Herbology and Functional Medicine Basic Action

Rajko Bisevac ND, ABAAHP, FAARFM
purelifehealth@yahoo.com
630-846-1400

Terminology (American Botanical Council)

- **Crude drug**: Natural products, which are not pure compounds (i.e., plants or parts of plants, extracts, or exudes).

- **Drug**: a pure substance or combination of pure substances (isolated from natural sources, semi-sythenthic, or purely chemical in origin) intended to mitigate, treat, cure or prevent a disease in humans (and other animals).

Herb: The word herb (sometimes referred to as botanical) has several different meanings depending on the perspective:

- In commercial terms – herb generally refers to plants used for culinary purposes. Additionally the terminology differentiates Temperate Zone plants from tropical and sub-tropical plants (i.e., spices).
- In horticultural terms – herb refers to "herbaceous," which describes the appearance of the plant (i.e., a non-woody, vascular plant).
- In taxonomic terms – herb generally refers to the aboveground parts or the aerial parts (i.e., the flower, leaf, and stem).
- In terms of herbal medicine – herb refers to plants used in various forms or preparations, valued for their therapeutic benefits, and sold as dietary supplements in the U.S. marketplace.

Binomial

- The two-part scientific Latin name used to identify plants. The first name is the genus and is a general name that may be shared by a number of related plants. The second is the species name, which refers to the name that is specific to that individual plant (i.e., *Echinacea purpurea, Echinacea angustifolia*).

- **Pharmacognosy**: The study of natural products (i.e., plant, animal, organism, or mineral in nature) used as drugs or for the preparation of drugs. Derived from the Greek *pharmakon* meaning drug and *gnosis* meaning knowledge.

- **Phytomedicinals**: Medicinal substances that originate from plants. This may include certain phytochemicals as well as whole plants or herbal preparations.

Phytochemicals

- Chemical compounds or chemical constituents formed in the plant's normal metabolic processes. The chemicals are often referred to as "secondary metabolites" of which there are several classes including alkaloids, anthraquinones, coumarins, fats, flavonoids, glycosides, gums, iridoids, mucilages, phenols, phytoestrogens, tannins, terpenes, and terpenoids, to mention a few. Extracts contain many chemical constituents, while chemicals that have been isolated from the plant are considered pharmaceutical drugs (i.e., digoxin having been isolated from the foxglove or *Digitalis lanata* plant).

Standardization

- In standardization, the finished product contains a specific amount of one or more active constituents. The herb is selectively extracted in order to concentrate and quantify the active constituent(s). Often, the inert constituents are removed or reduced.

- SFP = standardized full-potency

Plant parts

- **Aetheroleum**: Refers to the essential or volatile oil as a distinct aromatic product obtained from the plant.
- **Balsamum**: Refers to a solution of resin and volatile oil usually produced by special cells in some plants.
- **Bulbus**: Refers to the bulb or an underground bud (specialized stem structure) of a plant, from which both a shoot and roots may extend.
- **Cortex**: Refers to the bark of the plant. Bark can be collected from the root, stem, or branches.
- **Flos**: Refers to the flowers of plant usually consisting of a single flower or the entire inflorescences (i.e., head, umbel, panicle, spike, etc.).

Plant parts cont.

- **Folium**: Refers to the leaf of plant. Usually the middle leaves of plants are collected.
- **Fructus**: Refers to the fruit (the ripened ovary of the flower-bearing seeds) or berry of the plant.
- **Herba**: Refers to the aerial parts or the aboveground parts of plants which may include the flower, leaf, and the stem of the plant, and occasionally fruits too.
- **Lignum**: Refers to the wood or the secondary thickening of the stem. This may or may not contain the bark as well.
- **Oleum**: Refers to the fixed oil preparation pressed or squeezed from the plant material.

Plant parts cont.

- **Pericarpium:** Refers to the peel or rind of fruit.
- **Pyroleum:** Refers to the tar from dry distilled plant material.
- **Radix:** Refers to the root of a plant, though radix is sometimes synonomous with rhizome
- **Resina:** Refers to the resin that is secreted by the plant or by distillation of the balsamum.
- **Rhizoma:** Refers to the rhizome or a creeping horizontal stem, generally bearing roots on its underside.
- **Semen**: Refers to the seed of a plant, usually removed from the fruit, and may or may not contain the seed coat.

Preparations

- **Decoction**: A tea made from boiling plant material, usually the bark, rhizomes, roots or other woody parts, in water. May be used therapeutically. Natural dyes are often made this way.

- **Infusion**: A tea made by pouring water over plant material (usually dried flowers, fruit, leaves, and other parts, though fresh plant material may also be used), then allowed to steep. The water is usually boiling, but cold infusions are also an option. May be used therapeutically, as hot tea is an excellent way to administer herbs.

Preparations

- **Tincture**: An extract of a plant made by soaking herbs in a dark place with a desired amount of either glycerine, alcohol, or vinegar for two to six weeks. The liquid is strained from the plant material and then may be used therapeutically.

- **Liniment**: Extract of a plant added to either alcohol or vinegar and applied topically to employ the therapeutic benefits.

- **Poultice**: A therapeutic topical application of a soft moist mass of plant material (such as bruised fresh herbs), usually wrapped in a fine woven cloth.

Preparations

- **Essential Oils**: Aromatic volatile oils extracted from the leaves, stems, flowers, and other parts of plants. Therapeutic use generally includes dilution of the highly concentrated oil.

- **Herbal Infused Oils**: A process of extraction in which the volatile oils of a plant substance are obtained by soaking the plant in a carrier oil for approximately two weeks and then straining the oil. The resulting oil is used therapeutically and may contain the plant's aromatic characteristic.

Preparations

- **Percolation**: A process to extract the soluble constituents of a plant with the assistance of gravity. The material is moistened and evenly packed into a tall, slightly conical vessel; the liquid (menstruum) is then poured onto the material and allowed to steep for a certain length of time. A small opening is then made in the bottom, which allows the extract to slowly flow out of the vessel. The remaining plant material (the marc) may be discarded. Many tinctures and liquid extracts are prepared this way

INTENSITY vs Time-frame on using herbs

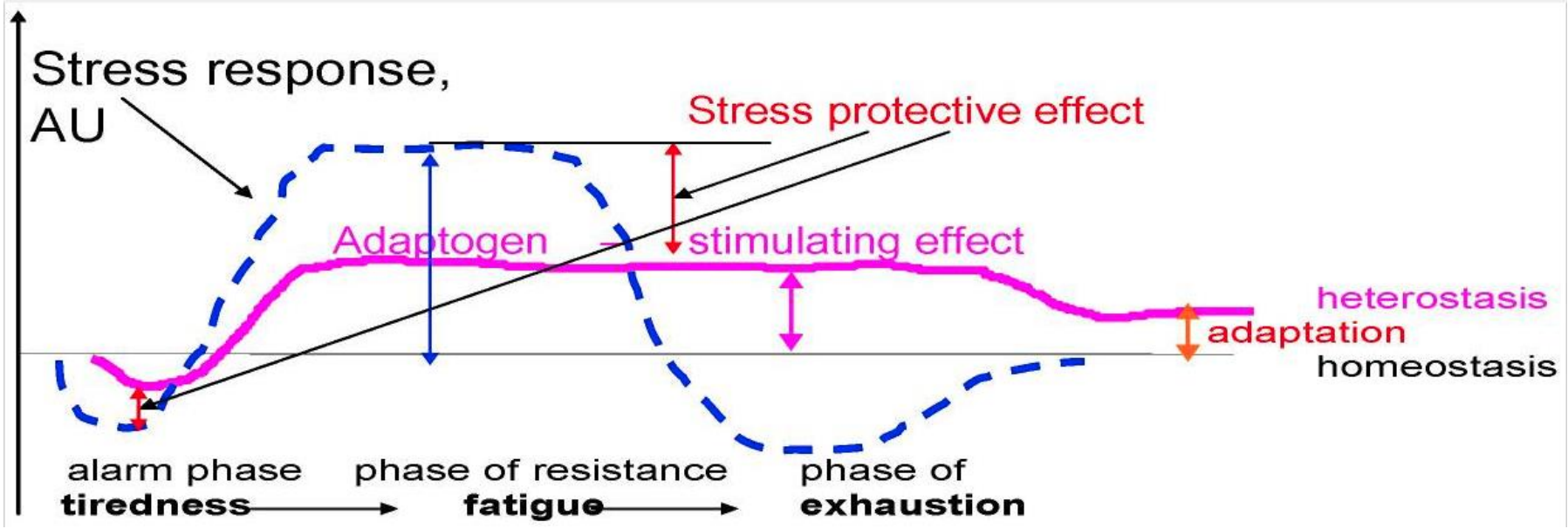
- 3 categories:
  - Short-term (1-2 weeks. Usually, strong herbs with antimicrobial, anti-fungal properties)
  - Medium term (3-9 months. Immune-modulating herbs such as echinacea or digestive bitters like yarrow)
  - Long-term (several months or years. Adaptogens like rhodiola, ginseng, vitex)

Classification of Herbs by Foundational Actions

Adaptogens

- Herbs that strengthen the HPO axis (hypothalamus, pituitary, gonadal)
- Defined as substances that enhance the “state of non-specific resistance” in stress
- Increase the resistance to stress
- Decrease sensitivity to stressors (stress protection effect)
- Stimulate the body’s overall physiology without impacting the balance of an individual organ or body system
- Exhibit neuroprotective, anti-fatigue, anti-depressive, anxiolytic, nootropic and CNS stimulating activity

Heterostasis ("different state")



Heterostasis is a condition of the body better adapted than homeostasis. A stable (if dynamic) distribution of states, behaviors etc.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3991026/

Common Adaptogens

- Ginseng (Panax ginseng)
- Codonopsis (Codonopsis pilosula)
- Astragalus (Astragalus membranaceus)
- Holy Basil (Ocimum sanctum)
- Ashwagandah (Withania somnifera)
- Shatavari (Asparagus racemosus)
- Eleuthero (Eleutherococcus senticosus)
- Rhodiola (Rhodiola rosea)
- Schizandra (Schizandra chinensis)
- Reishi mushroom (Ganoderma lucidum)
- Licorice (Glycerhiza glabra)

Summary of in vitro studies

Pharmacological profile of adaptogens: summary of *in vitro* or in animal studies.

Regulatory System: effect	Pharmacological Effects	*Rhodiola*	*Eleutherococcus*	*Schisandra*
Stress-system (neuro-endocrine-immune complex): Anti-stress/stress-mimetic/ stress-protective	CNS-stimulating: enhancing of physical performance, cognitive performance (learning and memory)	+	+	+
	Neuroprotective	+		+
	Hepatoprotective	+	+	+
	Cardioprotective	+		+
	Gastroprotective		+	+
	Oxidative stress/Radioprotective	+	+	+
	Anti-atherosclerosis		+	+
	Vasodilatatory/hypotensive			+
	Anti-hyperglycemic		+	
	Anti-inflammatory/allergy	+	+	+
	Immunotropic	+	+	+
	Antidepressive	+		
	Anxiolitic	+	+	

A selected pharmacological profile of adaptogens, clinical efficacy in humans relative to CNS.

	Pathophysiological condition	***Rhodiola***	***Eleutherococcus***	***Schisandra***
Neuro-endocrine system	Physical fatigue	+	+	++
	Mental fatigue (declined attention)	++	+	+
	Stress induced chronic fatigue	+	+	
	Depression	+		

Summary of the pharmacological activities of *Schisandra chinensis,* adapted from [26].

Regulatory system		**Pharmacological effect**	
Stress-system	Central and vegetative nervous system	Stimulating effect	Adapto-genic effect
	Endocrine system	Stress-mimetic and stress-protective effect	
	Immune system	Stress protective effect	

Alteratives

- Herbs that gradually restore the proper function of the body and increase health and vitality
- They alter the body's processes of metabolism, so that tissues can best deal with a range of functions from nutrition to elimination
- Many herbs have an alterative function, which can be their secondary or tertiary action
- Generally safe but may cause imbalance if used for prolonged period of time

Common alteratives

- Echinacea (Echinacea purpurea, E. angustifolia)
- Goldenseal (Hydrastis canadensis)
- Red Root (Ceonothus spp.)
- Burdock (Arctium lappa)
- Cleavers (Galium aparine)
- Nettle (Urtica dioica)
- Dandelion root (Taraxacum officinale)
- Red clover (Trifolium pratense)
- Violet (Viola odorata, V. tricolor)
- Yellow dock (Rumex crispus and others)
- Oregon grape root (Mahonia nervosa, M. aquifolium)

Anodynes

- Herbs which dull the sense of pain
- Range from completely safe to being low-dose botanicals that should never be used beyond 1-2 drops
- Some anodynes are better suited to nervous system pain while others are for muscle pain

Common anodynes

- Yarrow (Achillea millefolium)
- Essential oils (Clove and cinnamon are examples)
- Cow Parsnip (Heracleum spp.)
- Arnica (Arnica montanum)
- Cottonwood (Populus spp.)
- St. John's Wort (Hypericum perforatum)
- Ginger (Zingiber officinale)
- Belladonna (Atropa belladonna) *potentially toxic, must be used in very dilute doses

Anti-Inflammatory Herbs

- Herbs that work to lessen the inflammatory response

Anti-inflammatories

- Turmeric (Curcumin longum)
- Ginger (Zingiber officinale)
- Paprika (Capsicum annuum)
- Chickweed (Stellaria media)
- Marshmallow (Althaea officinalis)
- Celery seed (Apium graveolens)
- Hawthorn (Craetagus spp.)
- Meadowsweet (Filipendula ulmaria)
- Licorice (Glycyrrhiza glabra)
- Lavender (Lavendula spp.)
- Willow (Salix spp.)
- Plantain (Plantago lanceolata. P. major)
- Linden (Tilia spp.)
- Gotu Kola (Centella asiatica)

Antimicrobial Herbs

- Antimicrobial herbs negatively effect pathogens in the body through various mechanisms.
- These herbs can be useful against viral infections, bacteria and fungal infections.

Antimicrobials

- Elderberry (Sambucus nigra)
- Yarrow (Achillea millefolium)
- Garlic (Allium sativum)
- Goldenseal (Hydrastis canadensis)
- St. John's Wort (Hypericum perforatum)
- Elecampane (Inula helenium)
- Bee balm (Monarda fistulosa)
- Juniper (Juniperus communis)
- Rosemary (Rosmarinus officinalis)
- Usnea (Usnea spp.)
- Oregon Grape Root (Mahonia aquifolium)
- Cedar (Thuja occidentalis)

Antispasmodic herbs

- Antispasmodic herbs effect the nervous system to relieve muscle tension and cramping.
- Each of these herbs has an affinity to specific uses (e.g. menstrual cramping, ureter cramping, leg cramps, tense muscle shoulders, etc)

Antispasmodic herbs

- Black cohosh (Cimicifuga racemosa)
- Wild yam (Dioscorea villosa)
- California poppy (Eschscholzia californica)
- Wild lettuce (Lactuca virosa)
- Lobelia (Lobelia inflata)
- Motherwort (Leonurus cardiaca)
- Chamomile (Matricaria recutita)
- Lemon balm (Melissa officinalis)
- Passionflower (Passiflora incarnata)
- Jamaica dogwood (Piscidia erythrina)
- Wild Cherry Bark (Prunus spp.)
- Skullcap (Scutellaria lateriflora)
- Valerian (Valeriana officinalis)
- Cramp bark (Viburnum opulus)
- Ginger (Zingiber officinalis)
- Kava (Piper methysticum)

Antihelminthic Herbs

- Antihelminthic herbs are used to combat parasitical worms in the body.
- Optimal treatment will be designed for the particular parasite and will also include dietary arrangements as well.

- Wormwood (Artemisia absinthium)

- Black Walnut (Juglans nigra)

- Garlic (Allium sativum)

- Ginger (Zingiber officinale)

- Bee balm (Monarda fistulosa)

Aphrodisiacs

- Herbs that help stimulate sexual arousal through varied actions including increased circulation, relaxation, stimulation, or tonics that strengthen glandular health.

Common aphrodisiacs

- Damiana
- Rose
- Vanilla
- Maca
- Cacao
- Muira puama

Aromatics

- Herbs that present a strong aroma most often used to support the digestive and reproductive systems and to maintain healthy respiration
- They are the basis for aromatherapy
- May have one or more of the following actions:
  - Anti-inflammatory, anti-microbial, anti-fungal, relaxant, stimulating, diuretic

Common Aromatics

- Angelica
- Anise
- Cardamon
- Fennel
- Ginger
- Peppermint
- Rosemary
- Oregano

Astringents

- Herbs that dry, draw, or shrink tissue, which helps to create a barrier for healing
- Topically, astringents can be used to ease bug bites and burns, help pull out splinters or infection from a wound, dry out oozing sores, tighten tissue and gums, tone the skin, and stop bleeding
- Internally, astringents work to help tighten and tone mucus membranes and dry up conditions of excess.
- Think of these for spongy gums, infections of the mucosal membranes such as a sore throat, vaginal infection, ulcers in the digestive tract, urinary tract infections, varicose veins and diarrhea.

Common astringents

- Uva ursi (Arctostaphylos uva ursi)
- Shepherd's purse (Capsella bursa-pastoris)
- Raspberry (Rubus Idaeus)
- Oak bark (Quercus spp.)
- Witch hazel (Hamamelis virginiana)
- Horse chestnut (Aesculus hippocastanum)
- Agrimony (Agrimonia eupatoria)
- Black berry (Rubus spp.)
- Goldenrod (Solidago spp.)
- Many rose family plants

Bitters

- Bitters refers to the taste of a plant.
- The bitter taste creates a cascade of digestive events, from increased salivation, to increased HCL in the stomach, to the release of bile and pancreatic enzymes and peristalsis.
- The bitter taste is beneficial to everyone at mealtimes and many digestive problems can be corrected by simply adding the bitter taste into meals.
- Helpful for constipation, gas-related cramping, sluggish digestive movement, and to support healthy appetite after illness or while traveling

Common bitters

- Dandelion leaf (Taraxacum officinale)
- Artichoke leaf (Cynara cardunculus*)*
- Gentian root (Gentiana lutea)
- Oregon Grape Root (Mahonia aquifolium, M. nervosa)
- Yarrow (Achillea millefolium)
- Centaury (Centaurium erythraea)
- Boneset (Eupatorium perfoliatum)
- Goldenseal (Hydrastis canadensis)
- Horehound (Marrubium vulgare)
- Chamomile (Matricaria recutita)

Cardio Tonic Herbs

- Cardio tonic herbs are used to support cardiac function.
- They have observable beneficial actions on the heart but do not contain cardiac glycosides found in our more dramatic acting plants.
- Although generally safe they can interact with some pharmaceutical drugs.

Cardio Tonic Herbs

- Hawthorne (Craetagus spp.)
- Linden (Tilia spp.)
- Arjuna (Terminalia arjuna)
- Motherwort (Leonurus cardiaca)

Carminatives

- Often aromatic, these herbs help reduce or prevent excess gas and bloating

- Fennel (Foeniculum vulgare)
- Ginger (Zingiber officinale)
- Chamomile (Matricaria recutita)
- Angelica (Angelica archangelica)
- Parsley (Petroselinum crispum)
- Cardamom (Elettaria cardamommum)
- Bee balm (Monarda fistulosa)
- Thyme (Thymus vulgaris)
- Mints

Cholagogue Herbs

- Cholagogue herbs increase the production and release of bile.
- Most bitters are cholagogues.
- Because these herbs stimulate bile secretion they also stimulate peristalsis and are therefore somewhat laxative in nature.
- They help to improve hepatic function and can increase a person's ability to digest fats.

Cholagogue Herbs

- Dandelion root (Taraxacum officinale)
- Artichoke leaf (Cynara scolymus)
- Oregon Grape Root (Mahonia aquifolium)
- Celandine (Chelidonium majus)
- Gentian (Gentiana lutea)
- Fumitory (Fumaria officinalis)
- Yellow dock (Rumex crispus)

Circulatory Stimulant Herbs

- These herbs are used for stagnant circulation.
- They are often added in small amounts to formulas to diffuse the herbs throughout the body.

- Cayenne (Capscium spp.)

- Rosemary (Rosmarinus officinalis)

- Ginger (Zingiber officinale)

- Prickly Ash (Zanthoxylum americanum)

Demulcents

- Herbs that are mucilaginous or oily and coat, soothe, and protect mucus membranes
- The “oiliness” triggers a reflex which promotes natural moistening secretions within the body
- These herbs are used to soothe hot and irritated tissues.
- Demulcent herbs are also used for a sore throat, digestive ulcers, dry and unproductive coughs, irritated intestines and an irritated urinary tract.

Common demulcents

- Aloe vera gel (Aloe vera)
- Marshmallow root (Althaea officinalis)
- Violet leaf and flower (Viola odorata and other species)
- Slippery Elm (Ulmus fulva)
- Comfrey (Symphytum officinale)
- Rose hips (Rosa spp.)
- Iceland moss (Cetraria islandica)
- Irish moss (Chondrus crispus)
- Licorice (Glycyrrhiza glabra)
- Common mallow (Malva neglecta)
- Cornsilk (Zea mays)

Diaphoretics

- Herbs that help raise body temperature to make you sweat, which stimulates circulation
- Can also cool the body through increased perspiration
- More advanced herbalists seek to understand the type of fever and then use herbs to match the particular circumstance.
- Diaphoretics are thus divided into two general categories: relaxing diaphoretics and stimulating diaphoretics.

Relaxing Diaphoretics

- Relaxing diaphoretics are used when a person has a fever and they feel hot and look hot but they are not sweating. They may have a red face and be tense or restless.
- Relaxing diaphoretic herbs may increase peripheral circulation to release the exterior and open the pores. In this way they are releasing the heat in the body akin to opening a window of a hot house. Some relaxing diaphoretic herbs also specifically relieve the aches and pains associated with fevers.

Relaxing Diaphoretics

- Willow (Salix alba and other species)
- Chamomile (Matricaria recutita)
- Elder flower (Sambucus nigra)
- Meadowsweet (Filipendula ulmaria)
- Boneset (Eupatorium perfoliatum)
- Yarrow (Achillea millefolium) Herbs
- Linden (Tilia spp.)

Stimulating Diaphoretics

- Stimulating diaphoretics are used when a person has a fever but they feel chilled and are shivering. These spicy herbs support the body's desire to increase our internal temperature.
- Ginger (Zingiber officinale)
- Bee balm (Monarda fistulosa)
- Yarrow (Achillea millefolium)
- Horseradish (Armoracia rusticana)
- Hyssop (Hyssopus officinalis)

Diffusive Herbs

- Diffusive herbs break up stagnant energy and move it throughout the body. Have you ever eaten a hot pepper and felt the heat in your toes and fingers? That's diffusive. Diffusive herbs are often used for stagnant digestion (like if you feel you have a bowling ball in your stomach after eating) and are often added in small quantities to formulas.

Diffusive Herbs

- Prickly ash (Zanthoxylum americanum)
- Cayenne (Capsicum spp.)
- Ginger (Zingiber officinale)

Diuretics

- Herbs that help you urinate
- They can be used to lower blood pressure, resolve damp conditions in the body (edema) or for infections of the urinary system.
- These generally work best as a lukewarm tea.

- Dandelion leaf (Taraxacum officinale)
- Yarrow (Achillea millefolium)
- Nettle leaf (Urtica dioica)
- Celery seed (Apium graveolens)
- Horsetail (Equisetum arvense)
- Cleavers (Galium aparine)
- Juniper (Juniperus communis)
- Parsley (Petroselinum crispum) Elderflowers (Sambucus nigra)

Common diuretics

- Cleavers
- Dandelion
- Green tea
- Parsley
- Juniper
- Nettle
- Uva ursi

Emmenagogue Herbs

- Help promote menstruation and are used for irregular or stagnant menstruation. These herbs should be avoided in pregnancy.
- Motherwort (Leonurus cardiaca)
- Ginger (Zingiber officinale)
- Yarrow (Achillea millefolium)
- Mugwort (Artemisia vulgaris)
- Blue Cohosh (Caulophyllum thalictroides)
- Black cohosh (Cimicifuga racemosa)
- Parsley (Petrosilinum crispum)
- Chasteberry (Vitex agnus-castus)

Emollients

- Mucilaginous herbs that are used topically to help soothe, condition and protect the skin

Common emollients

- Aloe vera
- Chickweed
- Comfrey
- Irish moss
- Marshmallow
- Plantain
- Violet

Expectorants

- Herbs that encourage productive coughing by breaking up mucus in the lungs and expelling it more effectively.
- The quality and condition of the mucus helps to determine if relaxing expectorants or stimulating expectorants would be more appropriate.
  - Yellow mucus indicates heat and cooling herbs may be of benefit.
  - Clear or white mucus indicates coldness and warming herbs may be of benefit.

Relaxing Expectorants

- Relaxing expectorants are often demulcent, anti-tussive and anti-inflammatory. They soothe bronchial tissues (via a reflexive action) and can move dry stuck mucus. Often times these herbs are cooling.
- Marshmallow (Althaea officinalis)
- Licorice (Glycyrrhiza glabra)
- Comfrey (Symphytum officinale) *potentially toxic, must be used by a professional only
- Linden (Tilia spp.)
- Violet (Viola odorata)

Stimulating Expectorants

- These stimulate mucus expectoration, especially for stuffy conditions. Have you even eaten spicy mustard or wasabi (horseradish) and then felt your sinuses drain? That's a stimulating expectorant.
- Oftentimes these are warming in nature and can work by irritating the bronchial tissues. These herbs often have volatile oils and alkaloids.

Stimulating Expectorants

- Ginger (Zingiber officinalis)
- Garlic (Allium sativum)
- Horseradish (Armoracia rusticana)
- Elecampane (Inula helenium)
- Bee balm (Monarda fistulosa)
- Horehound (Marrubium vulgare)

Hypotensive herbs

- These herbs lower blood pressure. Best results are seen when combined with a more holistic approach (diet, sleep, exercise, etc).
- Hawthorne (Craetagus spp.)
- Yarrow (Achillea millefolium)
- Motherwort (Leonurus cardiaca)
- Mistletoe (Viscum album)
- Linden (Tilia spp.)
- Arjuna (Terminalia arjuna)
- Garlic (Allium sativum)
- Dan shen (Salvia miltorrhiza)

Immunomodulating Herbs

- These herbs build and strengthen the immune system. They are generally used for people who get sick all the time with colds and flus or have other symptoms of immune system dysfunction such as seasonal allergies, environmental allergies, food intolerances, cancer and autoimmunity problems.
- Think of these as deeply nourishing food and herbs for the immune system.

Immunomodulating Herbs

- Astragalus (Astragalus membranaceus)
- Reishi (Ganoderma lucidum)
- Cordyceps (Cordyceps sinensis)
- Shitake (Lentinula edodes)
- Tulsi (Ocimum sanctum)

Immunostimulant Herbs

- Immunostimulant herbs boost the immune system in the short term. These may work by increasing phagocytosis (Echinacea) or disrupting viral replication (elderberry).
- Immunostimulant herbs are generally not taken in the long term and should not be used to compensate for a weakened and unhealthy immune system. Instead, immunomodulating herbs should be considered.

Immunostimulant Herbs

- Echinacea (Echinacea purpurea)
- Elderberry (Sambucus nigra)
- Boneset (Eupatorium perfoliatum)
- Spilanthes (Acmella oleracea)

Laxative herbs

- Laxative herbs increase bowel movements. They can range from supportive and gentle to more purgative in effect. Some laxative herbs increase peristalsis of the bowels, others may provide lubrication. In general it is always good to start with the most gentle and work up. It is imperative not to rely on stimulating or cathartic laxatives to move the bowels since they can easily create dependency.

Gentle or Supportive Laxatives

- Dandelion root (Taraxacum officinale)
- Yellow dock root (Rumex crispus)
- Triphala
- Aloe vera gel (not the leaf)

Cathartic Laxatives

- Use of these herbs may cause griping or pain and so they are usually used in a formula to offset those effects. Using these herbs for more than 10 consecutive days may cause dependency.
- Rhubarb (Rheum rhabarbarum)
- Senna (Senna spp.)
- Aloe leaf

Lymphatic Herbs

- Lymphatic herbs are a specialized type of alterative. Lymphatic herbs move congested lymph and can be used to shrink swollen lymph glands and dissolve benign cysts.
- Calendula (Calendula officinalis)
- Poke root (Phytolacca spp.)
- Violet leaf and flower (Viola odorata)
- Alder (Alnus spp.)
- Red Root (Ceonothus spp.)
- Chickweed (Stellaria media)

Nervine Herbs

- Herbs that specifically support the nervous system
- They have a range of actions from mildly calming, anti-spasmodic and strongly sedative
- They are used to relieve muscle tensions and spasms, some pain, circular thoughts, insomnia and occasional worry

Relaxing Nervines

Relaxing nervines relax the nervous system. Some herbs are merely calming, others can have a more overt sedative effect to promote sleep.

- Cramp bark (Viburnum opulus)
- Valerian (Valerian officinalis)
- California poppy (Eschscholzia californica)
- Milky oats (Avena sativa)
- Skullcap (Scutellaria laterifolia)
- Chamomile (Matricaria recutita)
- Passionflower (Passiflora incarnata)
- Lavender (Lavendula officinalis)
- St. John's Wort (Hypericum perforatum)
- Lemon balm (Melissa officinalis)
- Vervain (Verbena officinalis)

Stimulating Nervines

- Stimulating nervine herbs stimulate the nervous system. This may be through direct stimulation, such as caffeine from tea or coffee, or stimulating nervine herbs may promote circulation or have a diffusive effect that wakes up the nervous system.

Stimulating Nervines

- Coffee (Caffea arabica)
- Tea (Camellia sinensis)
- Chocolate (Theobroma cacao)
- Horseradish (Armoracia rusticana)
- Rosemary (Rosmarinus officinalis)
- Cayenne (Capsicum spp.)
- Prickly ash (Zanthoxylum americanum)
- Peppermint (Mentha x piperita)
- Kola (Cola acuminata)

Trophorestorative Herbs

- Trophorestorative herbs bring balance to a particular organ or system in a person whether that function is excess or deficient.
- Milky Oats (Avena sativa) – nervous system
- Goldenseal (Hydrastis canadensis) – mucus membranes
- Nettle Seed (Urtica dioica) – kidneys and adrenals
- Milk Thistle (Silybum marianum) – liver
- Yerba Mansa (Anemopsis californica) – mucus membranes
- Hawthorn (Crataegus spp.) – heart
- St John's Wort (Hypericum perforatum) – nervous system

Vulnerary Herbs

- Vulnerary herbs are used to heal wounds.
- They can be used for external wounds on the skin, or internal wounds such as ulcers or hemorrhoids.

- Calendula (Calendula officinalis)

- Aloe (Aloe spp.)

- Plantain (Plantago major, P. lanceolata)

- Comfrey (Symphytum officinale) *potentially toxic, must be used by a professional only

- Chamomile (Matricaria recutita)

- Turmeric (Curcuma longum)

Taste

- By tasting and experiencing herbs we can instantly get a sense of how we can use that herb as well as its energetics (warm/cool, damp/dry).
- The following is a basic overview of the tastes.

TASTE

- *Pungent herbs* are warming and spicy and are used to awaken the senses and get things moving. A great example of this is how simply chopping an onion makes your eyes and sinuses run. Pungent herbs are also often used for promoting healthy digestion (garlic, sage, rosemary, black pepper) and for fevers when you feel cold (ginger, cayenne).

- *Salty herbs* are high in minerals and often affect the balance of fluids in our bodies. One of the best examples of a salty herb is nettles, which are both nutrient dense and a diuretic. Chickweed, oatstraw and red clover are other herbs that are classified as salty.

TASTE

- *Sour herbs* stimulate digestion and build strength and they are often high in antioxidants. We often use them as protectors, for example protecting the heart or the eyes. Elderberries and hawthorn berries are both sour herbs that are high in antioxidants.

- *Bitter herbs* stimulate digestion and often have a cooling and draining effect that can help to modulate inflammation. An example of this is Oregon grape root (Mahonia spp.), which stimulates digestion and modulates inflammation.

- *Sweet herbs* nourish and build and are used to restore energy levels and modulate the immune system. Drinking astragalus chai daily is a great way to experience the benefits of the sweet taste.

Herbs to use with caution

- **LICORICE ROOT** should not be used by people with anemia, high blood pressure, severe liver or kidney disease, or those taking digoxin-based diuretics or digitalis glycoside heart medications.
- It should also not be used in the presence of hypokalemia, liver cirrhosis, hypertension or severe renal insufficiency.

Herbs to use with caution

- **GOLDENSEAL** should not be taken by pregnant women. One of its chief constituents, berberine, has been reported to cause uterine contractions and to increase levels of bilirubin.
- It should be avoided by people with high blood pressure or low blood sugar. Those with heart conditions should only use goldenseal under the supervision of a health professional.

Herbs to use with caution

- **EPHEDRA**, when combined with other herbs high in caffeine such as kola nut, green tea, guarana or yerba mate can cause an imbalance (hyperactivity) of the autonomic nervous system leading to symptoms such as: nausea, headache, dizziness, diarrhea, anxiety, psychosis, kidney stones, tremors, dry mouth, irregular or rapid heart rhythms, heart damage, high blood pressure, nervousness, sleep problems, decreased appetite, flushing, sweating, and increased urination.

Herbs to use with caution

- **LOBELIA** is a potentially toxic herb, and should not be used unless under the supervision of a qualifed health practitioner. It can cause: dry mouth, profuse sweating, nausea/vomiting, diarrhea, tremors, rapid heartbeat, confusion, convulsions, coma, and in larger doses, even death.
- People with heart disease, high blood pressure, heart disease, tobacco sensitivity, paralysis, seizure disorder, shortness of breath, or who are recovering from shock should not take this herb.
- Pregnant and nursing women and children should avoid the use of lobelia.

Flower Essences

- In the 1930s, Dr. Edward Bach developed an approach to healing using "flower essences." Flower essences are made by infusing flowers or other plant parts in spring water and then adding alcohol as a preservative. The essences are used internally or topically to balance emotional states. The underlying philosophy focuses on stabilizing emotions in order to dissipate illness and stimulate internal healing processes.