinnamon wood, fennel wood, ague tree, sassafrax, saloop

**Parts Used:** root bark (soft inner bark of the root is most potent), root, leaves, pith, twig

**Taste/Energy:** sweet, spicy, cool/warm, stimulating, mucilaginous

**Location/Appearance:** Deciduous tree native to eastern North America from Canada to Mexico grow to be 30–115 feet tall. Sassafras is also found in Eastern Asia. Often found on ridges, hills, and mountainous areas. Trees have slender sympodial branches and smooth, orange-brown or yellow bark. All parts of the plant are fragrant. They have three distinct leaf patterns on the same tree: unlobed oval, bilobed (mitten-shaped), and trilobed (three-pronged). Tiny, five-petaled yellow flowers with male and female flowers appear on separate trees. Fruit is blue-black when ripe. Deciduous sassafras trees lose their leaves for part of the year.

**Root + Root Bark:**

- Root bark contains volatile oils (up to 80% safrole), lignans, alkaloids and tannins

- Root and root bark is warm, sweet, and spicy, and harvested in the spring to thin the blood

- Traditionally the main ingredient in “root beer,” tonic beverage made from roots and barks for seasonal cleansing in the spring

- Early settlers exported sassafras root; a favored drink among rural population

- Cleansing; stimulating for congestion in the liver and gallbladder

- Grounding yang action

- Thins the blood and enhances circulation

- Stimulating diaphoretic (like its friends elder and yarrow): opens pores of the skin, releases perspiration, and brings deep, stagnant, hot blood to the surface
- Important remedy for acute fever (in combination with wild cherry bark, mountain mint)

- Drunk on a hot day, sassafras has a cooling effect because it thins blood (increases watery proportion); actions on blood make it cooling even though its energy is spicy and warm

- Used to prevent stroke and heart attack

- Promotes circulation to the brain and improves peripheral circulation

- Improves digestion: carminative action removes wind/spasms of digestive tract

- Astringent nature makes it useful for diarrhea and dysentery

- Volatile oils stimulate the lungs and renal function

- Indicated where there is thick, coagulated, dark, blackish blood; Indicated when blood is easily congealed, heavy, thick—needing thinning and purification

- Dark complexion around eyes almost appearing like a bruise

- Indicated when blood is easily congealed, heavy, thick—needing thinning and purification

- Bruise Remedy! Poultice of root bark or direct application of oil

- Powdered bark useful for bruises or congested swelling

- Powerful astringent makes it useful for external use on insect bites

**Specific Conditions** (Thanks to Matthew Woods’ *Earthwise Herbals*)

Constitution/Complexion: Dark, blackish complexion, especially around eyes

Mind/Emotions/Nerves: Depression, melancholy

Respiration: Colds, bronchitis

Cardiovascular: Thick, viscid blood; thins blood to prevent stroke

Kidneys: Kidney stones, edema, cystitis

Female Reproductive System: After-birth pains
Muscular/Skeletal: Stiff muscles and joints; deposits in muscles and joints that cause arthritis and rheumatism

Skin: Pimples, boils, ingrown hairs, eczema, psoriasis, poison ivy

Fever: fever with cold extremities, lack of perspiration

Wounds: bruises with blackish blue complexion; insect bites with putrefaction

Preparations
- Tea: water-soluble; makes delicious tea (often used to enhance flavor other tea formulas)
  - Tea is made from root and root bark
  - Boiling root in decoction makes medicine worthless; prepare root by infusion with hot water or cold maceration overnight

- Tincture: fresh root extraction, 1:2; dried root extraction, 1:5; small dosage quite effective: 1–3 drops, 1–3 x daily

- Powder bark for use as poultice on bruises, poison ivy, insect bites

- Leaves directly applied to wounds; young leaves are mucilaginous and produce citrus-like scent when crushed

- young leaves used for marinade to flavor meats; leaves powdered to thicken and flavor soups, including Cajun gumbo

- Leaves should be simmered, never boiled

- Essential oil (used in small quantities, 1–3 drops) in liniments to heal wounds and sores

- Leaves, barks, twigs, stems, and fruit are all enjoyed by birds, white-tailed deer, rabbits, porcupines, and other woodland animals

Safety Note: In the 1970s, safrole, a highly toxic chemical constituent found in sassafras, was isolated, extracted with chemical solvents, and tested on laboratory rats. It was found that large amounts of isolated safrole produced carcinogenic cells in lab rats. No human case of cancer from sassafras has ever been reported. Tests have actually shown that people who drink sassafras tea for many years have a reduced rate of cancer. Sassafras should not be used by those with thin-blood or in combination with a prescribed blood-thinning medication. Contraindicated during
winter when thin blood makes one cold. In isolation, safrole is a neurotoxin and carcinogenic. Essential oil is highly toxic—use very small quantities. Do not use sassafras during pregnancy. Check with your healthcare provider before use.
Schizandra

Adaptogen, antioxidant, anti-inflammatory, astringent, antiasthmatic, hepatoprotective, immune tonic, nerve, expectorant, diuretic, antibacterial, liver protective, cardiac tonic

Botanical Name: Schizandra chinesis, S.splenathera
Common Names: Wu wei zi (Chinese), gomishi (Japanese), omija (Korean), Chinese magnolia vine
Part Used: Berry (Fruit and Seed)
Energetics: Sweet, salty, sour, pungent, bitter/warm/dry
Location/Cultivation: Grown in various provinces of China

-Known as the ‘five–flavored plant’ or Wu Wei Zi in Traditional Chinese medicine, Schizandra berries have five distinct flavors: sweet, salty, sour, pungent and bitter. Each flavor activates and balances a different organ system. Schizandra berries balance all five of the Chinese elements: earth, wood, water, metal and fire, and balance the five yin organs: liver, kidneys, heart, lungs, and spleen.

-Schizandra has real effects on the nervous, immune, and endocrine systems.

-Stimulates circulation and mildly stimulates central nervous system, enhancing reflexes, work performance, and mental activity. Used for hundreds of years to increase strength, endurance and stamina, and tone physical coordination.

-Calming effect, making it effective for people with stress–induced palpitations, insomnia, anxiety and night terrors. Helps relieve anxiety and stress–induced asthma.

-In modern Chinese medicine, schizandra is used to “astringe the jing.” Dries up excess fluids!

Used to control diarrhea, frequent urination, excessive vaginal discharge and premature ejaculation. Also useful for excess sweating, night sweats, and menopausal sweating.

-Raises the body’s ability to handle stress and disease; balances the entire body and improves overall health and general performance; reduces fatigue and depression, aids memory and cognitive function, helps with anger control.
- In Japan, schizandra is known as gomishi and is used for people with coughs, weakness, excess phlegm, and “hood vertigo” (a feeling of congestion and constriction around the head).

- With its anti-inflammatory and antiasthmatic effects, it is very useful for people who have asthma and wheezing, wet coughs, and chronic obstructive pulmonary disorder.

- Protects the liver and liver function by increasing hepatic glutathione (essential liver antioxidant); stimulates liver repair and normalizes liver function. In animal studies, it has been shown to provide significant protection against chemical- and drug-induced liver damage.

- Very useful protocol for hepatitis B & C (use with Milk Thistle and Turmeric), asthma (with Licorice), and for nervous system disorders including Parkinson’s disease, depression, and adult ADHD. Combines well with bacopa, milky oat tops (or fresh oat extract), and rhodiola for treating ADHD in teens and adults.

- **Helps to prevent immune system depletion caused by stress**

- Supports and modulates immune function and prevents harmful side effects caused by chemotherapy and radiation. Enhances endocrine system and endocrine-mediated immune system function (part of the immune system that is most affected by stress and is inhibited by chronic anxiety, anger, depression, fear).

- Kidney tonic, lung astringent, digestive herb (reduces over-acidity/acidosis)

- Studies have shown that schizandra has a normalizing (amphoteric) effect on blood pressure—lowering elevated blood pressure and raising low blood pressure.

**Preparations:** Can be soaked in fruit juice or wine for a tonic drink, or cooked in honey until soft and jam-like. Made into tea (dried berries) they add a delicious sour, lemon-like flavor. Tincture berries or make into a syrup.

**Tincture:** 40–80 drops, 3–4 times daily

**Decoction:** Add 1–2 tsp. of dried berries to 8–10 oz. water, decoct 5–10 minutes, steep 20–30 minutes. Take 4 oz. three times daily.

**Capsules:** One to two 400–500 mg capsules, 2–3 times daily
Safety Note: Do not use during pregnancy or while breastfeeding. In animal studies, schizandra increased the effects of barbiturates. May prevent liver damage that can be caused by hepatotoxic medications such as acetaminophen and tetracycline. Be sure to check with your healthcare provider before use.
Shatavari

Adaptogen, antibacterial, antispasmodic, aphrodisiac, rejuvenative, galactagogue, emollient, demulcent, diuretic, immune tonic, lung tonic, gastroprotective, nutritive, hormone-balancer

Botanical Name: *Asparagus racemosus*   Family: Asparagaceae
Common Names: Shatamuli, Indian Asparagus Root
Part Used: Root
Energetics: sweet, bitter, warm, moist
Doshic effect: Reduces hot pitta and dry vata due to moistening, heavy and building qualities, while increasing wet kapha
Systems: circulatory, reproductive, respiratory, digestive
Location/Cultivation: Native to tropical and subtropical regions of India, Southeast Asia, Malaysia, Africa and northern Australia

-Shatavari literally translates as “she who possesses a hundred husbands”

-Powerful and nurturing rejuvenating tonic for the female reproductive organs! Been used for millennia as an aphrodisiac and to enhance fertility in women (and men as well).

-First mentioned in two ancient religious texts, the *Rig Veda* and the *Atharvaveda*. Noted as a powerful rasayana that enhances physical strength, maintains youthfulness, and improves memory and intelligence.

-Known as “The QUEEN of Herbs” and “The Hormonal Harmonizer,” as it is nourishing, calming and hormonally-balancing. Especially useful for women with minor hormonal imbalances that prevent pregnancy and menopausal symptoms such as vaginal dryness, lack of libido, and dry skin. Also useful for irritability, emotional symptoms of PMS and menopause, and sleep problems during perimenopause.

-Shatavari is a traditional uterine tonic, primarily used as a menstrual regulator in dysmenorrhoea, menorrhagia and menstrual irregularity. It is very useful in menopausal symptoms with hot flushes, irritability, irregular memory and dryness.

-With its ability to stimulate prolactin and libido, it is likely that shatavari has a stimulatory effect on the pituitary gland.
- Shatavari contains steroidal saponins called shatavarins, which can have a normalizing effect on hormonal balance – reducing the effect of excess estrogen by preventing it from binding with estrogen receptors, while providing some estrogenic stimulation when there is a lack of estrogen, such as post menopause.

- An immune system and nutritive tonic! Frequently used by people with fatigue, poor appetite, anemia (taken in milk with amla and ashwagandha), and chronic fatigue immune deficiency syndrome.

- Research suggests benefits for improving immunity, antioxidant activity and insulin secretion, and reducing gastric acidity and preventing stress ulcers.

- Animal studies indicate that it may inhibit breast cancer and stimulate increased immune system response.

- Effective demulcent for dry and inflamed membranes of the lung, stomach, kidneys and sexual organs. Relieves urinary, respiratory, and gastric irritation. Healing for urethritis (inflammation of the urethra), cystitis (inflammation of the bladder), gastric ulcers, irritable coughs, and hard to expectorate, sticky mucus.

- Human and animal studies show its ability to heal gastric ulcers and prevent aspirin-induced stomach irritation.

- Long history of shatavari being used to increase milk flow in lactating women.

- Thirst-relieving and fluid-protecting powers (great medicine for diarrhea, dehydration, and dysentery)

- Ayurvedic medicine recognizes Shatavari as possessing sattvic qualities; known to enhance love and devotion.

- Externally: effective emollient for stiff joints, stiff neck and muscle spasms. Root infused in oil is also used for skin diseases.

**Preparations:**
- A classic shatavari formula, ghrita, combines ghee, shatavari root juice, and milk. This is boiled together, and then sugar, honey, and long pepper are added.

**Tincture:** 40–80 drops, three times daily
Decoction: Add 2 tsp. dried root to 8 oz. water, decoct 10–15 minutes, steep for 40 minutes. Drink two to three cups daily.

Safety Note: Shatavari is a very safe herb; in India it is considered to be a nourishing food and no side effects have been found in clinical trials at doses of up to 20g/day. Shatavari is considered to be safe in pregnancy. Energetically, it is not recommended to use it in conditions where there is excess mucus due to its moistening properties. Be sure to check with your healthcare provider before use.
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Sweet Fern

*Tonic, astringent, digestive tonic, immune tonic, lymphatic tonic, nutritive, anti-inflammatory, emollient, antibacterial, antiviral, anti-fungal, anti-tumor, bronchodilator, free-radical scavenger, slight muscle relaxant*

**Botanical Name:** *Comptonia peregrina*, *C. asplenifolia*

**Family:** Myricaceae

**Common Name:** Sweet fern, meadow fern, sweet bush, fern gale, sweet ferry, spleenwort

**Energy/Taste:** aromatic, astringent, spicy, warming, stimulant, drying, bitter, slightly sweet

**Parts Used:** leaves, bark, roots, berries, cones and stems

- Medicine for Poison Ivy. Jewelweed is best used at the onset or before the rash appears; Sweet Fern is used when the rash is already present and well established.

- Sweet Fern contains a fair amount of tannins which account for its astringency and many medicinal actions.

- Applications of Tannins, taken from *Medical Herbalism – The Science and Practise of Herbal Medicine* by David Hoffman
  
  Protect inflamed mucous membranes
  Exert a drying effect on mucous membranes, reducing hypersecretion
  Reduce inflammation and swelling accompanied by infection
  Prevent bleeding from small wounds
  Reduce uterine bleeding
  Relieve symptoms of diarrhea/dysentery through binding effects in gut
  Used externally for astringent action in douches, snuffs and eyewashes

- Healing for poison ivy, oak and sumac, eczema, sprains, swellings, inflammation.

- Matthew Wood recommends Sweet Fern for lymphatic swellings, diarrhea, poor digestion, weakened immunity, emaciation and poor bone development and worms

- Traditionally, Native people employed it extensively as a remedy for diarrhea, flu and stomach cramping, worms, headaches and inflammation; externally used for poison ivy, oak and sumac, eczema and other skin rashes, insect bites and as an insect repellent; also used as a poultice or decoction for sprains, wounds, inflammation and swellings.
- The Ojibwe peoples also used Sweet Fern to line and cover their baskets when picking berries to help preserve them. The aromatic qualities were used in steam baths, as incense and as a bug repellent.

**Safety Note:** No cautions or contraindications noted. Be sure to check with your healthcare provider before use.
Wintergreen

Analgesic, antispasmodic, antiseptic, aromatic, astringent, carminative, diuretic, emmena
gogue, anti-inflammatory, antioxidant, antiarthritic, antibacterial, antiviral, antifungal, soothing, stimulating

Botanical Name: Gaultheria procumbens (US), Gaultheria fragrantissima (Nepal)
Family: Ericaeae
Common Names: eastern teaberry, checkerberry
Parts Used: leaves and berries
Location/Appearance: This small creeping shrub is native from Newfoundland to Manitoba and south to Georgia. Wintergreen grows in well-drained, acidic soil in woodlands and clearings, often in the shade of evergreens. It creeps along the shady woodland floor and rises 3–7 inches above the ground. A few green, glossy oval leaves, each about 2 inches long, cluster near the top of erect stem. The underside of each leaf is paler in color and dotted with glands. Leaves turn red in the fall. During summer months, white or pink bell-like flowers hang singly from short stalks in the leaf axils. Each bell flower has five small scallops at the open end. From late summer until the following summer months, ¼-inch round bright red berries hang from short stalk in the leaf axil. Most plants are without berries. Find wintergreen in shady areas with dappled sunlight—often very close to the side of a trail

Essential Oil: DO NOT INGEST + DO NOT USE ON OPEN WOUNDS + ALWAYS DILUTE FOR EXTERNAL USE

- Leaves are used to make wintergreen essential oil by a steam distillation process
- Wintergreen oil is primarily comprised of methyl salicylate, which accounts for healing properties of essential oil. Wintergreen oil has a very similar chemical make-up to sweet birch oil.
- Essential oil has a sweet, fresh, uplifting, “minty” aroma
- Use sparingly and be sure to dilute wintergreen oil in a carrier oil, such as olive, coconut, almond, jojoba, apricot seed, etc.
- Analgesic benefits: add wintergreen oil to liniment for pain and tension relief
- Wintergreen oil has a warming effect when applied to skin
- Works to alleviate headache, nerve pain, muscle cramps, joint pain, tendonitis, bone pain, arthritis and rheumatism

- Reduces swelling and inflammation

- Stimulates blood circulation and helps to clear blood obstructions

- Antispasmodic actions make it useful for cramps, ovarian pain or muscle pain; mix with carrier oil and massage abdomen or affected area

- Potently antibacterial and antifungal

- Aids in clearing skin irritation

- Essential oil mixed with carrier oil massaged into scalp and hair may help to heal dry scalp and dandruff

- Use 3–5 drops of essential oil in a diffuser to receive benefits in air molecules; very useful during times of sickness, colds, flus, acute asthma attack, respiratory infections, etc.

- Essential oil is uplifting and mentally stimulating, creating greater focus and attentiveness

- Powerful aroma works to open and elevate the body's sensory system

- Use as a steam: boil water in a pot, add drops of essential oil, lean over a pot of steam, place a thick towel over your head, and breathe in the healing steam for respiratory infections and congestion. Mixes well with eucalyptus, rosemary, peppermint, and lavender essential oils.

- Put a few drops in the dishwasher or when washing clothes to kill-off bacteria, fungi, viruses

- Add a few drops of essential oil to home-made cleaner

**A Soothing + Cooling Blend for Massage/Muscle aches/Overworked Body:**
- Mix essential oils of Wintergreen, Camphor, Peppermint, Spearmint, Rosemary, Lavender, Ylang-Ylang, Blue Tansy, and Blue Chamomile together in carrier oil

**Leaves for Tea:**
- Used for centuries by tribes native to North America for fatigue, lung, sinus, and respiratory complaints
- Naturally antioxidant, energizing and immune-enhancing
- Chew leaves to increase respiratory capacity and endurance
- Make tea with leaves for respiratory and sinus infections
- Tea is diuretic and works to stimulate and increase urination, thus aiding the removal of uric acid and other toxins and alleviating symptoms of arthritis, rheumatism, and acidosis
- Tea is beneficial for the digestive system and increasing stomach acid—known to be effective for stomach aches, gas, bloating, cramps (antispasmodic action), and overall digestion.

**Berries:**
- Only consume a few (1-3) berries as a cleansing, minty, refreshing treat to enliven spirits
- Especially following a winter frost, the berries have a crisp, cool, refreshing, strong flavor
- May be used for tincture extraction or tea decoction

**Safety Note:** Keep essential oil of Wintergreen out of reach of children. Methyl salicylate is toxic—DO NOT INGEST ESSENTIAL OIL and DO NOT USE ESSENTIAL OIL ON OPEN WOUNDS. Be thoughtful and cautious about using a very small amount of essential oil in carrier oil or diffuser as it is very strong. Pregnant women, children and babies, and people who experience epilepsy should avoid use of wintergreen essential oil. Possible allergic reactions to essential oil include: hives, difficulty breathing, or swelling of face, throat or lips. Overuse of essential oil may cause blistering or severe burning of skin. Keep away from eyes, mucus membranes inside of nose, mouth and lips. Internal ingestion of essential oil may cause liver or kidney damage. Check with your healthcare provider before use.
Yarrow

Astringent, anti-inflammatory, nerve tonic, stimulant, diuretic, antiseptic, antibiotic, diaphoretic, carminative, hemostatic (normalizer of blood), antispasmodic, stomachic

Botanical Name: Achillea millefolium
Common Names: gordaldo, nosebleed plant, old man’s pepper, soldier’s woundwort
Parts Used: leaves and flowers
Energy/Taste: cooling & warming, bitter, pungent, astringent, aromatic, acrid

- Member of the aster family native to Europe and Asia

- Long history of association with the occult witchcraft and mystical, which essentially means it was used by women healers in Europe (haha)

- Excerpt from Rosemary Gladstar’s Herbal Healing for Women:

  When Achilles was born, his mother, holding him firmly by the heel, dipped him head first in a bath of yarrow tea. Wise Woman that she was, she knew that this would protect him from all harm. And it did—until he was wounded in the very heel his mother had held him by. Nonetheless, the yarrow bath had protected him in other respects, and during the Trojan wars Achilles used yarrow to stanch the bleeding of his soldiers. To this day, yarrow is considered a prime remedy for wounds and hemorrhages. When medicine was in short supply during World War I, yarrow was used on the wounds of injured soldiers (259).

YARROW: MASTER OF THE BLOOD and MASTER OF FEVER:
- Through clotting, unclotting and neurovascular control, yarrow regulates the flow of blood to and from the surface, in and out of the capillaries, thickening and thinning; moves blood to or from the surface to release or preserve heat and regulate fluids. Yarrow heals all manner of wounds, bruises, hemorrhaging, clotting.

- High level of flavonoids, which soothe capillaries, so blood passes more quickly; warming and cooling—normalizes opposing conditions

- Tonic for BLOOD, CIRCULATORY SYSTEM, STOMACH, LIVER, URINARY TRACT, GLANDULAR SYSTEM, and UTERUS
On his website, www.woodherbs.com, Matthew Wood writes:

In order to effectively treat disease we have to be able to decongest blood associated with inflammation, thin stagnant, congealed blood, tone the veins, stimulate the capillaries and arteries, and move the blood to or from the surface. Yarrow, the great ‘normalizer’ of the blood does all these things.

- Use for hemorrhaging (with fresh, red blood), bruises (fresh or old, hardened bruises), lacerations, fevers, chills, heat and congestion in digestive tract and/or liver, uterine congestion with excessive or lack of bleeding.

- Useful remedy in any situation of acute inflammation with congestion of blood

- External/topical use for wounds, cuts, abrasions, poison ivy, poison oak, rashes, hemorrhoids, severe bruising, swelling, eczema, inflamed joints, muscle spasms, varicose veins, gum disease, toothache, sore breasts, eyestrain and eye/eyelid inflammation, hair rinse; oil used as chest-rub for colds and flu

- Use internally for mucus conditions and congestion, respiratory viruses (bronchitis, pleurisy), children’s infectious diseases (chicken pox, measles, etc).

- Powerful diaphoretic—breaks fevers by inducing sweating! Its diaphoretic and diuretic actions normalize the distribution, secretion, and elimination of water in the body.

- Digestive tonic and bitter; used for lack of appetite, bloating, digestive cramps, bleeding from stomach or intestines, diarrhea, dysentery, gastritis, hyperacidity, gas and ulcers.

- Healing for liver inflammation and acute hepatitis (use external, warm compress daily)

- Healing for migraines (congestion of blood to the head), headache, vertigo, high blood pressure and heart palpitations
Amphoteric in action, yarrow has both stimulant and sedative actions on the uterine muscles. Useful for stimulating delayed or absent menstrual cycles as well as heavy flow/excessive bleeding (tones blood vessels). Helps ease menstrual cramps and uterine tension.

Healing for endometriosis, uterine fibroids with bright red hemorrhage, inflammation of the ovaries, excessive vaginal discharge, prolapsed uterus, menopausal symptoms of restlessness and night sweats; helps prevent excessive bleeding post-childbirth; soothes sore nipples during lactation.

Use for acute inflammation and bleeding from kidneys; acute cystitis (with or without bleeding); varicose veins (take a bath with yarrow tea); psoriasis (yarrow tea bath); pale, thin skin with poor circulation to the periphery and closed pores; healing for people with environmental allergies (cools heat and reduces sensitivity).

**Preparations**

**Tea:** Hot or warm cup of yarrow tea will open the skin (diaphoretic); cold cup of tea tends to stimulate stomach, digestion and kidneys. 1 tsp. of herb to a cup of boiling water (cover to preserve oils); 1–3 cups daily in chronic conditions; drink hourly with fevers.

**Tincture:** 20–40 drops, 1–3 x daily

The whole aerial part of the plant may be used fresh yet the blooming flowers are most potent. Flower tops are harvested at peak and dried for use in tea or to be tinctured fresh with alcohol.

**Safety Note:** Safe and nontoxic, however avoid overdose. Do not use yarrow during pregnancy since it is a strong uterine stimulant. Possible side effect/allergy: heightened photosensitivity. Be sure to check with your healthcare provider before use.
Yellow Dock

*Astringent, tonic, laxative, alterative, antipyretic, circulatory stimulant, antitoxin*

**Botanical Name:** Rumex crispus (crispus means curly)  
**Family:** Polygonaceae

**Common names:** curled dock, curly dock, sour dock

**Parts Used:** root, leaves, seeds

**Energy/Taste:**
- **Roots**—sour astringent, bitter, drying
- **Leaves**—sour, cooling, astringent

**Wild-Harvesting:** In early spring, recognize the European perennial curly dock by its basal rosette of long, narrow leaves, nearly 2 feet long, and no more than 3 ½ inches wide, with curled/wavy margins. Each leaf has a long, central vein with smaller veins heading toward the leaf’s edge. In the summer, yellow dock grows a flower stalk up to 5 feet tall, with smaller alternate leaves similar to basal leaves. Papery sheaths surround the flower stalk and connect it to leafstalk (typical of buckwheat family). The flower stalk becomes covered with dense clusters of tiny flowers. Flowers consist of six green, white or pink sepals. Flowers become seed clusters later; each seed is enclosed in rusty-brown, three-angled papery wings (similar to buckwheat groats). One plant may have as many as 40,000 seeds. Yellow dock and its relatives grow in fields near beaches, on disturbed soil, in meadows and along riverbanks and roadsides.

- **Springtime:** young, fresh leaves are edible. Delicious distinctive lemony-sour flavor. Perfect for adding to soups, salads, or sauteing. Also wonderful to infuse in apple cider vinegar. Leaves can be steamed or sautéed like spinach or Swiss chard. Slightly thickens soups and stews. Be aware: when the young yellow dock has just begun to emerge in the spring, the leaves contain chrysophanic acid, which may irritate one’s mouth if eaten without washing. Wash well before eating raw or cooking.

- **Later in the summer season:** use the rusty-colored seed heads. Rub seed-heads together over a box to separate seed from shaft. When seeds are separate, use them as a grain (sprout or grind).

- Leaves contain protein, iron, calcium, potassium, beta-carotene, phosphorus and more than twice the amount of vitamin C compared to fresh spinach. Medicine from the root provides us with potassium, manganese and iron.

**YELLOW DOCK ROOT:** Harvest All Roots in the Fall
- The root is too tough and bitter to ingest yet it is important medicine to decoct, tincture or make into a syrup. **Yellow dock root tonifies qi and blood.**

- Helps to detoxify liver and cleanse the blood (alterative); strengthens liver function and increases liver's ability to store iron; root contains rumicin, a liver decongestant which stimulates liver to produce bile.

- Indications: toxic conditions of the blood. Used internally and externally for skin disorders such as eczema, acne, boils, fungal infections, swelling, sores, psoriasis, and any skin eruptions with oozing discharge and redness

- Yellow dock contains tannins, making it astringent and healing for wounds and bleeding; use a compress of yellow dock on eruptions, wounds, eczema, psoriasis and other skin irritations

- Contains anthraquinones: healing for ringworm, candida and other fungal infections

- Other indications: swollen glands, glandular tumors, stomach acidity, hemorrhoids, anemia, thrush, systemic candida

- Yellow dock root cleanses and purifies the blood, lymph and liver and is cleansing for most toxic conditions of the circulatory system

- Promotes cerebral circulation

- **Yellow dock is especially useful during times of deficiency or debility when the body is too depleted to clear itself of toxins; relieves heat and clears infections**

- Healing for heat in intestines: Crohn's disease (autoimmune attack on small intestine); colitis (autoimmune attack on colon); rectum heat

- Healing for gallbladder colic, gallbladder heat, and any type of gallbladder issue

- Cools down hot digestive tract (eat leaves on a hot summer day)

- Useful for excessive salivation/excessive hydrochloric acid secretion (associated with burning of stomach/excessive appetite)

- Yellowdock root tones intestines and tones esophagus reflex
- Very beneficial for iron deficiency, anemia or low red blood count; helps to build the blood; aids with assimilation and use of IRON

- Nutritive support for pregnant women; healing for women who hemorrhage severely with menstruation, miscarriage, or childbirth

- A bitter tonic for the stomach; yellow dock contains the active ingredient emodin, which stimulates peristalsis. A very safe laxative and a terrific remedy for constipation and sluggish digestion; yellow dock also strengthens the colon.

**Preparations**

**Tea:** Make decoction with fresh or dried yellow dock root

**Tincture:** Use fresh or dried yellow dock root

**Syrup:** make a blood-building, detoxifying syrup with strong tea decoction, honey or molasses, and small amount of alcohol for preservation

- Eat fresh, young leaves and infuse in apple-cider vinegar

- Use compress externally as described above

**Safety Note:** Safe for long-term use; overdose may result in diarrhea or nausea; no known drug interactions or warnings. Always check with health-care providers before use. Be aware: when the young yellow dock has just begun to emerge in the spring, the leaves contain chrysophanic acid, which may irritate one’s mouth if eaten without washing. Wash well before eating raw or cooking.
Notes

Autumn: Metal Element

The forces of Autumn create dryness in Heaven and metal on Earth; they create the lung organ and the skin upon the body...and the nose, the white color, and the pungent flavor...the emotion grief, and the ability to make a weeping sound. –Inner Classic

-A Time to Focus. Preparing foods to reflect the qualities of autumn with its abundant yet contracting nature: cook with less water, and at lower heat, for longer periods of time to internalize ones focus. The bitter and salty flavors move energy strongly inward and downward. To focus and organize, add more sour flavored foods such as sauerkraut, olives, leeks, adzuki beans, rose hip tea, vinegar, lemons, limes, grapefruit, and sour varieties of apples, grapes and plums.

-Paul Pitchford, in his Healing with Whole Foods, writes: “The lungs receive the qi vital force of the air and mix it with the qi extracted from food. The combination of qi and associated nutrients is then distributed throughout the body and is of particular importance in protecting the surfaces of the body (including the mucous membranes and interior surfaces of the lungs) from viruses, bacteria, and other invading pathogens. The strength of the lungs depends on their qi” (347-348).

-Personality of one with strong lungs: unified, hold onto their direction, create order, and are effective at what they do. A person with healthy lungs tends to hold onto their principles and keep their commitments. When it is time to let go of a relationship or object, the person is able to do this without emotional repression, feeling the associated grief and sadness, but letting it move and resolving it. A person with weaker lungs may attempt to stifle their sadness and never completely let go. One with weaker lungs may hold onto things with unreasonable or unhealthy attachments.

-Attachments as an Indicator of Lung Vitality: how well we “hold on” and “let go”

-The colon is the yang organ paired with the lungs. Colons function is releasing what is no longer needed; releasing on a physical, emotional, psychic level.

-Grief is an emotion associated with the lungs and colon. Repressed grief causes a long-term contraction of the lungs, which then interferes with their function of dispersing nutrients and qi energy.
- Emotions and thoughts can be cleared by long, deep breathing. The expansion quality of pungent foods can assist in clearing grief.

- Symptoms of dryness: thirst, dryness of skin, nose, lips and throat, and itchiness; those who are chronically dry tend to have a thin body type.

- When a person has a dry condition, it usually is related to the lungs, and also could have been caused by imbalances in diet, excessive activity, adverse climate, and/or organ malfunction.
- Foods which moisten dryness: spinach, barley, millet, pear, apple, seaweeds, almond, pine nut, peanut, sesame seed, honey, rice syrup, eggs, clam, crab, oyster, mussel. Using a little salt helps to moisten dryness.

**Physical Indications of Lung Vitality:**

- Lungs are “open” to the nose; the sinuses, bronchioles, air passageways, and nose are all influenced by the lungs

- Health of the skin, including mucous membranes and their immunity, reflect lung health

- The amount and quality of mucus relate to the lung

- A person with healthy lungs maintains a light, moist, protective covering/coating on all mucous membranes

- When skin is well-nourished and energized, it wards off extreme weather influences as well as viruses, bacteria, fungus, and other pathogens

- Indications of lung imbalance: dryness and/or excessive mucus in membranes, sinus problems, nasal congestion, lung and bronchial conditions, frequent colds, and susceptibility to pathogens

- What contributes to lung disorders: over-eating, not eating enough fiber/roughage; consuming too much meat, dairy, sugar, processed foods, and other congesting acidic foods; cigarettes, drugs, alcohol; insufficient activity, which encourages poor respiration and elimination.

**Common Lung Disorders:**
- **Heat congesting the lungs:** exterior symptoms such as fevers, red tongue with a dry, yellow coating, dry cough, shortness of breath, and painful sore throat; may be thick, yellow-green sputum with pus, or even foul-smelling, blood pus (yuck!), and yellow nasal discharge.

**Treatment:** add foods and herbs which cool the heat and transform sputum

**Useful foods:** watercress, cantaloupe, apple, peach, pear, strawberry, citrus, seaweeds, mushroom, daikon radish, radish, carrot, pumpkin, cabbage, bok choy, cauliflower, chard, papaya. Majority of the diet should be soups. Congees of millet, barley or rice are also cooling and soothing.

**Useful herbs:** horehound leaf, chickweed (tea)

Avoid warming/congesting foods such as coffee, alcohol, lamb, chicken beef, fish, onion family members (especially garlic), cinnamon, ginger, fennel and other warming spices.

- **Phlegm in the lungs:** most often brought about by weak digestion (weak spleen-pancreas qi) which causes excessive mucus. May be the result of too much mucus-forming foods. Symptoms include: shortness of breath, wheezing, or asthma accompanied by sticky phlegm; tongue coating is greasy and white if the phlegm is cold; tongue coating is greasy and yellow if phlegm is hot.

**Treatment:** foods and herbs which transform, reduce or expel phlegm.

**Useful foods, spices and herbs:** fennel (w), fenugreek (w), flaxseed (n), cayenne (w), watercress (c), garlic and other members of onion family (w), horseradish (w), turnip (n), fresh ginger (w), radish (c), daikon radish (c), mushroom (n), cereal grass (c), seaweeds (c), nettles (c), coltsfoot (n), elecampane root (w), mullein leaf (c).

Cooling thermal nature (c); warming thermal nature (w); neutral thermal nature (n)

- Use cooling remedies for treating hot phlegm; warming remedies for cool phlegm; neutral remedies for either hot or cold phlegm.

- Diet should consist of foods that digest easily: vegetables, fruits and sprouts; small amounts of legumes, grains, almonds. Eat simple, small meals.

- A tea for hot phlegm: combine mullein, coltsfoot, nettles, flaxseed
- A tea for cold phlegm: combine elecampane, fresh ginger, fenugreek

- **Avoid** all dairy products, mammal meats, peanuts, tofu, tempeh, miso, soy sauce, soymilk and other soy products, amasake and all sweeteners except stevia

- **Deficient yin of the lungs:** a chronic lack of *yin* to cool and nourish the lungs; most often a result of a chronic lung infection, inflammation, or other long-term lung disease which drains the *yin* of the body. Insufficient *yin* of the lungs (or any organ) suggests a deficiency of kidney *yin*, which enriches the *yin* of the entire body. Typical symptoms include: dry, unproductive cough with little or no sputum; periodic fever, frequent thirst, fresh red-cheeks and tongue, hot palms and soles, night sweats, thin and fast radial pulse.

- **Treatment:** foods which tonify the lung *yin* and kidney *yin*

- Useful foods and herbs: Irish moss and all other seaweeds, spirulina and chlorella microalgae, orange, peach, pear, apple, watermelon, tomato, banana, string bean, rice syrup, flaxseed, oyster, clam; **marshmallow root, slippery elm bark, rehmannia root (raw), Solomon’s seal root**

- Basic diet should exclude all warming foods and spices; too much bitter food is drying and should be limited.

**Deficient qi of the lungs:** a chronic, debilitating lung pattern. Symptoms include weakness, fatigue, weak voice, limited speech, coughing, shortness of breath. May result from long-term lung diseases, particularly those with heat signs. General lack of bodily *qi* can contribute; *qi* energy in the body is rooted in the kidney-adrenals, which depend on *qi* from food, which is a spleen-pancreas function.

- **Treatment:** foods and herbs which tonify the lung *qi* and improve absorption of food *qi*.

- Useful foods and herbs: rice, sweet rice, oats, carrot, mustard green, sweet potato, yam, potato, fresh ginger, garlic, molasses, rice syrup; elecampane root, licorice root

- Diet should include primarily cooked foods and restrict cooling or mucus-forming foods such as citrus, salt, milk and other dairy products
Recommendations for Protecting & Purifying the Lungs and Colon

- Mild lung and colon cleansing twice a year
- Regular consumption of fruits, vegetables, seaweeds, and wild greens
  - Regular use of pungent foods
  - Mucilaginous foods
  - Dark green and golden-orange vegetables
- Exercise and fun movement!

**Pungent Foods** help disperse the stuck, mucus-laden energy of the lungs and colon. All pungent foods such as chilies and hot peppers can be used to protect the lungs; at least some white pungents should be included as this color specifically affects Metal Element.

- **White pungent foods**: include all members of the onion family, especially garlic; turnip, ginger, horseradish, cabbage, radish, daikon radish, white peppercorn

- **Mucilaginous foods**: important for mucus membrane renewal of lungs and colon; these plants remove old, thick mucoid deposits and replace them with a clean, moist coating. Great choices: seaweeds, marshmallow root, flaxseed, fenugreek

- **Dark green and golden-orange vegetables**: beta-carotene protects the surfaces and mucous membranes of the body; this protection boosts peripheral immune activity of the qi. Foods rich in beta-carotene protect the lungs and colon against cancer.

- Enjoy carrot, winter squash, pumpkin, broccoli, parsley, kale, turnip, mustard greens, watercress, wheat or barley grass, micro-algae, yerba santa, mullein leaf, nettles.

- Chlorophyll inhibits viruses and helps the lungs discharge residues from toxic chemicals, chemical fumes, cigarette smoke, etc. Green foods improve digestion of proteins and fats.

**Fiber**: Emphasizing fibrous foods will help cleanse the lungs and colon. Fiber is the indigestible portion of foods—the bran of grains, the pulp of fruits, the cell walls of vegetables. All fiber improves the functioning of the intestines yet not all fiber is alike. For example, wheat bran has little effect on cholesterol, whereas pectin, a fiber in apples, cherries, carrots and other vegetables, eliminates cholesterol from the
digestive tract. Oat fiber also has this capacity. Sufficient fiber in diet reduces the incidence of some cancers by more than 60%. Lungs and colon are the sites of the highest incidence of cancer in Americans.

**Colds, Flus, and other Exterior Conditions**

- Exterior condition is considered *yang*; interior condition consider *yin*

- Exterior condition affects the surface or exterior parts of the body, including the skin, hair, muscles, tendons and orifices (mouth, noses, external ears, anus)

- Sweating (diaphoresis) is the most efficient method of driving out surface pathogens

- Exterior conditions often have a sudden onset triggered by external environmental influences such as wind, cold, heat or damp; in most cases, wind combines with either cold or heat, and affects the skin, the mucous membranes of the nasal passages and lungs, and their immunity. Viruses, germs or other pathogens establish themselves, resulting in fevers, chills, joint and muscle pain. If the condition is not purged by sweating or other means, then the disease will move deeper in stages, becoming interior and chronic.

**Signs of an Exterior Condition:**
- Recent condition; short duration
- Simultaneous fevers and chills
- Stuffy head, runny nose, thin coating on tongue
- Achiness, stiff neck, recent headache
- Intolerance to wind or cold

- The sooner one notices these conditions and takes action, the more likely their interior progress can be reversed.

- If colds and flus are frequent, one is most likely eating too many sweets, salty foods, excess dairy, eggs, meat and other mucus- and acid-forming foods

- To balance such conditions, choose herbs and spices that are expansive and reach toward periphery of the body—open the sweat glands to sweat out exterior disease

**Suggestions for Treating Exterior Conditions:**
- **Eat less and enjoy simple, liquid-based foods** such as vegetable or grain soup, vegetable and seaweed broths if chills predominate over fever. If fever predominates, enjoy fruit or vegetable juices or fresh fruits.

- **Sweat!** Drink a cup or more of hot diaphoretic tea, take a hot bath or shower, drink more tea, cover in blankets/layers of clothing, and sweat. Do not sweat to the point of exhaustion. After sweating, change damp clothing and bedding and rest. - Sweating is contraindicated when emaciation, severe weakness, or lack of *yin* fluids are present (dryness, fast and thin pulse, fresh red cheeks and tongue, night sweats).

- **Diaphoretic herbs:** yarrow, boneset flowers or leaves, elder flowers, chamomile, catnip, peppermint, cayenne red pepper, angelica, fresh ginger root, *Ephedra viridis*, *Ephedra sinica*. Add lemon and honey to tea; use rose hips as a good source for Vitamin C.

- **Helpful foods:** bioflavonoid-rich foods such as cabbage, green peppers, parsley, carrots, broccoli, turnips, parsnips, horseradish, scallions, garlic, lemon, grapefruit, and most fruits.

- Once acute stage and exterior symptoms pass, gradually introduce foods to nourish and build

  **Wei-Qi: Protective Energy**
  
  - When *protective qi* is strong, diseases from viruses and weather influences are completely warded off; if it is less strong, diseases may enter onto an exterior level and bring about a cold, flu or other *exterior* condition; if immunity is very deficient, disease factors may penetrate to *interior* levels and affect the functioning of internal organs.

  - **Protective Qi:** the body’s most *yang* energy; considered the most vigorous type of energy in the body. In the daytime, it is mainly distributed in the skin and muscles, warming and nourishing the outer tissues. The *protective qi* circulates, opening and closing pores and sweat glands and offering protection against viruses, germs, pathogens, toxins and other environmental factors. At night, *protective qi* circulates deeper within the organs of the body. According to traditional Chinese teachings, *protective qi* is derived from essential substances in food and in inhaled air.

**Building and Maintaining Immunity:**

- Exercise and activity! Yoga, walking, swimming, laughing, biking, hiking, etc.

- Enjoy whole, organic foods and simple food combinations; avoid overeating and eating late at night; avoid intoxicants, refined or chemically-contaminated foods.
rancid nuts and seeds. Enjoy seasonal & local produce, wheat–or barley–grass juice, sea vegetables, sprouts, micro-algae, and an abundance of fresh fruits and vegetables.

-Sunlight, clean fresh air, and pure water strengthen immunity. Avoid overexposure to dampness. Less screens and less driving if possible! Spiritual practices such as prayer, meditation, visualization support healing and renewal. Positive attitude and loving practices raise the vibration!

-Royal Jelly, the food that transforms a common worker bee into a queen bee, is thought to contain the highest complete nutrition of any food. It promotes growth and development—commonly used for both infant and general malnutrition

-Bone broths! Use bones from organically–raised animals. Break the bones (if using poultry bones) and cook bones just below boiling for 18 hours. If using bones from cows, bison or other hearty animals, roast the bones before cooking in water. Add seaweeds, spices and root vegetables. Unique nutrition from the marrow. Avoid animals raised where lead has been deposited from exhaust or other sources; lead collects in the bones and marrow of animals.

**The Five Element and Organ Systems & Seasonal Attunement**
The ancient Chinese believe that the seasons have a profound cyclical effect on human growth and well-being

-The Five Elements system of the ancient Chinese serves as an aid for understanding the correspondences that pervade every facet of life.

-Chinese physiology, in conjunction with the Fire Element system, presents the entire person—bodily functions, tissues and organs as well as mental and emotional aspects—as correspondences that influence one another.

-Inter-connectedness of all things

**Therapeutic Use of the Five Flavors**
-Sour flavor enters the liver and gallbladder
-Bitter flavor enters the heart and small intestine
-Sweet flavor enters the spleen–pancreas and stomach
-Pungent flavor enters the lungs and large intestine
- Salt flavor enters kidneys and bladder

**PUNGENT (including acrid, spicy, hot, and aromatic flavors)**
- A yang flavor; expansive, dispersive; when the pungent flavor has a warming thermal energy, it stimulates circulation of energy and blood, tending to move energy upwards and outwards to the periphery of the body

- Pungent flavor stimulates digestion, disperses mucus caused by highly mucus-forming foods (dairy products, excessive grains, meats); offers protection against mucus conditions like a common cold.

- Diaphoretic pungents: mint, cayenne elder flower, scallion, garlic, chamomile; used to induce sweating during common cold or exterior condition; also lighten the effects of grains, legumes, nuts and seeds on digestive system; disperse stagnant blood and increase qi energy.

- Garlic, mugwort, cayenne have the capacity to destroy or expel parasites.

**Actions of Pungent Flavor:**
1. Pungent flavor enters and clears the lung of mucus conditions (do not use warming pungents if heat conditions are present in the body; do not use cooling pungents if coldness is present).
2. Improves digestive activity, which is ruled by the spleen–pancreas; expels gas from intestines
3. Moisten the kidneys, which impacts fluids in the entire body. Hot pungent herbs tend to be food for cold, contracted conditions of the kidneys, helping to warm and relax them.
4. Stimulates blood circulation and is cardiotonic
5. Clears obstructions and improves sluggish liver function
Herb Actions for the Digestive System

**Demulcents:** cooling, soothing, mucilaginous substance used internally and externally to emolliate inflamed, abraded, or irritated mucosal tissues.
- marshmallow root, slippery elm, licorice root, comfrey root

**Bitters:** a plant that possesses a bitter flavor; stimulates secretion of digestive enzymes from all organs involved; paramount importance for toning digestive system, stimulating appetite, and enhancing digestion.
- gentian, goldenseal, oregon grape, mugwort, yarrow, burdock

**Astringents:** tannins in plants cause surfaces of tissues to dry, condense, and contract, shrinking inflamed or suppurative tissues.
- raspberry leaf, blackberry, oak, bayberry, meadowsweet, witch hazel, yarrow

**Carminatives:** aromatic herbs that are rich in volatile oils; oils stimulate gut walls and ease bowels and over-activity or tension of digestive system; commonly used for colic, wind, cramps, bloating, and gas.
- fennel, ginger, anise, caraway

**Antispasmodics:** a plant capable of easing painful spasms in muscles and organs; commonly used for cramps, colic pains.
- cramp bark, wild yam

**Laxatives:** relieve constipation; promotes painless evacuation of bowels; some plants work as a bulk laxative; some plants work to irritate the intestines to the point where peristalsis is promoted to evacuate foreign substance; some plants restore peristalsis and balance beneficial colon flora; most issues of constipation are relieved with dietary changes, exercise, relaxation, or addressing other external triggers; using bitters and liver remedies that help produce and release bile are often helpful to relieving bowels.

**Irritant Laxatives:** senna (Cassia senna), aloe vera, cascara

**Bulk Laxatives:** psyllium seeds/husks, raw fruits and vegetables, grains, flax, bran, apple pectin

**Restore Function:** cascara

**Alternatives:** burdock, oregon grape root, dandelion root, yellow dock
**Nervines**: a plant that tones and balances nervous system; many nervines are also carminative or antispasmodic
- chamomile, valerian, lemon balm, blue vervain, St. John’s wort, passionflower, hops

**Hepatics**: a plant that improves functions of the liver
- dandelion root, burdock root, yellow dock, rhubarb root, milk thistle

**Cholagogues**: a plant that increases gallbladder tone and increases flow of bile from the gallbladder
- dandelion, burdock, yellow dock

**Antimicrobials/AntiFungals**
- pau d’arco, andrographis, oregon grape root, echinacea, myrrh, usnea, cryolepsis, juniper, ginger
The Stunning Truth: The Earth is Saturated in Synthetic Antibiotics

- In a short period of geologic time, the earth has been saturated with hundreds of millions of tons of non-biodegradable, biologically-unique pharmaceuticals that are designed to kill bacteria.

- Physician and researcher, Stuart Levy, explains how these antibiotics are not easily biodegradable:

  “They can remain intact in the environment unless they are destroyed by high temperatures or other physical damage such as ultraviolet light from the sun. As active antibiotics they continue to kill off susceptible bacteria with which they have contact”

- Antibiotics: name literally means “against life”: do not discriminate in their activity—kill broad groups of bacteria

- All of the antibiotics that hospitals purchase end up, one way or another, in the environment

- Hospital Wastewater Streams: full of synthetic antibiotics in their pure or metabolized states

- Millions of pounds excreted from the millions of patients who visits hospitals each year

- Antibacterials in the form of disinfectants also enter hospital waste streams

- Antibiotics travel to treatment plants and pass through relatively unchanged into our water supply

- Outside of hospitals, American physicians dispense an additional 260 million antibiotic prescriptions yearly—these too are excreted into our environment

- Pharmaceutical Manufacturers discharge thousands of tons of spent mycelial and other antibiotic-related waste still containing active antibiotic residues into environment

- Yearly, in the US, factory farms use nearly 30 million pounds (or more!) of antibiotics on pigs, cattle, and chickens so that these animals will survive overcrowding and grow quickly (low levels of antibiotics stimulate weight gain).
- Millions of gallons of the waste from these animals flows through waste lagoons and then—relatively unchanged—into ecosystem.

- Free-range farm animals as well as domesticated animals (dogs and cats) excrete their antibiotic-laden feces directly on the land.

- 97% of the antibiotic kanamycin goes thru animal GI tracts relatively unchanged

- The Earth is awash in antibiotics

Perhaps no technological advance has been more widely advertised and capitalized upon than the development of antibiotics. It is routinely lauded as one of the primary accomplishments of the application of science and modern medicine in Western culture—the success of the scientific method over the uninformed medicine of the past. The excitement over the discovery and successful use of antibiotics in medicine was so strong in the late 1950s and early 1960s that many physicians, including my great-uncle Lee Burney, then surgeon general of the United States, and my grandfather David Cox, president of the Kentucky Medical Association, jointly proclaimed the end for all time of epidemic disease. A 1963 comment by the Australian physician Sir F. Macfarlane Burnet, a Nobel laureate, is typical. By the end of the twentieth century, he said, humanity would see the ‘virtual elimination of infectious disease as a significant factor in societal life.’ Seven years later, one of my great-uncle’s successors, Surgeon General William Stewart, testified to Congress that ‘it was time to close the book on infectious diseases.’ …They couldn’t have been more wrong. By 1997 it had become so bad that three million people a year in the United States were being admitted to hospitals with difficult-to-treat, antibiotic-resistant, bacterial infections. The Centers for Disease Control (CDC) estimated in 2002 that another 1.7 million were becoming infected while visiting hospitals and 100,000 were estimated to be dying after contracting a resistant infection in a hospital. (9–10)

—Stephen Harrod Buhner, Herbal Antibiotics: Natural Alternatives for Treating Drug-Resistant Bacteria

In the late 1940s, the successes of Waksman and Schatz (streptomycin) and Duggar (tetracycline) led many to believe that bacterial infections were basically conquered. That conceit led to widespread misuse and outright abuse of antibacterial agents. Nonetheless, we still neither fully understand nor appreciate resistance to antibacterial agents…Many important advances in the practice of medicine are actually at serious risk. Multi-drug resistant bacteria are compromising our ability to perform
what are now considered routine surgical procedures…A ubiquitous phrase encountered in obituaries is “died from complications following surgery,” but what is not well understood is that these “complications” are quite frequently multi-drug resistant infections.

–Steven Projan, Bacterial Resistance to Antimicrobials

We have let our profligate use of antibiotics reshape the evolution of the microbial world and wrest any hope of safe management from us…Resistance to antibiotics has spread to so many different, and such unanticipated types of bacteria, that the only fair appraisal is that we have succeeded in upsetting the balance of nature.

–Marc Lappe, When Antibiotics Fail

It is worth considering that despite being smaller than one millionth of a meter long, microbes compromise fully 60 percent of the mass of life on the planet.

–Brad Spellberg, Rising Plague

There is a unique smell to hospitals, composed of equal parts illness, rubbing alcohol, fear, and hope. Few of us who have been in a hospital can forget that smell or the feelings it engenders. But underneath those memory-laden smells and feelings is the belief that in this place, this hospital, an army of men and women is fighting for our lives, working to bring us back from the brink of death. We have learned, been taught, known for a fact, that this army is winning the war against disease, that antibiotics have made an end to most bacterial diseases. It is a comforting belief. Unfortunately, what we “know” couldn’t be more wrong.

–Stephen Harrod Buhner, Herbal Antibiotics: Natural Alternatives for Treating Drug-Resistant Bacteria

The worldwide environmental dumping over the past 65 years of such huge quantities of synthetic antibiotics has initiated the most pervasive impacts on the earth’s bacterial underpinnings since oxygen-generating bacteria supplanted methanogens 2.5 billion years ago. It has, as [Stuart] Levy comments, ‘stimulated evolutionary changes that are unparalleled in recorded biological history.’ In the short run this means the emergence of unique pathogenic bacteria in human, animal, and agricultural crop populations. In the long run it means the emergence of infectious disease epidemics more deadly than any in human history.”

–Stephen Harrod Buhner, Herbal Antibiotics: Natural Alternatives for Treating Drug-Resistant Bacteria
*Hospital-acquired resistant infections is the fourth leading cause of death in the US*

- In March 1942, Anne Sheafe Miller was in a hospital in New Haven, CT, struggling to live and suffering with pneumonia caused by a streptococcal infection. The doctors managed to get a small amount of a new, highly experimental drug from a lab in NJ. Once Anne was injected with this drug, her temperature dropped, she came out of the delirium, and she began to recover. The pharmaceutical companies began full production of this “miracle” drug: Penicillin.

- In 1942: world’s entire supply of penicillin was 32 liters (approx. 64 pounds)

- By 1949: 156,000 pounds a year of penicillin and new antibiotic, streptomycin (isolated from soil fungi), were being produced in the world

- By 1999: 40 million pounds per year of antibiotics were being produced solely in the US for people, livestock, agricultural plants, and research

- By 2009: 60 million pounds per year of antibiotics being produced in US; many millions of pounds by other countries around the world

- In 2009: Nearly 30 million pounds of antibiotics being used on factory farms—animals raised for human consumption—in the US

- Millions of people are contracting resistant infections every year in the US, and hundreds of millions more are contracting resistant infections around the globe. The toll is mounting.

- The number of people infected by resistant bacteria is increasing, especially in places where young and old and people who are ill congregate: prisons, child care centers, homeless shelters. Place where so many pathogenic bacteria thrive and experience a multiplicity of antibiotics: hospitals!

- In a 1945 New York Times interview, Dr. Alexander Fleming, the man who discovered penicillin, warned that the improper use of penicillin would lead to the development of resistant bacteria. At this time, 14% of Staphylococcus aureus bacteria were already resistant to penicillin.

- By 1953, 64% to 80% of the bacteria had become resistant to penicillin; resistance to tetracycline and erythromycin was also reported
By 1960, resistant staph had become the most common source of hospital-acquired infections.

By 1995, 95% of staph was resistant to penicillin. At this time, physicians started to use methicillin, a beta-lactam antibiotic that was found to be effective against penicillin-resistant strains. Within a year, Methicillin-resistant staph (MRSA) emerged.

Brad Spellberg of the Infectious Diseases Society of America says, “these people come into the hospital for a heart attack, or cancer, or trauma after a car accident, or to have elective surgery, or with some other medical problem and then ended up during of infection that they picked up in the hospital...The number of people who die from hospital-acquired infectious is unquestionable much higher now, and is almost certainly more than 100,000 per year in the United States alone.”
Bacterial Resistance

“The thing that so many people missed, including my ancestors, is that all life on Earth is highly intelligent and very, very adaptable. Bacteria are the oldest forms of life on this planet and they have learned very, very well how to respond to threats of their well-being.” (13)

–Stephen Harrod Buhner, Herbal Antibiotics

The world is filled with antibacterial substances (fungi, plants, other bacteria). Most antibiotics developed by humans came from fungi. Bacteria have been encountering these fungi for millennia. Bacteria have learned how to respond to such substances!

–Keep in mind: for many species of bacteria, a new generation is born every 20 minutes (this is 500,000 times faster than humans).

–As soon as bacterium encounters antibiotics, it begins to generate potential responses

–Bacteria have created a variety of mechanisms to respond to antibiotics:
  Altered Uptake; Target Modification; Antibiotic Modification; Efflux Pumps

Altered Uptake

–Antibiotics need to enter bacterial cells in order to kill them. In order to do this, they need to figure out how to enter the cell. Some antibiotics sneak in by attaching themselves to other nutrients or materials that must enter bacterial cells daily in order for bacteria to survive.

–Bacteria can decrease the amount of the antibiotic that gets inside their cell walls by altering the permeability of their cell membranes—they alter the structure of the doorways that allow outside substances to enter the cell, thus making it impossible or much harder for antibiotics to sneak-in.

Target Modification:
–The bacteria have the ability to change the internal structure of their bodies so that the parts of themselves that would be impacted by antibiotics are not affected.

–David Hooper at the Division of Infectious Diseases at Mass General Hospital says: “Resistance by the general mechanisms of target modification can be brought about,
however, by a remarkable variety of specific means, which have been exploited by
different clinically important bacteria. The modification mechanism often results in
an altered structure of the original drug target structure that binds the drug poorly or
not at all.”

- The antibiotic may enter the bacteria cell but the bacteria isn’t impacted

**Antibiotic Modification:**
- Bacteria have learned how to degrade or destroy any antibiotic that enters them

- Bacteria has developed antibiotic-specific inactivation or disabling compounds in
the form of enzymes (extended-spectrum beta-lactamases enzymes (ESBLs)

- Harry Taber of the New York Department of Health: “It is not surprising to find,
then, that antibiotic inactivating enzymes are found in the [cell] envelope: B-
lactamases and aminoglycoside-modifying enzymes are examples.”

**Efflux Pumps:**
- Bacteria have designed efflux pumps to remove antibiotics from their cells as fast as
they enter them

- Over time, bacteria has created a variety of efflux pumps in order to protect
themselves—each coded for particular substances.

- Some are multi-drug efflux pumps; others are single-substance efflux pumps

- Pumps have the ability to pump out positive-, negative-, or neutral-charged
molecules

- Five main forms of efflux pumps:
  - Major Facilitator Superfamily (MFS)
  - APT-Binding Cassette Superfamily (ABC)
  - Small Multidrug Resistant Family (SMR)
  - Resistance-Nodulation-Cell Division Superfamily (RND)
  - Multi-Antimicrobial Extrusion Protein Family (MATE)

- Most gram-positive bacteria use MFS efflux pump; most gram-negative bacteria use
RND
Additionally: Bacteria have learned how to live in cleaning solutions; some have ever learned how to use antibiotics as food.

**Sharing Knowledge:**

“Once a bacterium develops a method for countering an antibiotic, it systemically begins to pass the knowledge on to other bacteria at an extremely rapid rate [...] In fact, bacteria are communicating across bacterial species lines, something they were never known to do before the advent of commercial antibiotics. The first thing they share is resistance information and they do this in a number of different ways [...] Bacteria are not competing with each other for resources, but rather cooperating in the sharing of survival information.” (17-19)

~Stephen Buhner, Herbal Antibiotics

-Bacteria share resistant information directly or extrude it from their cells, thus allowing it to be picked-up by other bacteria. When bacteria pick-up encoded information on antibiotic resistance, they weave it into the fiber of their own DNA. The information becomes a genetic trait passed on to all descendants

**Encoding Plasmids:**

-Bacteria pass resistance information to other bacteria by encoding several different kinds of plasmids (chromosome-independent DNA strands)

-Plasmids: highly mobile genetic strands

-**Using Transposons and Integrons:**

-Transposons: movable segments of DNA sometimes referred to as “jumping genes”; normal components of bacteria genome; easily move between chromosomes and plasmids.

-Bacteria transfer resistance information using transposons and release them freely into environment so other bacteria can take the information

-**Using Viruses:**

-Bacterial viruses also transfer information between bacteria

-The viruses that infect bacteria teach them how to be resistant to antibiotics
Factory Farms/Commercial Agriculture

- In the US, at least half, if not more, of all antibiotics are produced for factory farm operations.

- Bacteria from factory farms have spread quickly into the world: *E.Coli* in beef, *Salmonella* in chicken eggs, *Campylobacter* in chickens, *Listeria* in deli meat.

- Antibiotics are used to treat diseases spread by inhumane industrial husbandry practices

- Farms have become petri-dishes for superbugs!

- Stuart Levy, who runs the Levy Lab at the Center for Adaptation Genetics and Drug Resistance at the Tufts University School of Medicine, did the following study:

  *To trace the flow into the environment of resistant bacteria from farming operations, he took six groups of chickens and placed them 50 to a cage. Four cages were in a barn, two just outside. Half the chickens received food containing sub-therapeutic doses of oxytetracycline. The feces of all the chickens as well as the farm family living nearly and farm families in the neighborhood were examined weekly. Within 24 to 36 hours of eating the first batch of antibiotic-containing food, the feces of the dosed chickens showed *E. Coli*-resistant bacteria. Soon the undosed chickens also showed *E. Coli* that were resistant to tetracycline. But even more remarkable, by the end of 3 months, the *E. Coli* of all chickens were also resistant to ampicillin, streptomycin, and sulfonamides even though they had never been fed these drugs. Still more startling: At the end of the 5 months, the feces of the nearly farm family (who had no contact with the chickens) contained *E. Coli* resistant to tetracycline. By the sixth month their *E. Coli* were also resistant to five other antibiotics. A similar but longer study in Germany found that this resistance eventually moved into the surrounding community—taking a little over 2 years.* —Stephen Harrod Buhner, *Herbal Antibiotics*

- A recent 2011 study found that nearly 50% of all store-bought conventional meat and poultry tested were contaminated with staph, and over half the bacteria tested were resistant strains.

- *Salmonella* can survive refrigeration, boiling, basting, frying (to kill: egg must be fried hard or boiled for nine minutes or longer)
- *E. Coli* can now survive in orange juice and apple juice—acidic substances that once killed it
- Flies: main vector for the spread of resistant organisms
- Seagulls and other birds are spreading resistant bacteria
- Salmon, catfish, and trout raised commercially are heavily dosed with antibiotics. Salmon are raised in crowded conditions in open sea pens and given antibiotics for long periods of time; antibiotics flow right into ocean; approx. 150 pounds of antibiotic per acre of salmon
- When antibiotics flow into water, the resistant traits are now available throughout the environment and easily picked-up by other marine life. Tetracycline, for example, does not break-down quickly in fish so it is excreted in an active state in feces and then deposited onto sea floor.
- To treat infections in mono-cropped fields, antibiotics such as streptomycin are sprayed heavily
- Antibiotics are showing genotoxicity: affecting integrity of genetic structures in other life forms
Our Symbiotic Relationship with Bacteria

“Bacteria are not our enemies, as some scientists have postulated, nor a dangerous life-form bent on sickening mankind, as so many television commercials would have us believe. They are our ancestors and we are very much alike; we both metabolize fats, vitamins, sugars, and proteins [...] Bacteria are not germs but our germinators—and fabric—of all life on Earth. In declaring war on them, we declared war on the underlying living structure of the planet, on all life-forms we can see, on ourselves.”

(32).

–Stephen Harrod Buhner, Herbal Antibiotics

–One to two pounds of our adult body weight comes from coevolutionary bacteria; they are our first line of defense against disease.

–All of our bacteria generate antibiotic substances that kill off other harmful bacteria.

–Example: Streptococcus bacteria normally live in our throats and produce large quantities of antibacterial substances that are active against the Streptococcus pyogenes bacteria that causes strep throat.

–As we are growing, regular exposure to pathogenic bacteria teaches our bodies and our symbiotic bacteria how to respond to such organisms. Children who are in exceptionally clean environments and “protected” from bacteria with constant exposure to antibacterial soaps/wipes/sanitizers are more prone to illness and immune suppression. Constant exposure to bacteria stimulates our immune health!

–An ancient symbiosis exists between humans and bacterial, viral, and microfaunal colonizers

“The skin of our bodies and the mucosal systems of our sinus passages and intestinal tracts are to bacteria much like fresh fertile black soil is to plants. Plow up the soil, disturbing the plants that grow there, and even if you don’t plant anything, the soil will soon be covered with a profusion of new plant growth. The same thing occurs in our bodies if our bacterial ecology is disturbed, as if often is, by antibiotics.” (33).
Antibiotics kill off so much of our internal symbiotic microfauna that overtime the human microfauna ecology has changed. Antibiotics harm our microbiome and distort our internal landscape—this is now directly linked to nutritional deficiencies, chronic infections, allergies, asthma, food intolerances, candida overgrowth, immune suppression, and more.

The *Journal of Clinical Infectious Disease* published a review of antibiotic use in the US and found that 70% of the time antibiotics are being recommended inappropriately. When doctors were surveyed on the issue, these were the 3 top reasons: 1. doctors think that parents want them for their kids, 2. doctors don’t know what else to offer, and 3. doctors are afraid not to give them for legal reasons—even when indications are not there.

**Specifics**

- In the newest edition of *Herbal Antibiotics*, Stephen Buhner covers 21 resistant pathogens (that number does not count the various subspecies in each genus that are not resistant).

- Most of the resistant pathogens are either Gram-positive or Gram-negative bacteria.

- Gram-positive and Gram-negative organisms are denoted as such because they take a Gram stain, a way of identifying them.

- Hans Gram (1853–1938): found he could see bacteria clearly under a microscope if he applied a stain made from crystal violet. Varying bacteria absorb stain differently, making it easier to identify types of bacteria.

**Gram-positive and Gram-negative Bacteria**

- Every bacterium has an external cell membrane surrounding their body known as a cell wall.

- Interior is called cytoplasm; cytoplasmic membrane covers cytoplasm and then the cell wall.

- Cell wall consists of a polymer called peptidoglycan.

- If bacteria is Gram-negative, they will have a second cell wall called the outer membrane; between two membranes is a compartment called periplasmic space.
- Gram-positive bacteria lack the other membrane yet have much thicker cell walls to protect them.

- Gram-positive bacteria, with only a single cell wall, are easier to treat.

- Gram-negative bacteria have two cell walls that need to be penetrated; gram-negative bacteria have a series of highly synergistic reactions to antibiotics (double cell wall, special group of enzymes, multidrug efflux pump).

- Gram-positive bacteria have thicker cell walls and efficient efflux pumps (they have also learned to incorporate enzymes, which they have learned from Gram-negative bacteria).

- In addition to Gram-positive or Gram-negative Bacteria, Stephen Buhner covers other resistant pathogens: one parasitic protest (malarial parasite), one mold (aspergillus), and one yeast (candida) that have become very resistant.

## How to Treat

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>HERBAL TREATMENT</th>
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<tbody>
<tr>
<td>Systemic Infection</td>
<td>Cryptolepis, alchornea, or sida (Bidens very effective too—yet one will need higher doses.)</td>
</tr>
<tr>
<td>Severe diarrhea, dysentery</td>
<td>Berberine plant</td>
</tr>
<tr>
<td>Urinary Tract infection</td>
<td>Juniper berry combined with Bidens</td>
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<tr>
<td>Infected surface or surgical wound</td>
<td>Honey</td>
</tr>
<tr>
<td>Meningitis</td>
<td>Add Piperine, Isastis, and either Japanese Knotweed or Stephania to herbal mix</td>
</tr>
<tr>
<td>Bacteremia</td>
<td><em>Echinacea angustifolia</em> in large doses</td>
</tr>
<tr>
<td>Sepsis</td>
<td><em>Salvia mitiorrhiza</em>/Angelica sinensis tincture in large, frequent doses</td>
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Stephen Buhner has put herbs into three categories: systemic antibacterials, localized antibacterials, and facilitative or synergistic herbs.

**Systemic antibacterials:** herbal medicines that are broadly systemic, that are spread by the bloodstream throughout the body, thus affecting every cell and organ within the body, and that are active against a range of bacteria. Good for treating infections such as MRSA that have spread throughout the whole body and are not responding to multiple antibiotic protocols.

**Localized antibacterials:** do not spread easily throughout the body but are limited in their movement. They do not easily cross membranes, so they are effective in the GI and urinary tracts for external infections. Useful for infections such as E. Coli or cholera or for infected skin wounds.

**Synergistic Herbs:** plants that facilitate the action of other plants or pharmaceuticals. Enhance the action of antibiotics or affect the bacteria so that the antibacterial is more effective.

Plant alkaloids (meaning alkaline-like) do not extract easily in alkaline waters; they need more acidic waters.

- The water being used to make extracts (tinctures and infusions) needs to be “soft,” or else an acid such as vinegar need to be added in minimal amounts

- Understanding these types of complexities in plants is important

- There is a synergy between the plant and the medium in which it is extracted

- Herbalism is an art

- Nonlinear complexity: combined effect of different substances will be greater than that which can be expected from the individual components alone.

- Importance of systemic herbal antibiotics cannot be understated
- Many resistant diseases, such as staph, are widely spread throughout the body. They can affect internal organs, invade different-to-reach parts of the body, or, very commonly, infect the skin from inside rather than outside, appearing in skin ulcerations. To treat a systemic infection like staph, an herbal antibiotic that is systematically spread throughout the body is necessary.

- With resistant bacterial infections spreading at the rate that they are, we need systemics!

- When herbs are taken into body, some stay pretty much in the GI tract, whereas others cross intestinal membranes and circulate in the body, often concentrating in particular places such as liver or kidneys.

- Systemics: once ingested, they concentrate in the bloodstream (sometimes liver) and are widely circulated, reaching every cell that needs a constant blood supply (every cell in body!).

- Cryptolepis: traditional herbal medicine from Ghana
What is the GUT?

- The gastrointestinal system, also referred to as the gastrointestinal tract, digestive system, digestive tract, or gut, is a group of organs that include the mouth, esophagus, stomach, pancreas, liver, gallbladder, small intestine, colon (large intestine), and rectum.

- The gastrointestinal system is way more than the primary site of breaking down food and absorbing + assimilating nutrients!

- The digestive organs also act as a communication center to and from the brain and contains 70% of the body’s immune system.

- A healthy digestive system extracts and synthesizes (absorbs and assimilates) the nutrients needed from food, detoxifies and eliminates waste efficiently and fully, and is a protective immune system barrier between the internal body and external environment.

- The digestive system involves: cells, called enterocytes, which produce a variety of enzymes to break down food; stomach acid which creates a pH unlivable for harmful organisms/pathogens; immune cells and nerves that communicate with your entire body.

- Intestinal ecology is comprised of trillions of diverse microorganisms; the average adult’s microbiome weighs more than 2 pounds (approximately the same weight as the brain).

- Microorganisms impact and influence nutrient absorption, detoxification processes, the health of gut lining, moods, appetite, food cravings, mental function.

- When the internal gut ecology (gut flora) is out of balance, one may experience inflammation, neuroinflammation, obesity, diabetes, hormonal imbalance, anxiety, brain fog, and depression.

- The microbiome extracts calories and nutrition from food, synthesizes vitamins, and detoxifies chemicals and hormones.

- Healthy forms of bacteria prevent gut hyper-permeability, aka Leaky Gut.
Healthy forms of bacteria produce short-chain fatty acids and butyrate, which work to keep the intestinal lining healthy and intact.

Unhealthy forms of intestinal organisms release toxins that disrupt integrity of intestinal lining and increase intestinal permeability.

Inflammation in intestinal lining affects entire immune system and mood.

Optimal Gut Health: coexistence with trillions of bacteria, yeasts, and other organisms.

**Layers of the Gut: Surface Layer and Immune Barrier Layer**

- If unfolded and flattened, the intestinal lining would cover the length of two whole tennis courts—Woooh!

- Epithelium: thin cell layer punctuated by “gates” called tight junctions, which allow nutrients through yet work to protect tissue and bloodstream from harmful, invading particles/pathogens.

- The lining of the digestive system forms a protective barrier internally (as ones skin does externally).

- Surface Layer: provides a physical barrier, which contains rich mucus to protect the lining from inflammation as well as nutrients that feed microbiome.

- Surface Layer: covered with villi in the small intestine, providing a huge surface layer for nutrient absorption.

- Surface Layer: a selectively permeable barrier that allows essential nutrients from food/herbs into your body.

- Immune Barrier Layer: 70% of the body’s immune system is in the gut lining in lymphatic tissue called gut-associated lymphoid tissue (GALT).

- Layers work together to allow nutrients into bloodstream and work to prevent harmful protein fragments, bacteria, and other particles from bacteria/food from having contact with sensitive immune tissue and bloodstream.

Mouth: the digestive process begins with the mouth, where the teeth and the tongue help us chew our food and where enzymes in our saliva start to break down food.
Esophagus: chewed food then leaves the mouth and enters the food pipe, aka the esophagus, which uses its muscles to move the food from the mouth to the stomach through a coordinated process called peristalsis. The food is released into the stomach and a valve, or spincter, acts as a gateway to keep the food from going back up into the esophagus.

Stomach: produces hydrochloric acid (HCL), which helps to sterilze the food. Enzymes in the stomach work to digest protein and other nutrients, and the organ’s churning motion turns the mushed-up food into a liquid, called chyme. This process can take hours depending on the richness or lightness of the food. The gut and brain communicate and decide when the food is ready to pass-on into the small intestine.

Small Intestine: the large surface area of the small intestine is responsible for the massive absorption of nutrients. This organ measures 21 feet when stretched out. The inner lining is covered with little projections called villi.

Pancreas, Liver, Gallbladder: enzymes are secreted by the pancreas into the small intestine to help break down proteins, carbohydrates and fats. The pancreas also produces the hormones insulin and glucagon to help regulate blood sugar. The liver, which is the largest solid organ in the body, produces bile, which is secreted into the gallbladder. The bile is then released into the small intestine to help break down fats. The liver converts carbohydrates, fats, and other nutrients into protein and glucose to be used as fuel. The liver performs thousands of functions in the body.

Colon and Rectum: After the small intestine is finished absorbing nutrients from the chyme, the remaining digestive material is passed into the colon. The colon absorbs water and electrolytes as nourishment and excretes the remaining solid waste out of the rectum as a bowel movement.

Brain and Gut Relationship:

**The Brain and the Gut are Constantly Communicating**

- The gut communicates via the enteric nervous system, sometimes referred to as “the second brain,” and the microbiome

- Microbiome: a constellation of 100 million neurons that live in the lining of the gut and communicate using neurotransmitters

- 95% of the information passes through the vagus nerve, one of the largest nerves in the body, which travels from the gut to the brain (not the brain to the gut)
- The gut provides information to the brain and the brain helps to decide what, when, how much, and how fast to eat and drink.

- The gut informs the brain of stressors, toxins, poisons, pathogens.

- The gut produces more than 90% of the body’s serotonin, a hormone that regulates mood and emotions.

**Dysbiosis**
Disruption in the microbiome; overgrowth of unfriendly bacteria species, loss of helpful species, or a combination of both.

- Dysbiosis most commonly occurs in the small and large intestine.

- Caused by stress, certain medications (antibiotics, antacids, ibuprofen, Tylenol), deficiencies of gut-protective nutrients (Vitamin A, D, zinc, iron), and a diet high in processed + refined carbohydrates, processed sugars, and poor-quality fats and low in fiber, fresh fruits, fresh vegetables, and fermented foods.

*Eating highly processed foods for 10–14 days can reduce your microbiome diversity by 40%*

*People who eat an organic, whole foods diet are up to 40% more resilient to stress and mental illness than those who eat a processed foods diet (I believe more!)*

**Body Weight**
- Firmicutes bacteria extract a lot of calories from food; with an overgrowth of Firmicutes, one might store fat even when one isn’t overeating.
- Bacteroides, another bacteria species, do not extract a lot of calories and people with an appropriate amount of Bacteroides tend to be leaner.
- This has been proven with fecal transplants.

**Cravings: Bacteria in Control?**
- Bacteria create cravings for food that they specifically need for their own growth.
- Certain bacteria will produce toxins until the person consumes the foods that satisfy the bacteria.
- Your gut microbiome manipulates what you eat!
Stress/Anxiety/Depression
- Beneficial species of gut flora produce butyrate, which reduces anxiety and depression
- When the intestinal lining is perturbed, butyrate production stops
- Healthy, balanced gut flora can alleviate depression and anxiety

Brain Fog
- The health of the microbiome can affect cognitive function
- Dysbiosis often causes brain fog—this occurs as a result of the chemicals and gases that are produced by fermentation in the gut
- For example, a highly refined carbohydrate diet for a person with intestinal dysbiosis can lead to the production of chemicals that can make the individual experience feeling drunk, groggy, drugged, fatigued, or foggy after eating.

Hormonal Imbalance
- Healthy gut flora contains bacteria with genes that are capable of breaking down estrogen and helping the body eliminate estrogen
- Healthy gut flora bacteria also transform plant compounds called lignans, which are present in many vegetables and legumes, into phytoestrogens, plant hormones that protect the body against the risk of excess estrogen
- Phytoestrogens prevent excess estrogens from recirculating through the intestines
- When the microbiome is damaged, estrogen recirculates in a toxic form through the intestines, thus increasing a woman’s risk of developing breast, ovarian, and endometrial cancers.
- Elevated estrogen levels can also inhibit thyroid function and is a risk factor for gaining weight
- High estrogen blocks progesterone, which may cause fertility issues, miscarriage, mood and sleep issues
- Women who are estrogen-dominant are more prone to heavy periods, lumpy + painful breasts, and are at increased risk of miscarriage and infertility
- High fiber, fermented foods, probiotics, high fruit + vegetable diet with low sugar and no unhealthy fats help to lower risks

What is Leaky Gut & How Does One Develop Leaky Gut?
- Leaky gut involves a breakdown in the integrity of the intestinal barriers, resulting from various factors: stress; environmental toxins and industrial food additives; use of steroids, non-steroidal anti-inflammatory drugs (NSAIDs, like ibuprofen), antibiotics, Tylenol, and PPIs; altered bacterial flora/microbiome disruption;
excessive consumption of alcohol; nutritional deficiencies; immune and inflammatory assaults/inflammatory food triggers. –

-if one doesn’t feed gut flora with nutritious foods, they begin to eat away at the protective mucosal layer of the intestines, causing inflammation and eventually leaky gut.

-When the integrity of the gut lining is continuously breached, the intestinal lining becomes more permeable.

-Leaky gut allows food particles, fragments of bacteria and other organisms, and other small intestinal waste products that are in the gut waiting to be eliminated, to cross into the immune-system rich layer of your intestinal lining. Immune reactions are now triggered there and in your bloodstream. Inflammatory cascade begins.

-Proteins, particles from food, and fragments from the outer coats of bacteria are all toxic to your body

-When these proteins, particles, and bacteria migrate across inner protective barrier and into circulation, the body recognizes foreign invaders and mounts an attack.

Importance of Microbiome

-The gastrointestinal system is colonized with microorganisms from the mouth to the anus

-From the time of birth, the microbial colonization which occurs during vaginal birth and breastfeeding, influences the development of the body’s immune system and sets the tone for how well the HPA-axis is able to respond to stress.

Ingredients Needed for Healthy Intestinal Lining and Microbiome

-WHOLE ORGANIC FOODS: High-fiber, antioxidant-rich vegetables and fruits; slow-burning carbohydrates; quality protein (not excessive amounts of animal proteins); healthy fats; herbs, seaweeds, and small amounts of fermented foods.
Symptoms and Conditions Commonly Associated with Leaky Gut and Chronic Inflammation:

- Gas
- Bloating
- Constipation
- Loose stools
- Fatigue, mood changes, or rapid heartbeat after eating
- Chronic fatigue
- Food intolerances
- Irritable Bowel Syndrome
- Celiac disease (both cause and result of leaky gut)
- Hashimoto’s Thyroiditis
- Crohn’s Disease and ulcerative colitis
- Rheumatoid arthritis
- Allergies, hives, eczema
- Arthritis, joint aches and pains
- Obesity, heart disease, diabetes, fatty liver disease

How to HEAL the GUT

REMOVE Triggers

- Remove Gut-Disrupting Medications:
  - Antibiotics, NSAIDs, Tylenol, and PPIs
  - These medications damage gut ecosystem

Antibiotics:
- More than 70% of antibiotics prescribed in the US are medically unnecessary!
- The average American, by the age of 30, has had thirty courses of antibiotics
- Even just one round of antibiotics can wipe out an entire species of your gut flora permanently
- Antimicrobial products (hand sanitizers/wipes/dish soap/body soaps) often contain triclosan and other endocrine disrupters and encourage antibiotic resistance.
- Antibiotics destroy the gut flora responsible for 90% of your metabolic activity, hormonal detoxification, nutrient assimilation, and protection of your intestinal lining
- Antibiotics can wipe out great numbers of gut flora species even with just one dose
- Nonsteroidal anti-inflammatory drugs (NSAIDs): Ibuprofen, Aleve, Motrin
- Even just five continuous days of use can lead to gastrointestinal (GI) bleeding
- Chronic users often develop chronic inflammation of the GI tract
- Major cause of leaky gut: Proton Pump Inhibitors (PPIs) for GERD, such as Prilosec, Prevacid, Nexium (medications regularly used for the treatment of acid reflux)
- Stomach acidity protects against bacterial overgrowth in the upper small intestine so the use of antacids can result in SIBO (small intestinal bacterial overgrowth). SIBO can lead to chronic inflammation and food intolerances.
- PPI use has been associated with obesity, rosacea, restless leg syndrome, infertility and pregnancy complications, and joint pain
- PPIs also interfere with the absorption of vitamin B12 (which increases risks of depression, detoxification issues, and neurological problems)

Tylenol:
- Acetaminophen damages the delicate lining of the stomach and may lead to GI bleeding and interference with the absorption of nutrients necessary for gut health
- Tylenol is one of the leading causes of liver damage in the US annually
- Tylenol depletes the body of glutathione—one the most important detoxifier in the human body

**REMOVE/ELIMINATE/REDUCE TOXINS and HEAVY METALS:**
- Eliminate ones exposure to agricultural chemicals (herbicides, pesticides, antibiotics), industrial waste, heavy metals, hormone-disrupting plastics, solvents, and flame retardants that permeate the air, water, food, soil, clothing, furniture, body products, cleaning products, and electronic devices.
Toxins bind to cells in our immune, nervous, and endocrine systems; toxins increase inflammation and oxidative stress.

Chronic low-exposure to such toxins dramatically increases risk for metabolic syndrome, prediabetes, cognitive decline, impaired memory, and Alzheimer’s disease.

Toxins obesogens and diabesogens trigger changes in cells that increase fat and cortisol, alter insulin production and secretion, and lead to insulin resistance and diabetes.

Heavy metals: lead, mercury, copper, cadmium, nickel, arsenic, and aluminum can all build up in the body to create or contribute to illness.

Potential exposure is everywhere and even falling out of the sky in vapors.

Heavy metal mercury, as well as pesticide DDT, can stay in the bloodline for millennia, passing from generation to generation, amplifying as it gets passed along.

Heavy metals tend to oxidize over time; heavy metals lower immunity and feed viruses and bacteria.

DETOXIFY and ELIMINATE the Overgrowth of Yeasts and Fungi, Heavy Metals, Pathogens, Viral By-Product, Radiation, Chemical and Toxic Accumulations, Yeast/Fungus Overgrowth

A few effective herbal remedies for cleaning out yeasts and fungi overgrowths (such as Candida): mugwort, oregon grape root, goldenseal (or other berberine-containing herbs), garlic, andrographis, echinacea, pau d’arco, oregano leaf, essential oils of oregano, thyme, sage. Products containing herbs with caprylic acid, sodium propionate, and sorbic acid are effective.

Recommended product: Nature’s Sunshine Yeast/Fungal Detox

Use yeast/fungal detox herbs and products for 4–8 weeks. Long-term maintenance will most likely be necessary with occasional deep cleanses.

EAT FRUIT!

Be aware of die-off symptoms. When pathogens, especially Candida, begin to die, they release endotoxins into your gut and bloodstream that can cause unpleasant symptoms, such as: achiness, headaches, rash, brain fog, constipation, diarrhea,
fatigue, gas, bloating. Drink plenty of filtered/spring/mineral water, take herbs to stimulate and cleanse your lymphatic system (cleavers, calendula, red root), cleanse your blood and bowels (yellow dock root, burdock root, cascara sagrada), and eat a bounty of fresh + raw fruits and vegetables.

Viral Infections:
- Herbs for Fighting Stealth Infections: licorice root, St. John’s Wort, lemon Balm, andrographis, cat’s claw, reishi, cryptolepis

- Cleansing Heavy Metals: spirulina, chlorella, cilantro, fruit, microgreens, Atlantic seaweed

REPLACE Digestive Enzymes and Boost Stomach Acid

- If you have undigested food in your stool or experience gas or bloating after meals, it may be helpful to supplement with Digestive Enzymes for a period of time. Take Digestive Enzymes at the beginning of each meal to coincide with when your pancreas would naturally begin to pump-out enzymes.

- To naturally boost the hydrochloric acid in your stomach, enjoy Digestive Bitters (for example, a tincture blend of dandelion, burdock, angelica, fennel seed, orange peel, cardamom, gentian, ginger) at the beginning of a meal OR enjoy 1–2 tablespoons of raw apple cider vinegar in water at the start of your meal.

- Recommended product: Nature’s Sunshine Food Enzymes (contains Betaine HCl, bile salt, bromelain, lipase, alpha amylase, pancreatin, papain, and pepsin)

- If one is suffering from GERD (acid reflux), consider DGL licorice, one to three chewable tablets or capsules, between meals and before bed.

- Zinc carnosine, 30 mg daily, helps heal gastric inflammation

- Avoid drinking cold water during meals, as it reduces hydrochloric acid in your stomach

- EAT CELERY and DRINK CELERY JUICE regularly to boost hydrochloric acid production

REINOCULATE: Restore Gut Flora
- ENJOY lacto-fermented food, probiotics, and healthy fiber!!
To ensure optimal gut health for your entire life: eat at least two cups of dark leafy greens (collards, kale, spinach, watercress, swiss chard, dandelion leaves, etc.) at least two meals each day and one serving of fermented vegetables once daily with your meal to repopulate gut. Note: be thoughtful about eating fermented foods if you have a histamine intolerance.

What’s the best food for a healthy microbiome? Fiber from a variety of plant sources! If one doesn’t feed gut flora with nutritious foods, the microbes begin to eat away at the protective mucosal layer of the intestines, causing inflammation and eventually leaky gut. Recommended fiber intake: 25–40 grams daily.

Prebiotics are starches found in garlic, onions, asparagus, Jerusalem artichokes, and oats.

Take a probiotic that contains at least ten billion CFUs and a variety of Lactobacillus and Bifidobacterium species to help restore normal balance of gut flora and repair gut barrier

Recommended Probiotic: Nature’s Sunshine NutriBiome Eleven Elevated (30 billion CFU of 11 strains of beneficial bacteria per serving)

Note: If one has an intense case of dysbiosis or SIBO, taking a probiotic may cause gas or bloating. If this occurs, discontinue the probiotic and work on cleaning out bacteria overgrowth intensively for 4–6 weeks, and then reintroduce the probiotics two weeks into your treatment.

REPAIR your Gut Lining and Heal Leaky Gut

Turmeric root, marshmallow root, and licorice root are some of the most effective herbs for healing the gut lining. Vulnerary herbs, such as calendula blossoms and St. John’s Wort, helpful as well.

Zinc: integral mineral in maintaining the intestinal tight junctions and calming inflammation in the intestinal lining. Also healing for stomach ulcers. Dose: 25–40 mg. Do not exceed 60 mg in a day.

L-glutamine: amino acid that nourishes and heals the intestinal lining. Dose: 5 to 10 g of powder 2 x daily for up to 3 months
- Antioxidant vitamins A, C, E, and mineral selenium: necessary for healthy intestinal lining

“The health, integrity, and proper function of the whole digestive system is fundamental to all life processes. Not only are we what we eat, but we are also what we are able to assimilate. If the digestive system is not breaking down and absorbing food properly, then the body will not be able to reap the rewards of a healthy diet.”
-David Hoffman, The Herbal Handbook

*Your body is innately wise and continuously seeks greater balance and health*

*Let’s remove what is potentially harming you and provide your body with what may be missing + needed for healing*

The Roots of Imbalance: Chronic Emotional and Mental Stress

“Viewed from the perspective of the evolution of the animal kingdom, sustained psychological stress is a recent invention, mostly limited to humans and other social primates.”
-Robert Sapolsky

Food triggers: foods that may be causing hidden inflammation; blood sugar ups and downs causing chronic stress response; phytonutrient deficiencies

Gut imbalances: damage to your gut lining or your microbiome from food triggers, stress, medications

Toxic overload: agricultural chemicals (herbicides, pesticides, antibiotics), industrial waste, heavy metals, hormone-disrupting plastics, solvents, and flame retardants that permeate the air, water, food, soil, clothing, furniture, body products, cleaning products, and electronic devices; under-functioning or impaired-functioning of natural detoxification processes due to poor elimination, stress, nutrient insufficiencies

Stealth Infections/Heavy Metals: reactivation of prior infections or new infections that chronically activate and tax your immune system; viruses feed–off of heavy metals; lead, mercury, copper cadmium, nickel, arsenic, and aluminum can all build up in the body to create or contribute to illness.
Statistics from Dr. Aviva Romm:
According to the Annual Stress Survey by the American Psychological Association, 75% of women experience moderate to severe stress, 49% report sleep problems, and more than 40% report physical symptoms as a direct result of stress. Recent studies show that most are also experiencing chronic overwhelm and exhaustion.

34% of adults aged twenty years or over are overweight, 34% are obese, and 6% are extremely obese. Between ages twenty and sixty, women are much more likely to be overweight than men.

Terrifyingly, 50% of the entire adult population is expected to have diabetes by 2030, and this is one of the major predictors of heart disease and is also associated with dementia.

One in four women experiences an extended time of major depression in her life, and as many women are on an antidepressant, an antianxiety medication, or often both, not living their lives with the joy and satisfaction we are meant to experience. Autoimmune disease is now the third most common category of disease in the United States, and one of the ten leading causes of death for women. Conservative estimates show that 78% of autoimmune disease sufferers are women. Hashimoto’s thyroiditis is the most prevalent, and affects women almost exclusively.

-Dr. Aviva Romm, The Adrenal Thyroid Revolution

Adrenal Overdrive Symptoms + Conditions:
- Afternoon fatigue, caffeine or sugar cravings, often between 2–4 pm.
- Allergies, food reactions, hives
- Anxiety, irritability, or depression
- Cravings for sugary, salty, or fatty foods
- Difficulty with focus of memory; brain fog
- Trouble with willpower
- Digestive problems
- Eczema
- Fatigue after eating
- Fatigue, exhaustion, chronic overwhelm
- Feeling “tired and wired”
- Hormone problems, including PMS, infertility, endometriosis, polycystic ovarian syndrome
- Insomnia
- Low sex drive
- Difficulty losing weight or difficulty gaining weight
- Waking up tired even if you had a full night sleep
- High blood pressure
- High cholesterol
- Insulin resistance
- Diabetes
- Hashimoto’s thyroiditis
- Osteoporosis or osteopenia
- Endometriosis and infertility

**Adrenal Exhaustion Symptoms + Conditions**

- Allergies
- Autoimmune disease
- Decreased concentration and memory
- Depression
- Excessive need for caffeine
- Fatigue, exhaustion, fatigue upon waking
- Frequent colds, respiratory infections, sinus infections, urinary tract infections, yeast infections, cold sores, herpes outbreak
- Increased aches, pain, inflammation
- Increased fear and apprehension
- Loss of ambition, low motivation
- Low blood pressure
- Low blood sugar symptoms
- Low sex drive
- No appetite in the morning
- Scattered thinking
- Irritability, short fuse, easily frustrated
- Slow recovery from illness
- Sugar and carb cravings
- Tendency to feel better or have more energy toward evening

**Understanding Stress Response**

Discussion: What are the adrenal glands? What are their functions? What are the functions of adrenaline and cortisol? How is the thyroid impacted? What is the Hypothalamus–Pituitary–Adrenal (HPA) Axis?

When one’s stress response system is triggered too often, or just doesn’t turn off, meaning one barely gets rest from high alert, health issues may result, including:
- Chronic anxiety, overwhelm, sleep problems: long-term exhaustion can lead to depression, cognitive problems, sugar cravings, weight gain, and increases risk of heart disease and cancer.

- Brain fog: Cortisol has specific actions in the brain and, when overly activated, can detrimentally impact memory, focus, and willpower.

- Digestive problems: When your body mobilizes energy to run or fight, energy is diverted away from digestive functions. Over time, persistent stress response activation, can lead to digestive symptoms, irritable bowel syndrome, and even damage to your intestinal lining and microbiome.

- Sugar, fat, and salt craving and belly fat: Cortisol tells the body to store energy in case emergency persists. When cortisol is chronically elevated as result of a chronically elevated stress response, the body holds onto calories and converts them into fat. This fat is packed around the waist/digestive organs and excess fat gets stored as cholesterol.

- Hormonal Chaos: When stress response is activated, the body diverts energy away from hormone production and sends messages to the pituitary gland to produce prolactin, a chemical which suppresses sex hormones.

- Metabolic syndrome and high blood pressure: When blood sugar and insulin are constantly required in elevated amounts, the sugar can cause damage to blood vessels and the pancreas may under-function from the extra demand, resulting in insulin resistance. Insulin resistance may lead to diabetes and heart disease. Elevated blood pressure may stay elevated if stress response system is chronically activated and become chronic hypertension.

- Immune system issues and autoimmune disease: Long-term activation of your immune system, which happens when ones stress response is persistently activated, causes great harm and confusion in your immune system. Common issues result: allergies, hives, eczema, getting sick frequently, autoimmune disease.

- Premature Aging
Common Food Triggers

“If your great-grandmother wouldn’t recognize it, or you can’t pronounce what’s on the food label, don’t eat it.”
-Michael Pollan, Food activist, writer, journalist

*Processed Foods/Artificial Foods/Artificial Sweeteners
*Gluten
- Refers to specific proteins in wheat, barley, rye; gives bread chewy, elastic quality
- Hidden in a number of products: salad dressings, soy sauce, ketchup, beer, deli meats
- Corn, oats, millet, coffee, dairy may “cross-react” with gluten
- Celiac disease, an autoimmune condition, and gluten-sensitivity causes chronic inflammation and numerous symptoms
- Celiac associated with numerous nutritional deficiencies (iron, B12, folate, vitamin D) due to poor absorption through gut

*Wheat

*Corn
- Most corn in the US is genetically-modified
- The use of glyphosate, an agricultural chemical contaminant in corn and other grains, contributes to increase in grain intolerance

*Nuts
- Overconsumption of nuts taxes the liver and gallbladder and causes inflammatory exacerbation

*Yeast
- Found in bread, vinegar, alcohol

*Soy

*Eggs

*Dairy
- Lactose intolerance: for some people, inherent digestive enzyme deficiencies in the intestinal lining prevent digestion of the sugars in dairy, often causing immediate diarrhea, gas, cramping
- Other people are sensitive to proteins in dairy
- For example, casomorphins can lead to brain fog and depression, and have been associated with addiction to dairy
- Dairy, even when organic, can impact women’s hormone balance
- Inorganic dairy can contain significant amounts of antibiotics, hormones, and environmental toxins—all of which accumulate in the fat
- Leaky Gut and IBS often suggest intolerance to dairy
When proteins in dairy (especially ones found in cow dairy) migrate across intestinal lining and reach intestinal immune system, a low-level inflammatory response is triggered.

**Why is one sensitive to particular foods?**

- An inherent inability to digest a specific food (example: lactose intolerance)
- An inherited or acquired autoimmune response to a food (example: celiac disease)
- Leaky Gut has developed, making your immune system overly reactive to that food
- Blood type
- Toxic congestion

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### Common Nutritional Deficiencies

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Sign/Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Fatty Acids (Omega-3)</td>
<td>Dry eyes, depression, cognitive function problems, dry sky</td>
</tr>
<tr>
<td>Mineral</td>
<td>Deficiencies</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Iodine</td>
<td>Goiter, hypothyroidism</td>
</tr>
<tr>
<td>Iron</td>
<td>Fatigue, hair loss, pale skin, weakness, shortness of breath, poor appetite, rapid heart rate, more frequent colds and upper respiratory infections</td>
</tr>
<tr>
<td>Magnesium</td>
<td>Leg or other muscle cramps, eye or facial twitching, constipation, restless leg syndrome, rapid or irregular heartbeat, elevated blood sugar, sleep disturbances</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>Fatigue, weakness, constipation, loss of appetite, numbness and tingling in the hands and feet, difficulty maintaining balance, depression, poor memory, soreness of the mouth or tongue</td>
</tr>
<tr>
<td>Vitamin D</td>
<td>Depression, Hashimoto’s, elevated blood sugar, diabetes, obesity; bone pain and muscle weakness</td>
</tr>
<tr>
<td>Zinc</td>
<td>Frequent colds and upper respiratory infections, white spots on fingernails, loss of sense of taste or smell, delayed wound healing; leaky gut</td>
</tr>
</tbody>
</table>

**Healing Foods**

**Fruits**
Apples
Apricots
Avocados
Bananas
Berries: blueberries, strawberries, blackberries, raspberries, chokeberries
Cherries
Coconut
Cranberries
Dates
Figs
Grapes
Kiwi
Lemons + Lemons
Mangoes
Melons
Oranges, Clementines, Tangerines, etc.
Papayas
Pears
Pomegranates
Vegetables/Microalgae/Sea Vegetables /Herbs
Artichokes
Asparagus
Atlantic sea vegetables
Beets
Broccoli
Brussel Sprouts
Burdock root
Cauliflower
Celery
Chlorella
Cucumbers
Fennel
Leafy Greens: kale, collards, arugula, spinach, dandelion greens, swiss chard, watercress, etc.
Garlic
Ginger
Mushrooms
Nettles
Onions, Leeks, Scallions
Potatoes
Radishes
Spirulina
Sprouts + Microgreens
Sweet Potatoes
Squashes
Turmeric
Yams
Zucchini
Herbal Formulas for the Digestive System

Notes from Herbal Formulas for Health Professionals Volume 1 Digestion and Elimination: Including the GI system, Livier, Urinary System, and the Skin
By Jill Stansbury, ND (highly recommend)

Simple Carminative Tea for Dispelling Gas and Bloating
Fennel seeds 1 part
Peppermint 1 part
Chamomile flowers 1 part

Mix 1 tablespoon of herb mixture per cup of water. Drink continuously until gas subsides.

All-Purpose Tea for IBS
*Teas have direct surface contact with intestinal mucosa membranes*

Chamomile 1 part
Licorice root 1 part
Fennel seeds 1 part
Peppermint 1 part

Combine equal parts of dry herbs. To make tea, add 1 tablespoon of herb mixture per cup of hot water. Steep for at least 10 minutes. Overnight infusion will be quite potent. Consume at least 3 cups per day; more, if possible, especially during a flare-up. For additional demulcent, soothing power, add slippery elm powder into tea.

*Be thoughtful with Bitter Alteratives in IBS Formulas*

-Bitter alteratives stimulate motility, bile flow, peristalsis, and gastrointestinal secretions. Alterative herbs can be very beneficial in small dosages between flare-ups to enhance digestive absorption, metabolism, and elimination. Begin with small dosage, 1/4 tsp. of tincture, 2x daily, for people with IBS. Increase to 1/2 tsp. -1 tsp. of tincture, multiple times per day. Cease use of bitter alterative herbs if inflammation, diarrhea, or bleeding occurs.

Laxative Tincture for IBS
*People with IBS do not tolerate irritant laxatives, even when severely constipated*

Yellow dock  28 ml  
Dandelion root  28 ml  
Cayenne  4 ml

**Decoction for IBD**

*Inflammatory Bowel Diseases (IBD) include Crohn’s Disease and ulcerative colitis  
*Symptomatically they are similar*

Astragalus  2 parts  
Licorice  2 parts  
Wild Yam  2 parts  
Red Sage  2 parts  
Pomegranate  1 part  
Turmeric  1 part

Decoct 1 tsp. of herb mixture per cup of water. Prepare 6 to 8 cups at a time; Simmer for at least 15–20 minutes, let stand for 10 minutes, and strain. Drink 6–8 cups over the course of a day. Reduce intake overtime as symptoms improve.

**Carminative Tea for GERD and Helicobacter Infection**

*Helicobacter pylori infections have been implicated in many cases of reflux*

Yarrow, finely ground flowers  
Chamomile flowers  
Rosemary, cut leaves  
Fennel seeds, crushed or powdered  
Ginger, cut dried root

Combine equal parts and steep 1 tablespoon of herb mixture per cup of hot water, drink at least 3 cups daily. Consuming 2 to 3 cups over the course of 30 minutes may help to alleviate acute discomfort.

**Antimicrobial Tincture for GERD and Helicobacter Infection**

Yarrow
Turmeric root
Oregon grape root
Rosemary
Gentian
Ginger
Fennel essential oil
Demulcent Tea for GERD
Licorice root
Comfrey root
Marshmallow root

Combine equal parts and decoct 1 tsp. per cup of water for at least 20–30 minutes

**Carminative Tea for GERD**

Cardamom seeds 2 parts
Fennel seeds 2 parts
Marshmallow root 2 parts
Licorice root 1 part
Ginger 1 part

Place 6 teaspoons of ground herb/seed mixture in a saucepan and soak in 6 ounces of cold filtered water or overnight. Bring to a brief boil for 2–3 minutes, remove from heat, cover, and allow to stand for 15 minutes. Strain and drink freely.

**Hemorrhoids**

*Hemorrhoids are usually related to increased pressure in the intestines resultant from chronic constipation or portal congestion in the liver*
*Be sure to treat underlying conditions*
*Many red, purple, and blue pigments in plants improve the integrity and strength of blood vessels*
*Eating colorful fruits and vegetables eaten over a lifetime help to stabilize vascular tissue*
*Alleviating pressure: exercise, high-fiber diet, ample water consumption*

**Tincture for Hemorrhoids**

Witch hazel 10 ml
Dandelion leaf + root          8 ml
St. John’s Wort              8 ml

Take ½ to 1 tsp. of combined tincture 4x daily for 3 months of longer to improve tendency to hemorrhoids.

**Tincture for Infectious Diarrhea**
*Use for “stomach flu,” traveler’s diarrhea, food poisoning, amoebic dysentery

Licorice root         15 ml
Oregon grape root     15 ml
Ginger root           7.5 ml
Yarrow                7.5 ml
Peppermint            7.5 ml
Slippery Elm          7.5 ml

**Therapies for Intestinal Parasites**
- Use papaya seeds in smoothies or dry/grind and use like black pepper
- chew 2-3 tablespoons of raw pumpkin and sunflower seeds with hulls

**Herbs/Foods/Supplements that discourage pinworms/parasites:**
- Bromelain
- Probiotics
- Raw pineapple and papaya
- Fresh pineapple and papaya juice
- Extra fiber
- Whole sunflower or pumpkin seeds with hulls

**Tincture for Intestinal Parasites**

Black walnut           15 ml
Wormwood               15 ml
Garlic                 10 ml
Fennel seed            10 ml
Ginger                 10 ml

**Ulcers**
The amount of stomach acid optimally occurs in balance with the amount of gastric mucous secreted to protect stomach tissue from the acid. Ulcers may develop when acid is excessive or the protective mucous barrier is deficient. Contributing factors: alcohol, stress, aspirin, NSAIDs, steroids. Cabbage powder or drinking a quart of cabbage juice daily is very healing for ulcers — powerful source of glutamine.*

**Formula for Gastric Ulcers**

Echinacea angustifolia  
Oregon grape root  
Goldenseal  
Licorice root  
Slippery Elm

**Healing Mouth Ulcers:**  
High dose of vitamin B complex, vitamin C, and a mouthwash of Red Sage (Salvia officinalis) tea

**Tea for Peptic Ulcers:**

Comfrey root 2 parts  
Marshmallow root 2 parts  
Goldenseal 1 part  
Valerian 1 part  
-Other healing herbs for ulcers: meadowsweet, slippery elm, licorice root, Irish moss  
-For relieving anxiety and tension: lemon balm, chamomile, valerian, skullcap, St. John’s wort, passion flower, hops

**Tea for Small Intestinal Bacterial Overgrowth (SIBO)**

Peppermint 2 parts  
Slippery Elm 2 parts  
Thyme 1 part  
Oregano leaf 1 part  
Wormwood 1 part  
Licorice root 1 part
Seaweed Broth for Leaky Gut
- Several pounds of soup bones (clean, organic source)
- 1 cup dried reishi mushroom slices
- 1 cup Atlantic seaweed
- 8–10 dried Astragalus root slices
- 1 cup raw apple cider vinegar
- Place all ingredients in a slow cooker (crock pot/clay pressure cooker), and fill the pot ¾ full with water. Simmer gently for 24 hours, adding more water as evaporation occurs. Strain contents and discard bones and herbs. Use broth to prepare soups or simply warm with ginger, garlic, turmeric, rosemary, onions, other desired spices.

Gastritis, Enteritis, and Gastroenteritis
*Gastritis is an inflammation of the stomach lining
- Enteritis is inflammation of the intestinal lining
- Gastroenteritis is when both the stomach and the intestinal lining are inflamed
- Gastroenteritis often overlaps with GERD due to low-grade Helicobacter pylori infection
- Viral infections often cause gastroenteritis
*Hot gastritis is erosive (ulcerative) and presents with heat, a sense of burning, excessive stomach acid
*Cold gastritis is inflammatory and often presents with sensations of pressure or cramping rather than burning and is associated with low stomach acid/enzymes and atrophy of cells and mucosa
*Hot gastritis: use cooling demulcent and anti-inflammatory herbs
*Cold gastritis: use cholagogues, alterative bitters, and warming herbs such as Ginger, Cinnamon, Cayenne
*Neutral herbs: Chamomile and Licorice would be appropriate for both hot or cold gastritis

Tincture for Hot Gastritis
Chamomile 15 ml
Slippery Elm 15 ml
Licorice root 15 ml
Goldenseal 15 ml

Combine herbs and take 30–40 drops 4–6 x daily. Decrease frequency as symptoms improve.
Tea for Hot Gastritis
Comfrey root or powder
Licorice root
Chamomile flowers
Combine equal parts and steep 1 tablespoon of herb mixture per cup of hot water for at least 10–15 minutes. Strain and drink as much as possible.

Tincture for Cold Gastritis
Chamomile flowers 30 ml
Licorice root 30 ml
Dandelion root 30 ml
Wormwood 15 ml
Gentian 15 ml
Take 30–40 drops of combined tincture 20 minutes before meals to improve digestion. Take 4–6 x daily. Reduce frequency as symptoms improve.

Diverticulitis
*An inflammation or infection in one or more small pouches present in the lining of the digestive tract
*Acute diverticulitis presents abdominal pain, tenderness, bowel symptoms, fever
*Demulcent and antimicrobial herbs are effective: Ginger, Licorice, Turmeric, Echinacea, Garlic, Goldenseal, Oregon Grape root* When dosed aggressively, most people will not require pharmaceutical antibiotics
*Some cases are asymptomatic or only present as gas or bloating
*Allopathic medicine often suggests a bland, low-fiber diet yet this may contribute to the worsening of diverticulitis over time. Raw fruits and vegetables, seaweeds, and easily-digested whole grains are encouraged.
*Probiotics and herbs that encourage desirable probiotic species are recommended, such as Dandelion root*

Tea for Simple Diverticulitis
Dandelion root
Chamomile flowers
Slippery Elm
Peppermint
Mix equal parts of each herb and simmer 1 heaping teaspoon of the herb mixture per cup of hot water. Bring to a boil, let stand for 15–20 minutes, strain and drink at least 3 cups per day for months.

**Tincture for Diverticulitis when Infection/Fever are Present**

Echinacea (either E. purpurea or E. angustifolia)
Slippery Elm
Peppermint
Turmeric root
Licorice root
Ginger root
Oregon grape root

Combine equal parts of liquid extract and take 30–60 drops 3–4 x daily
Herbs for Gastrointestinal System (NOT EXHAUSTIVE)

Notes from Herbal Formulas for Health Professionals Volume 1 Digestion and Elimination: Including the GI system, Livier, Urinary System, and the Skin
By Jill Stansbury, ND (highly recommend)

Aloe. Aloe vera
- Anti-inflammatory, antioxidant, astringent, diuretic, liver tonic, laxative, wound healer
- Rind has laxative effects and promotes peristalsis and bile flow
- Dried aloe rind useful for constipation
- Gel and juice soothe intestinal pain, heal ulcers, and reduce inflammation of digestive mucous membranes
- Juice contains polysaccharides

Anise. Pimpinella anisum
- Excellent and delicious carminative to alleviate flatulence, cramps, and nausea
- Tea appropriate for infants with colic; breastfeeding mothers can drink anise tea to pass into colicky baby
- Balances harsh effects of laxatives, cholagogues, and stimulants
- Effective tea and tincture; essential oil mixed with carrier oil can be used topically over the abdomen for cramps, distension and nausea.

Burdock. Arctium lappa
- Blood purifier, diuretic, diaphoretic, digestive bitter, anti-inflammatory
- High in fiber, minerals, and vitamins, including vitamin C
- Powerful alterative (blood cleanser), detoxifier, and cholagogue
- Healing for dysbiosis, malabsorption, skin disorders (eczema, acne, hives, ringworm, psoriasis), general malaise and fatigue associated with toxicity
- Lowers blood sugar

Cardamom. Elettaria cardamomum
- Delicious flavored carminative
- Useful for digestive gas and bloating, belching with peptic ulcers, and flatulence with IBS
Cascara . Rhamnus purshiana
- Laxative, antispasmodic, antibacterial, liver stimulant, bitter tonic
- Stimulates peristaltic action of the large intestine and restores normal peristaltic action
- Acute and chronic constipation
- Cleans toxins from the colon; eliminates cancer cells and bacterial toxins from digestive tract
- Promotes balance of beneficial bacteria in intestines

Catnip . Nepeta cataria
- Antispasmodic, diaphoretic, antigas, tonic, sedative, astringent
- Carminative tonic for colic and intestinal cramps
- Effective for children’s digestive upset and flatulence; use for cranky babies and toddlers who are suffering with intestinal distress; combines well with chamomile, mint, fennel, hops, California poppy

Cayenne Pepper . Capsicum annuum
- Stimulant, antioxidant, rubefacient, antiseptic, tonic, circulatory stimulant, digestive
- Synergist in formulas for people with cold constitutions
- Brings blood into stomach and intestines
- Increases digestive secretions
- Promotes peristalsis
- Use in small amounts with alteratives, cholagogues, carminatives and demulcents

Chamomile . Matricaria recutita, M. chamomilla
- Anti-inflammatory, antispasmodic, analgesic, calmative, antifungal, antiallergenic, diuretic, digestive
- Healing for digestive symptoms associated with emotional upset, exhaustion, nervousness
- Effective for dyspepsia with gas, bloating, stomach pain and pressure, nausea, burping
- Use in formulas for IBS, diarrhea, intestinal ulcerations, colitis, intestinal cramping, flatulence, GERD, burping with bitter/foul taste in mouth
- Useful for colicky or cranky babies and toddlers, for children with diarrhea
- Diaphoretic action makes it useful for colds/flus
- Safe for babies and children, safe during pregnancy and breastfeeding, safe for long-term use

**Cinnamon . Cinnamomum zeylanicum, C. verum**
- Antimicrobial, antiviral, antioxidant, antibacterial, antifungal, analgesic, astringent, stimulant, digestive tonic
- Astringent, carminative, and hemostatic actions
- Warming and stimulating for enhancing circulation/blood flow in the intestines
- Tea or tincture useful for cold constitutions, those with excessive secretions, or blood in stools
- Make a cold infusion for its mucilaginous and demulcent effects
- Remedy for diarrhea
- Expels worms and parasites; kills harmful bacteria, yeasts, fungi

**Dandelion . Taraxacum officinale**
- Diuretic, laxative, tonic
- Balances and lowers blood sugar (hypoglycemia and diabetes)
- Use for liver diseases and liver congestion, jaundice, hepatitis, cirrhosis
- Increases bile production and enhances spleen function
- Diuretic and blood purifier for kidneys

**Echinacea . Coneflower. Echinacea angustifolia**
- Antibacterial, antifungal, antiviral, antimicrobial, anti-inflammatory
- Useful when combined with astringents in case of infectious diarrhea, food poisoning
- Indicated for septic conditions with debility and emaciation
- Useful for hepatitis, cirrhosis, and appendicitis

**Eleuthero . Siberian Ginseng. Eleutherococcus senticosus**
- Adaptogen, tonic, anticancer, immune enhancer, hormonal balancer
- Use as synergist in formulas for chronic digestive irritability when emotional and nervous instability is present
- Adrenal tonic: useful for one dealing with long-term stress, overwork, nervous debility, fatigue, and GI issues
- Balancing for endocrine and immune system
**Fennel . Foeniculum vulgare**
- Antimicrobial, antigas, expectorant
- Relieves gas and bloating, peptic distension causing fullness/discomfort, burping, cramping and gurgling in the intestines
- Breastfeeding mothers: drink to ease babies’ colic; galactagogue that enhances and increases milk supply
- Fennel essential oil may be used topically; mix with carrier oil and rub over abdomen or right upper quadrant to help reduce intestinal spasms
- Soothes peptic ulcers
- Immune stimulant and digestive aid

**Flax . Linum usitatissim**
- Antiviral, antibacterial, antifungal, anticancer, antitumor, antioxidant, anti-inflammatory
- Essential fatty acid source high in amino acids, fiber, omega-3 and omega-6
- Seed useful for constipation, chronic constipation, bowel inflammatory disease, colitis, Crohn’s disease, colon damage
- Balances beneficial bacteria in colon
- Reduces stomach acid production
- Healing for gastritis
- Soothes ulcers

**Garlic . Allium sativum**
- Antioxidant, antiviral, expectorant, anticancer, antiseptic, antimicrobial, antibiotic, antifungal
- Healing for intestinal dysbiosis (yeast/fungal overgrowth)
- Antimicrobial useful for colds/flus, infectious gastroenteritis, and dysentery
- Warming, stimulating suited for cold, damp conditions as well as slow peristalsis, constipation, heavy-mucus conditions

**Gentian root . Gentiana lutea**
- Anti-inflammatory, liver stimulant, antiseptic, tonic bitter
- Bitter herb that stimulates appetite and releases bile secretions
- Specifically indicated when metal lethargy and fatigue accompany physical GI symptoms
- Strengthens functions of liver, gallbladder, stomach acids, spleen, pancreas, kidneys, and circulatory system
- Use for indigestion, stomach cramps, too-full feeling after eating, gas, bowel cleansing, chronic constipation
- Not recommended for those with excess stomach acid conditions, heartburn, ulcers, gastritis, GERD

**Ginger . Zingiber officinale**
- Analgesic, anti-inflammatory, antibacterial, antiemetic, antispasmodic, stimulant, digestive
- Useful for indigestion, upset stomach, heartburn, gas, stomach cramps, diarrhea, belching, nausea and vomiting, motion and seasickness, chemotherapy, morning sickness
- Increases circulation; useful for colds and flus, fever, chills, coughs, sinus congestion, menstrual cramps, sinusitis, headache, migraine
- Provides pain relief

**Hops. Humulus lupulus**
- Antispasmodic, antiviral, diuretic, digestive bitter, antibacterial, anti-inflammatory, sedative, astringent, antiseptic
- Digestive bitter and nerve
- Useful in cases of stress, insomnia, anxiety
- Use in adrenal formulas in combination with licorice for those with GERD symptoms
- Effective for digestive issues common with alcoholics when wakefulness, muscular twitching, and excitability is present

**Holy Basil . Ocimum sanctum**
- Adaptogen, antibacterial, antiparasitic, antioxidant, anti-inflammatory, expectorant, antiviral
- Builds adrenal reserves; nourishes adrenals, heart, central nervous system
- Free-radical scavenger
- Protects body from pollutants and toxins
- Immune stimulator
- Expectorant for respiratory mucus conditions, viral and bacterial infections, asthma, allergies, fever
- Excellent addition to cough syrups and flu preparations
- Increases digestive enzymes, increases appetite; useful for indigestion, diarrhea, dysentery, vomiting
- Not for use during pregnancy or while trying to conceive
**Lemon Balm . Melissa officinalis**
- Antibacterial, antiviral, antidepressant, antispasmodic, antioxidant, calmative
- Useful for stress, insomnia, nervousness, nerve disorders, emotional upset, tension, anxiety, agitation, headaches and migraines
- Indicated for nervous indigestion, gas
- Clears mucus from lungs, decongestant for colds and flus
- Antihistamine and helps to reduce congestion and allergic response

**Licorice. Glycyrrhiza glabra**
- Demulcent, anti-inflammatory, antiviral, antibacterial, antioxidant, expectorant, laxative, antispasmodic, anticancer, adrenal tonic
- Healing for gastritis, digestive ulcers, liver disease, and hepatitis
- Immune-modulating effects makes licorice effective remedy for inflammation in digestive mucous membranes from allergic reaction
- Coats esophageal and mouth mucosa when irritation, ulceration, pain is present in tissues
- Side effects:: high blood pressure, salt and water retention, low potassium are mostly avoided by using DGL licorice; avoid use with diuretic drugs or steroids; avoid during pregnancy or with high blood pressure

**Marshmallow root . Althea officinalis**
- Gastrointestinal and urinary tract soother and healer
- Heals inflamed and irritated mucous membranes, respiratory tissues, and skin
- Cold infusions extracts most mucilage
- Suitable for gastritis, indigestion, digestive ulcers, gum disease, mouth inflammation, hiatus hernia, water retention, urinary tract infections, cystitis, urinary gravel, kidney stones, arthritis, intestinal and bowel inflammation, diarrhea, IBS, Crohn’s disease, colitis, hemorrhoids, respiratory tract uses for irritation and congestion
- Expectorant: thins mucus; useful for colds, coughs, sore throats, whooping cough, bronchitis
- Topical use for inflammatory skin conditions, dermatitis, chapped skin, wounds, bruises, swelling, burns, insect bites, abrasions, eczema, psoriasis, boils, varicose ulcers
- Detoxifier and cleanser
- Laxative
- Lowers blood sugar
**Meadowsweet . Filipendula ulmaria, spiraea ulmaria)**
- Astringent, diuretic, anti-inflammatory, antacid
- Herbal aspirin (less strong than white willow; fewer digestive upsets than aspirin)
- Use for indigestion and acid stomach, nausea, heartburn, gastritis, esophageal burning, gastric ulcers

**Milk Thistle . Silybum marianum**
- Detoxifier, liver tonic, antioxidant, anti-inflammatory
- Promotes new liver cell growth to replace damaged cells
- Protects liver and kidneys from toxins
- Accelerates speed of elimination of toxins
- Use for hepatitis, cirrhosis, inflammatory liver conditions, gallstones, liver damage from alcohol/chemicals/drugs/diseases/viruses/pollutants/toxins

**Mint . Mentha piperita, M. spicata**
- Effective for queasy stomachs, nausea and bloating, colic in infants, digestive upset with painful gas, burping, rumbling, flatulence
- Peppermint stronger action and taste than spearmint
- Use tinctures and teas; essential oil mixed with carrier oil may be applied topically for colic or spastic pain in stomach and intestines

**Mugwort. Common Wormwood . Artemisia vulgaris**
- Antifungal, antiseptic, anti-inflammatory, antibacterial, uterine stimulant, antioxidant, nerve tonic, bitter
- Healing for fungal/yeast overgrowths
- Bitter leaves specific for parasites and insufficient digestive secretions
- Avoid in cases of seizure disorder

**Oak. Quercus alba**
- Excellent astringent for swollen digestive passageways with excessive mucous discharges
- High in tannis
- Combines well with mint and cinnamon for diarrhea
- Bark and leaves useful medicinally; acorns incredible food when processed properly
- Improves gastric tone when liver disease/alcoholism present
Oats. Avena Sativa
- Oat straw or oat top tea: excellent source of minerals for malnutrition or digestive disorders
- Calming and stress-relieving for nervous exhaustion
- Healing for digestive issues resultant of alcoholism and drug addiction
- Supportive, nutritious base to be included in GI formulas

Oregon Grape . Mahonia aquifolium
- Inner bark of roots are valuable alterative and liver/digestive support
- Broad-acting antimicrobial: infectious hepatitis, dysbiosis, dysentery, food poisoning,
- Specifically useful for liver congestion with slow digestion, coated tongue, and skin eruptions due to poor liver and digestive health

Pau D’arco . Tabebuia impetiginosa
- Broad antimicrobial and anti-fungal properties
- Includes in teas, capsules, and tinctures for intestinal infections

Prickly Ash . Zanthoxylum clava-herculis
- Warming, stimulating remedy that brings heat and blood to the stomach
- Increases circulation and secretions
- Best for those with cold constitutions, weakness and poor circulation
- Carminative and antispasmodic actions; mild appetite stimulant

Red Raspberry . Rubus idaeus
- Nutritive agent for malnutrition
- Mild astringent effects on intestinal mucosa

Sarsaparilla . Smilax ornata
- Aromatic alterative (blood cleanser) with hormonal and adrenal support
- Slightly warming
- Suitable for weak digestion, fatigue, muscle weakness

Sheep Sorrel . Rumex acetosella
- Alterative for weak appetite and poor digestion
- Ally for nausea and vomiting
- Sour snack for liver
- Aids in detoxification
  - Anti-cancer properties.

**Slippery Elm** *Ulmus rubra, U. fulva*
- Intestinal demulcent useful in teas, capsules and tinctures
- Cold infusions best to extract most mucilage
- Provides pain relief on digestive mucous membranes
- Also excellent in a porridge
- Healing for burning pain, acid reflux and ulcerative pain. Gente laxative.

**St. John’s Wort** *Hypericum perforatum*
- Healing for the organs associated with the solar plexus
- Use in GI disorders when a connective tissue tonic is needed to improve vascular fragility
- Synergist in formulas for GI pain, vascular engorgement, inflammation, and GI issues associated with anxiety, tension, and nervousness

**Turkey Rhubarb** *Rheum palmatum*
- Roots indicated for poor digestive secretions and slow digestive motility
- Specific for colicky digestion
- Specific for bowel movements that require straining and for a sour smell of the body
- Do not consume leaves due to high oxalic acid content

**Turmeric** *Curcuma Longa*
- Antioxidant, anti-inflammatory, antibacterial, antiviral, antihistamine, anticancer
- Provides hepatic (liver) support
- Clears fatty deposits around the liver
- General alterative (blood cleanser) and antimicrobial
- Assists hormone detoxification via the liver
- Improves lipid and carbohydrate metabolism
- Improves intestinal dysbiosis and decreases propensity to fungal infections

**Yarrow** *Achillea millefolium*
- Bitter alterative (blood cleaner), diaphoretic, circulation-enhancer, nerve tonic, astringent, anti-inflammatory, diuretic, antiseptic, antibiotic/antimicrobial action
- Useful for intestinal inflammation, IBS, liver congestion, skin lesions associated with digestive issues
- Great hemostatic: indicated for bleeding hemorrhoids, blood in stool
- Useful for diarrhea, dysentery, indigestion, gastritis, gas, ulcers, bleeding ulcers
**Yellow Dock . Rumex crispus**
- Bitter alterative, laxative, astringent, tonic, nutritive
- Suitable for hypochlorhydria, malabsorption, constipation, anemia
- Healing for skin eruptions (boils, eczema, psoriasis, acne) and poor elimination with toxicity

**Wild Yam . Dioscorea villosa**
- Anti-inflammatory, antispasmodic, glandular, hormone precursor
- Relieves colic pains in abdominal organs
- Indicated for menstrual cramps, poor digestive, flatulence
- Healing for liver or gallbladder pains that radiate to shoulder or right nipple and digestive pain that radiates through the abdomen to the spine
- Use for hemorrhoids with pains that radiate upward
The Immune System: Our First Line of Defense

- Protects us from disease, and, in the presence of disease, helps our body heal

- The healthier the immune system, the less likely one is to become ill or the less likely the severity and duration of sickness

- Specific elements of immune system: thymus, spleen, liver, lymph system, lymph nodes, tonsils, appendix (essentially a large lymph node), bone marrow

- Lymph: the liquid that flows in the lymph system, which is comparable to a city’s sewer city

- Lymph system: runs parallel to blood vessels; stores, filters, and circulates waste, especially dead bacteria and massive numbers of white blood cells produced during active infections

- Lymph nodes: large intersections of lymph channels that store (or warehouse) waste products being processed through the lymph system

- When the lymph nodes are processing a lot of waste, they tend to swell, clog up, and become painful to the touch

- Keeping nodes clear helps the body process infections much more quickly

- Lymph nodes produce unique white blood cells called lymphocytes (thymus gland produces lymphocytes too); lymphocytes are strong elements of the immunity system

- Bone marrow: manufactures other types of white blood cells that fight infections, including phagocytes and neutrophils

- Phagocytes: exist in three forms (monocytes, macrophages, granulocytes)

- Macrophages: travel through the body looking for foreign body, engulf any unwanted invading pathogen, and clean up dead bacteria and white blood cell residues during and after infection.
- **Macrophages alert neutrophils** about the presence of unwanted pathogens; neutrophils also aid in attacking and destroying.

- **Thymus**: coordinates immune activity (also produces different types of white blood cells)

- **Spleen**: processes worn-out red blood cells and platelets; provides location for macrophages to engulf and destroy invading organism

- **Liver**: cleans toxins from the blood and produces most of body’s lymph

**Herbs for Immune System:**

Ashwagandha  
Astragalus  
Boneset  
Echinacea  
Eleuthero  
Red Root  
Reishi  
Rhodiola  
Usnea

*These herbs either strengthen, rehabilitate, or enhance—they all work differently to boost, stimulate, and support the body’s immune system. Some are active against a specific bacteria, fungus or virus; some offer protective activity for a specific organ; some work as restorative tonics.

*Many of these herbs are adaptogens—protecting the body from the harmful effects of stress and stimulating the immune system and HPA to more effectively deal with stressful events