

## RESPIRATORY SYSTEM ACTION CATEGORIES & HERBS

### Books:

**Breathe Free**; Daniel Gagnon, Morningstar, Amadea

includes emotional content along with respiratory conditions & dietary recommendations

**Medicinal Plants of the Mountain West**; Michael Moore

check out website, 200 complete books (searchable pdf.s)

**The Healing Power of Black Cumin**; Lotus light – Shangri LA

**Maimonides: Moses Maimonides Treatise on Asthma**; Rosnen, Fred

**Garlic**, Heinrich P Koch, Larry D. Lawson

**Medical Botany plants affecting human health**, Lewis, Walter H., Elvin-Lewis, Memory P.F.

Ethnobotanists who travelled through South America, cures for Malaria

**How to read a research paper**, Grenhalgh, Trish – 10 papers from 10 different types of research

- bacterial infections follow viral infections – URI may be followed by bacterial pneumonia
- SARS in Canada – fewer than 100 deaths, many more deaths every year in old folks homes from bacterial pneumonia
- vitamin D long periods where uv level is too low & clothing level is too high
- vit. D does not just regulate calcium (along with vit. K2) it is an immunomodulator
- flu shot – select 20 genotypes every year, pick in summer, start in Asia and decide that “these 3” will travel from China around the world
- if the virus that they pick is correct
- may not actually receive immunity
- more danger in healthy people
- immunocompromised states and will only use orthodox medicine than they may get the flu shot as they are more amenable to that

during SARS: Toronto Hospitals would Find patient in COMA then intubated, given Tylenol

people never recovered

nurses noticed, pinned notes to themselves instructing that they should not be intubated if found unconscious

**ANTICATARRHALS**: mucus phlegm – catarrh. Catarrh is a thickened mucus coatst tissues, contains immunoglobulins, also provides lubrication. Inflamed tissues produce thicker mucus, which dries into catarrh, breathing through you noser during the winter can be important as it allows time for the air to warm.

if mucus is thick – phlegm

if mucus is thick & dry – catarrh

phlegm – may be white and could be yellow/green (means infection) , blood may be found as well

***Althea off. fol.*** (Marshmallow Leaf, *Malvaceae*, Mallow Family)

Leaf for respiratory system. Contains mucopolysaccharides, helps to dilute thicker mucus, soothes and cools mucous membranes, high mucilage, soothing & cooling. **Puts fresh mucus into the body.** Catarrh can be formed by tissues that are inflamed. Althea cools and soothes inflamed tissues, reducing the body’s need to produce mucus

***Capsicum annuum*** (Cayenne Pepper, *Solanaceae*, Nightshade Family)

loosens catarrh by stimulating the production of fresh, more fluid mucus in the underlying tissues (also increases presence of immunoglobulin A on the surface), stimulates circulation of blood.

***Euphrasia officinalis*** (Eyebright, *Orobanchaceae*, Broomrape Family)

Dries mucous membranes when they are wet, boggy and runny, before catarrh is formed. **Specific to Upper Respiratory tract & eyes**

<p><b><i>Hyssopus officinalis</i></b> (Hyssop, <i>Lamiaceae</i>, Mint Family)  EO gathered in Respiratory tract, stimulates cilia to flagulate at increased rate pushing phlegm up. At night, cilia don't have to work against gravity - much easier - explains AM phlegm.  Cilia are fewer and is damaged in people who smoke &amp; those that work in factories. Oils help soften and break up phlegm or catarrh</p>
<p><b><i>Inula helenium</i></b> (Elecampane, <i>Asteraceae</i>, Aster or Composite Family)  use the root (which is pleasantly aromatic), opens pores for the secretion of thinner fluids, stimulating effect on the mucociliary escalator and the circulation. Saponins dissolve mucus, and stimulate the bronchial structures by reflex from their (mildly) irritating detergent effect on the stomach wall, soothing mucilages (containing inulin sugars) help to mitigate this slight irritation.</p>
<p><b><i>Salvia officinalis</i></b> (Sage, <i>Lamiaceae</i>, Mint Family)  warming, drying, stimulates new mucus production, will help to dry out inflammation by drawing fluid out of tissues, astringent. Specific to <b>sore throat</b> with phlegm.</p>
<p><b><i>Sambucus nigra flos.</i></b> (Black Elder flowers, <i>Adoxaceae</i>, Adoxa Family)  promotes diaphoresis (moves blood from core to surface and causes sweating), nutritive sugars. Open sweat glands as oils exit body through the skin.</p>
<p><b><i>Sambucus nigra fruc.</i></b> (Elderberries, <i>Adoxaceae</i>, Adoxa Family)  nutritive sugars, immunostimulant</p>
<p><b><i>Solidago odorata</i></b> (Goldenrod, <i>Asteraceae</i>, Aster or Composite Family)  Most relevant anticatarrhal, helps with lower respiratory catarrh as well, contains mucilage, <b>systemic demulcent</b>. Astringent &amp; soothing, helps body produce thin, clear mucous and cools the tissue.  *best to combine with drying astringent <i>Hydrastis can.</i>, <i>Euphrasia</i>, <i>Salvia off.</i>  Most common species is odorata in ON.</p>
<p><b><i>Thymus vulgaris</i></b> (Thyme, <i>Lamiaceae</i>, Mint Family)  drying, warming, high in EO which will dry out mucous before it becomes catarrh. Not for use if thick catarrh is already present - will make it worse. Strong antibacterial.</p>
<p><b><i>Tussilago farfara</i></b> (Coltsfoot, <i>Asteraceae</i>, Aster or Composite Family)  demulcent, inulin sugars, expectorant, moistening, relaxing &amp; allows for a productive cough.</p>
<p><b><i>Verbascum thapsus</i></b> (Mullein, <i>Scrophulariaceae</i>, Figwort or Snapdragon Family)  soothing demulcent, gentle action (good for kids), relaxes absorptive/secretory tissues, provides fresh mucous. saponins provide expectorant action. From the 'Scrophulariaceae Family', from the word 'scrofula' meaning neck swelling or lymphatic accumulations as a result of bacterial or mycobacterial infection/inflammation (tuberculosis).</p>
<p><b>ANTI-INFLAMMATORY (Demulcents):  cooling, moistening</b></p>
<p><b><i>Glycyrrhiza glabra</i></b> (European Licorice, <i>Fabaceae</i> or <i>Leguminosae</i>, Pea Family)  Sweet, cooling anti-inflammatory for the <b>whole system</b>. It is GLOBAL, works through the adrenals to increase endogenous adrenocorticosteroids (steroid) and maintains their presence in the blood for longer.</p>
<p><b><i>Marrubium vulgare</i></b> (Horehound, <i>Lamiaceae</i>, Mint Family)  mild, cooling &amp; soothing. EO gathered in Lung tissue.  Candies made from it in Southern America.</p>

***Nigella sativa*** (Black Cumin, *Ranunculaceae*, Buttercup Family)  
 Mucilaginous, anti-inflammatory, antibiotic, demulcent.  
 Seed has delicious flavor and is mixed with Labna (like cream cheese) and spread over flatbread in the middle east. Mucilage can be extracted in water or oil.

***Pimpinella anisum*** (Anise, *Apiaceae*, Carrot or Parsley Family)  
 pleasant flavour, essential oils are gathered by the lung tissues. Sweet, cooling, moistening demulcent. Antibacterial, anti-inflammatory. Anise seed is great to add to children's formulas for taste.

***Verbascum thapsus*** (Mullein, *Scrophulariaceae*, Figwort or Snapdragon Family)  
 antirheumatic, has an affinity for the absorptive tissues/structures, helps ease swelling and inflammation. Mucilaginous, anti-inflammatory, works on Peyer's Patches in the intestines and signals to Immune System to initiate anti-inflammatory process

**ANTIMICROBIALS:**

***Asclepias tuberosa*** (Pleurisy Root, *Apocynaceae*, Dogbane Family)  
 stimulates macrophages, specific for inflammation of pleura surrounding lungs. Is a diaphoretic so helps with fever, stimulates the Immune System through release of cytokines to turn up body temperature by stimulating the hypothalamus  
**acute remedy**  
 specific for **pleurisy, respiratory influenza & SARS**

***Andrographis*** (Chiretta, *Acanthaceae*, Acanthus Family)  
 One of main herbs in European cold and flu remedies. Very cooling and bitter, for hot infectious conditions.

***Baptisia tinctoria*** (Wild Indigo, *Fabaceae* or *Leguminosae*, Pea Family)  
 Use with anaerobic bacterial infections that produce pus., Good for wet, oozing infections, sepsis.

***Commiphora mol-mol*** (Myrrh resin, *Burseraceae*, Torchwood Family)  
 Antimicrobial, antifungal. Main activity is on contact, or in Peyer's patches of GI tract, also works in Kupfer cells of the liver. Prevents decay - used historically for disinfecting wounds externally, used in mummification to arrest the decomposition of tissues by bacteria.  
 it is a gum resin, in boiling water  
 alcohol extraction get mostly resin and no gum  
 drink – throat & esophagus get direct contact

***Echinacea angustifolia*** (Echinacea, *Asteraceae*, Aster or Composite Family)  
 Kills bacteria on contact and mobilizes the immune system, stimulates production of WBC but only when an antigen is present, so does not exacerbate auto-immune conditions. Contains large chain immuno polysaccharides, and isobutylamides (which create a notable numbing sensation in the mouth). Water extract used topically on the skin and in the mouth, tincture internally. Many species exist, lots of companies use *E. purpurea* & have to modify product. Natives only used root and used angustifolia because it has most active compounds.  
 May be applied to insect & snake bites

***Eucalyptus globulus*** (Eucalyptus, *Myrtaceae*, Myrtle Family)  
 Antimicrobial especially to respiratory system, EO gathers in the lungs, anesthetizes nerve and is released in oil and alcohol. Concentrated EO can be very irritating to mucous membranes, used topically. Often found in lozenges (eg Fisherman's Friend).

***Hydrastis canadensis*** (Goldenseal, *Ranunculaceae*, Buttercup Family)  
 3 alkaloids (Hydrastine, Berberine, Canadine) are strongly antimicrobial. Acts on mucous membranes. Can use to treat e-coli but will upset the gut flora if used for more than 2 weeks - do not use for prolonged duration, can cause diarrhea, disrupts bacterial metabolism by interfering with bacterial efflux pump.

<p><b>Lonicera</b> (Japanese Honeysuckle, <i>Caprifoliaceae</i>, Honeysuckle Family) Used in Chinese medicine for heat picture in viral infections.</p>
<p><b>Ligusticum porteri</b> (Osha, <i>Apiaceae</i>, Carrot or Parsley Family) grows in the mountains (above 1000m), bear love to eat it, roots look like a bear’s paw. Aromatic seeds &amp; roots. Antiviral properties. *strongest antiviral plants so do not use 1<sup>st</sup> **must learn how to cultivate when wildcrafting CAREFUL – also grows near poison hemlock</p>
<p><b>Lomatium dissectum</b> (Desert Parsley, <i>Apiaceae</i>, Carrot or Parsley Family) same family as <i>Ligusticum</i>, lower elevations, valleys of Nevada, both <i>Lomatium</i> and <i>Ligusticum</i> were used and documented during the Spanish influenza. Aromatic seeds &amp; roots. !oils! may cause photosensitivity – boil root and let sit, skim oil off and boil again *strongest antiviral plants so do not use 1<sup>st</sup></p>
<p><b>Isatis tinctoria</b> (Woad, <i>Brassicaceae</i>, Mustard Family) Chinese herb for a heat (fever) picture.</p>
<p><b>Nigella sativa</b> (Black Cumin, <i>Ranunculaceae</i>, Buttercup Family) antimicrobial quinone compounds, good for allergies. Anti-inflammatory, antibiotic, demulcent.</p>
<p><b>Pimpinella anisum</b> (Anise, <i>Apiaceae</i>, Carrot or Parsley Family) Essential oils collect in lungs. Sweet, cooling, moistening demulcent. Antibacterial, anti-inflammatory. Anise seed is great to add to children’s formulas for taste</p>
<p><b>Salvia officinalis</b> (Sage, <i>Lamiaceae</i>, Mint Family) drying draws fluid out of tissues, astringent, <b>sore throat</b> with phlegm. Mostly for trachea and bronchi. Does not penetrate deeper than that.</p>
<p><b>Thymus vulgaris</b> (Thyme, <i>Lamiaceae</i>, Mint Family) essential oils contain thymol, carvacol, produces antimicrobial effects on a variety of bacteria. Hot and dry, strong antibacterial, will gather in lungs and in digestive tract and penetrates deeper into respiratory system where sage will not. Joseph Lister “Listerine” - EO of Sage, Thyme, Eucalyptus in an alcohol spray - hygiene in hospitals</p>
<p><b>Usnea barbata</b> (Old Man’s Beard, <i>Parmeliaceae</i>, Lichen-forming Fungi) It is a lichen &amp; a moss that hangs from trees (found mostly in BC rainforest), gains nutrition from the air (not from the trees), used to measure the air quality of the region. Used as a field dressing during WWII. Bacitracin ointment – was made from usnea extracts (Usnic acids). Holds moisture and adds antibacterial components into wound.</p>
<p><b>Allium sativa</b>, (Garlic, <i>Amaryllidaceae</i>, Amaryllis Family) Antimicrobial compounds (the part that gives garlic its bite) are only active when it is crushed. Extract in honey or oil. Oils gather in lungs, sulphur compounds are antimicrobial, prepared with honey, forms hydrogen peroxide on contact with blood stream, great for pneumonia (wet, boggy condition) Garlic honey is one of the best for <b>pneumonia</b>, one of the only times that you might want to give honey to a baby - honey on the tip of a spoon. Or, you can crush it into olive oil and put oil on their feet. In 20 minutes, you can smell it on their breath. 1 clove of garlic in a 1Tbsp. of honey honey is hydroscopic (draws water to it) small clove with hard neck and red colour</p>
<p><b>ANTISPASMODICS:</b> relaxes smooth muscle (also usually a Bronchodilator) uncontrollable cough? smooth muscles in lungs need to relax *Bronchodilators – GREAT COMBO: <i>Ephedra</i>, <i>Grindelia</i>, <i>Lobelia</i></p>
<p><b>Angelica archangelica</b> (Garden Angelica, <i>Apiaceae</i>, Carrot or Parsley Family) root, essential oil fraction gathered by lung tissue, inhibits nerve transmission and relaxes muscles around bronchi.</p>

<p><b><i>Asclepia tuberosa</i></b> (Pleurisy Root, <i>Apocynaceae</i>, Dogbane Family) Mild antispasmodic.</p>
<p><b><i>Datura stramonium</i></b> (Jimsonweed, <i>Solanaceae</i>, Nightshade)  Strongest of all. Smooth muscle relaxant, blocks acetylcholine, induces parasympathetic NS. !small therapeutic window!, strong, atropine (like Belladonna).  too “drug-like” for 1<sup>st</sup> line antispasmodic  if have too much hallucinate – dark hallucinations  active level is close to !toxic level!  A powerful painkiller, dulls nerves when applied locally - along sciatic nerve, or bones with deep pain.  Historically, could get it in a pipe with tobacco &amp; smoked for asthma, is still in some cigarettes in India (Bidis).</p>
<p><b><i>Ephedra sinica</i></b> (Mormon Tea, Ma Huang, <i>Ephedraceae</i>, Ephedra Family)  Contains Ephedrine and Norephedrine. Excites sympathetic nervous system, reduces spasms in bronchial muscles - bronchodilator.  stimulates heart so combine with <i>Grindelia camp.</i> (antispas., bronchodilator &amp; relaxing cardiogenic)  dries out, relaxes smooth muscle, increases body heat. Long-lasting.  <b>asthma, anaphylaxis</b>  people abuse by mixing with black tea/coffee – takes away appetite &amp; feel great – dangerous – teenagers have been killed</p>
<p><b><i>Grindelia camporum &amp; robustum</i></b> (Gumweed, <i>Asteraceae</i>, Composite or Aster Family)  Greasy oil plant lives in hot, dry climates.  Antispasmodic &amp; relaxing cardiogenic (add to <i>Ephedra sinica</i>) - relaxes cardiac muscles as well as bronchial muscles.  sedative good in <b>whooping cough</b>  stops poison ivy rash, poison oak when used topically</p>
<p><b><i>Lactuca virosa</i></b> (Wild Lettuce, <i>Asteraceae</i>, Composite or Aster Family)  Milky sap is anodyne, nervine sedative, antispasmodic.  works on CNS: nervousness &amp; spasm - for <b>nighttime coughs</b> that keep you awake  <i>virosa &amp; scariola</i> leaves go perpendicular to the ground (like hands with palms out)  <i>canadensis</i> grows really tall and bleeds white latex</p>
<p><b><i>Lobelia inflata</i></b> (Puke weed, Indian Tobacco, <i>Campanulaceae</i>, Harebell Family)  Antispasmodic, bronchodilator, muscle relaxant (topically).  relaxes heart &amp; bronchi of the lungs.  externally may be used as an antispasmodic.  combine with <i>Ephedra &amp; Grindelia</i>  made popular by Samuel Thompson in colonial America –  too much or overdose (esp. with fresh herb) causes emesis – “puke weed”.  lobelian alkaloids may break cigarette need. Pick in seed and use leaf &amp; seed stem and tincture with apple cider vinegar</p>
<p><b><i>Marrubium vulgare</i></b> (Horehound, <i>Lamiaceae</i>, Mint Family)  EO are relaxing short term, put into cough syrup &amp; candies</p>
<p><b><i>Pimpinella anisum</i></b> (Anise, <i>Apiaceae</i>, Carrot or Parsley Family)  relaxing for short term, brings blood to surface</p>
<p><b><i>Prunus serotina</i></b> (Wild Black Cherry, <i>Rosaceae</i>, Rose Family)  *<b>BARK</b>* antitussive through the following action; contains hydrocyanic acid. In synthetic preparations hydrocyanic acid is extremely poisonous (cyanide), but in small quantities from a naturally prepared source, it can beneficially block nerve transmission, producing an antitussive/antispasmodic activity, and it is also calming to heart action. Soak overnight in cold water, tincture the next day using water the herb was soaked in. Remingtons manual is the pharmaceutical handbook.  good cherry flavour – cough syrup &amp; candies</p>

<p><b><i>Symplocarpus foetidum</i></b> (Skunk Cabbage, <i>Araceae</i>, Arum Family)  Swamp cabbage root.  Smells bad, sewer-like smell, “fetid” sulfur compound  good for <b>dry spasm</b> in Lungs  very effective but rarely picked/grown  grow in forests and wetlands</p>
<p><b><i>Thymus vulgaris</i></b> (Thyme, <i>Lamiaceae</i>, Mint Family)  Mild antispasmodic - activity of the oils appears to be greatest on trachea.  <b><i>Verbena hastata</i></b> Blue vervain antispasmodic nervine relaxant</p>
<p><b><i>Viburnum opulus</i></b> (Cramp Bark, <i>Adoxaceae</i>, Adoxa Family)  Recognized by the National Formulary as a specific antispasmodic for asthma. Good for any muscle tissue (smooth or striated).  has salicylates  mild action on heart</p>
<p><b>ANTITUSSIVES: Inhibits cough reflex. Good for dry lung cough when there is nothing to expectorate</b>  calm nerves  are also antispasmodic</p>
<p><b><i>Asclepias tuberosa</i></b> (Pleurisy Root, <i>Apocynaceae</i>, Dogbane Family)  Soothes a dry cough, promotes fluid production.  Use at the <b>beginning of influenza</b> to stimulate immune system, induce fever  pleurisy is a dry inflamed pleural cavity</p>
<p><b><i>Inula helenium</i></b> (Elecampane, <i>Asteraceae</i>, Aster or Composite)  Soothing mucopolysaccharides reduce irritation  can help a person cough (expectorate) <b>or</b> stop a person from coughing (dry).</p>
<p><b><i>Prunus serotina</i></b> (Wild Black Cherry, <i>Rosaceae</i>, Rose Family)  <b>bark</b>, Strongest antitussive in list, stops spasms by blocking the motor nerve (motor inhibitor)</p>
<p><b><i>Tussilago farfara</i></b> (Colt’s Foot, <i>Asteraceae</i>, Composite or Aster Family)  Medium strength antitussive, mucilage.  Contains a measurable amount of pyrrolizidine alkaloids</p>
<p><b><i>Verbascum thapsus</i></b> (Mullein, <i>Scrophulariaceae</i>, Figwort or Snapdragon Family)  Mild antitussive. soothing, good for dry, irritating coughs.</p>
<p><b>ANTIVIRALS: Help to create an ecological environment that does not support viral activities (ex. heat)</b>  <b>Initiate process within the immune response and also endocrine system</b>  We do not have vitamin D in the winter time so we have more susceptibility to viruses  Virus has specific temperature, pH &amp; salinity that it must live in  Herpes is most prevalent virus in the human species (lemon balm, hyssop, st. john’s wort)</p>
<p><b><i>Echinacea angustifolia</i></b> (Echinacea, <i>Asteraceae</i>, Composite or Aster Family)  Immunomodulating polysaccharides increase phagocytosis, and increase lymphocyte activity, also antiviral compounds.  Kills bacteria on contact and mobilizes the immune system, stimulates production of WBC but only when an antigen is present  does not exacerbate Auto Immune conditions.</p>

<p><b><i>Hyssopus officinalis</i></b> (Hyssop, <i>Lamiaceae</i>, Mint Family) Essential oils have antiviral properties, effective against herpes.</p>
<p><b><i>Inula helenium</i></b> (Elecampane, <i>Asteraceae</i>, Aster or Composite) Specific to <b>pneumonia (viral and bacterial)</b> (if patient has pneumonia – very possible they have both virus &amp; bacteria) use in cases where lots of fluid is present. volatile oils are antibiotic, alkaloids are antifungal more effective if not flowering grows all over Ontario, follows waterways</p>
<p><b><i>Ligusticum porteri</i></b> (Osha, <i>Apiaceae</i>, Carrot or Parsley Family) Respiratory viral infections. Aromatic seeds &amp; roots. grows in mountainous regions from 2000-7000m *one of strongest antiviral plants **must learn how to cultivate when wildcrafting CAREFUL – also grows near poison hemlock</p>
<p><b><i>Lomatium dissectum</i></b> (Lomatium, <i>Apiaceae</i>, Carrot or Parsley Family) aromatic seeds &amp; roots grows in desert regions antiviral properties used &amp; documented during the Spanish influenza !oils! may cause photosensitivity – boil root and let sit, skim oil off and boil again *one of strongest antiviral plants</p>
<p><b><i>Sambucus nigra fruc.</i></b>(Elderberries, <i>Adoxaceae</i>, Adoxa Family) <b>Europe’s antiviral</b> - diaphoretic, promotes stronger immune response, stimulates blood to produce WBC Helps to regulate temperature through diaphoresis, immune response. Will cause bowel movement, diarrhea if dose is too big. If that happens, it may cool the body.</p>
<p><b><i>Usnea barbata</i></b> (Old Man’s Beard, <i>Parmeliaceae</i>, Lichen-forming Fungi) All purpose, broad spectrum antimicrobial, antifungal, antiviral. Can use in almost any case. Only wildcrafted, so not as abundant as cultivated alternatives.</p>
<p><b>ASTRINGENTS: tissues like to be moist - astringents move tissue from too wet to normal.</b> Eg. astringe lungs when you have excess moisture like pneumonia</p>
<p><b><i>Euphrasia officinalis</i></b> (Eyebright, <i>Orobanchaceae</i>, Broomrape Family) drying, good for congestion(notably in the eyes)</p>
<p><b><i>Hydrastis canadensis</i></b> (Goldenseal, <i>Ranunculaceae</i>, Buttercup Family) drying, King of mucus membranes.</p>
<p><b><i>Salvia officinalis</i></b> (Sage, <i>Lamiaceae</i>, Mint Family) very drying, useful for weaning a child off a breast feeding</p>
<p><b><i>Solidago odorata</i></b> (Goldenrod, <i>Asteraceae</i>, Aster or Composite Family) upper respiratory catarrh, also has mucilage (soothing), antihistamine (reduces inflammation), also astringing to urethra.</p>
<p><b>BRONCHO DILATORS:</b> generally will open bronchioles &amp; stimulate the heart</p>
<p><b><i>Ammi visnaga</i></b> (Khella, <i>Apiaceae</i>, Carrot or Parsley Family) fatty oil contains Khellin, an effective broncho/smooth muscle dilator (used for centuries for easing the passage of kidney</p>

stones) slow acting but long acting bronchodilator, relaxes the same way as <i>Ephedra</i>
<b><i>Ephedra sinica</i></b> (Mormon Tea, Ma Huang, <i>Ephedraceae</i> , Ephedra Family) Contains Ephedrine and Norephedrine, relaxes muscular/vascular structures in the lungs. Caution is advised with patients suffering from high BP. strongest bronchodilator in list xanthine alkaloids *add <i>Eriodictyon</i> or <i>Grindelia</i> , or both
<b><i>Eriodictyon californicum</i></b> (Mountain Balm/Yerba santa, <i>Boraginaceae</i> , Borage Family) For drying up excess fluids, allowing bronchial muscles to relax, relaxes heart. Greasy plant, pleasant taste. *use with <i>Ephedra</i> & <i>Grindelia</i> Historically was smoked or made into a tea as a expectorant/bronchodilator
<b><i>Grindelia camporum</i></b> (Gumweed, <i>Asteraceae</i> , Aster or Composite Family) relaxing, used to mitigate <i>Ephedra</i> , regulates the amount of mucous being created and blocks nerve signals that can cause an excessive production of inflammatory chemicals, helps lung tissues relax not a bronchodilator, antispasmodic, cardiogenic it helps with bronchodilation through antispasmodic action relaxes the heart
<b>CARDIO TONICS: Bronchodilators can be stimulating (except for <i>Grindelia</i>). Relaxing cardiogenics can mitigate this action.</b>
<b><i>Grindelia camporum</i></b> (Gumweed, <i>Asteraceae</i> , Aster or Composite Family) respiratory & cardiogenic, can slow down a person's heart
<b><i>Leonurus cardiaca</i></b> (Motherwort, <i>Lamiaceae</i> , Mint Family) calms the nerves and heart contractions, good for heart palpitations harmonious with respiratory herbs, good in panic attack, heart racing
<b><i>Tilia species</i></b> (Linden Tree, <i>Malvaceae</i> , Mallow Family) mucilage (demulcent), gives a soothing taste & texture relaxes heart & increases arterial relaxation so heart receives more blood
<b>CIRCULATORY STIMULANTS: Needed when there is damp heat in the core of body.</b>
<b><i>Capsicum minimum</i></b> (Cayenne Pepper, <i>Solanaceae</i> , Nightshade Family) Promotes circulation, stimulates fluid production. 'Vaso peripheral dilator', also good general stimulant. Moves blood from the body core to periphery; induces sweating. With a cayenne footbath, can give your forehead a sweat in minutes – powerful Hot and dry - can dry up lungs in chronic asthma and fibrosis. Use as 1% of tincture compound.
<b><i>Zanthoxylum clava-herculus</i></b> (Prickly-Ash, <i>Rutaceae</i> , Rue or Citrus Family) Promotes capillary circulation, promotes saliva production when chewed, excellent for clearing congestion/obstructions systemically. Stimulates movement of blood from the core to periphery
<b><i>Zingiber officinalis</i></b> (Ginger, <i>Zingiberaceae</i> , Ginger Family) Good winter tea to leave brewing on the stove. Moves blood more in gut, tends to bring blood to core – good if you are chilled. Upper limit is 15%-20% of tincture formula.



<p><b>DEMULCENTS: The lungs favour moisture.</b> slightly antitarrhal</p>
<p><i>Althea off. fol./rad.</i> (Marshmallow, <i>Malvaceae</i>, Mallow Family)  Leaf. Mucopolysaccharides, hot water extract is moistening &amp; cooling,  Some of action is on Peyer's patches of the GI tract.  Cold water Root extract, highly mucilaginous and cooling, also nutritious</p>
<p><i>Asclepias tuberosa</i> (Pleurisy Root, <i>Apocynaceae</i>, Dogbane Family)  Likes wetlands. "Pleurisy" is a disease of the Pleural cavity (dry inflammation). Moistening &amp; cooling. Also diaphoretic.</p>
<p><i>Glycyrrhiza glabra</i> (Licorice, <i>Fabaceae</i>, Pea Family)  Mucopolysaccharides, saponins, anti-inflammatory compounds.  moistening &amp; cooling</p>
<p><i>Inula helenium</i> (Elecampane, <i>Asteraceae</i>, Aster or Composite Family)  Soothing inulin sugars, saponins. Effective against bacterial and viral pneumonia.  moistening &amp; cooling</p>
<p><i>Solidago odorata</i> (Goldenrod, <i>Asteraceae</i>, Composite or Aster Family)  Astringent and demulcent - 'just moist enough'. Can dry and tighten tissue but leave it still moist. Antihistaminic</p>
<p><i>Tilia europa</i> (Linden Tree, <i>Malvaceae</i>, Mallow Family), mucilage (demulcent)  calms nerves, gives a soothing taste &amp; texture.</p>
<p><i>Tussilago farfara</i> (Colt's Foot, <i>Asteraceae</i>, Composite or Aster Family)  contains mucilage, other constituents inhibit <b>arachidonic acid</b> metabolism, which is a precursor to pro-inflammatory, pro platelet-aggregating eicosanoids.  moistening &amp; cooling, soothes &amp; relaxes tissue – sedates cough</p>
<p><i>Verbascum thapsus</i> (Mullein, <i>Scrophulariaceae</i>, Figwort or Snapdragon Family)  Relaxes secretory tissues, Children like it and it is mild and soothing.</p>
<p><i>Viola odorata</i> (Blue Violet, <i>Violaceae</i>, Violet Family)  Very mucilaginous. Soothing for digestive tract &amp; lungs. Use externally as a poultice – soothing to chest, used to soften tumours (breast).</p>
<p><b>DIAPHORETICS: Cools the body through evaporative heat loss by inducing sweating.</b>  builds core temperature, pituitary tells thyroid to increase the temperature  bring blood under skin to periphery  used at 1<sup>st</sup> sign of flu  make a drink with all – break into sweat – induce fever to kill virus – this costs the body energy, temperature is highest at night  Fever – virus – cytokine  1<sup>st</sup> sign of chill (muscle contraction burns sugar – makes heat)  hypothalamus reads virus and moves thermostat set point up – now body thinks it is cold  muscle pain – wants to go into fetal position to contain energy you have to fight infection  *JR uses a combination of <i>Achillea</i>, <i>Eupatorium</i>, <i>Mentha pip.</i> as a tea before bed  **<i>Nepeta cataria</i> (Catnip) is good for babies to help sleep – warm 50-100mL of catnip tea and give as enema, is diaphoretic &amp; will induce sleep</p>
<p><i>Achillea millefolium</i> (Yarrow, <i>Asteraceae</i>, Aster or Composite Family)  Increases peripheral circulation, which cools inner temperature. If drink hot pushes blood from core to periphery – sweat leaves body.</p>

<p><i>Asclepias tuberosa</i> (Pleurisy Root, <i>Apocynaceae</i>, Dogbane Family) Moderate persistent diaphoretic action, relaxes capillaries.</p>
<p><i>Eupatorium perfoliatum</i> (Boneset, <i>Asteraceae</i>, Composite or Aster Family) Also an immunostimulant, used at the beginning of a viral infection to move body into diaphoresis and immune cell proliferation - stimulates WBC.</p>
<p><i>Mentha piperita</i> (Peppermint, <i>Lamiaceae</i>, Mint Family) volatile oils, dilates peripheral vascular tissues.</p>
<p><i>Sambucus nigra flos.</i> (Elderberry Flowers, <i>Adoxaceae</i>, Adoxa Family) Stimulates WBC, causes diaphoresis within ½ hr. of drinking.</p>
<p><i>Sambucus nigra fruc.</i> (Elderberries, <i>Adoxaceae</i>, Adoxa Family) Less diaphoretic than the flowers. Much stronger at stimulating the immune system.</p>
<p><i>Tilia species</i> (Linden Tree, <i>Malvaceae</i>, Mallow Family) Mild. Not its primary action.</p>
<p><i>Zingiber off.</i> (Wild Ginger, <i>Zingiberaceae</i>, Ginger Family) Hot, good for ginger baths or in teas. Brings blood to core – then directs heat to surface.</p>
<p><b>EXPECTORANTS (stimulating): stimulate cough reflex through controlled irritation</b> Use when the body cannot make a cough happen DO NOT use for long periods of time because the body gets used to constant stimulation &amp; will need to increase. DO NOT use for a dry cough – without phlegm. In those cases use a demulcent.</p>
<p><i>Aralia racemosa</i> (Spikenard, <i>Araliaceae</i>, Ginseng Family) Tonic, blood sugar regulator, saponins. Cousin of ginseng, delicious root – also used as an energy/spring tonic. prolific in hardwood forests, adaptogen, wildcrafted</p>
<p><i>Cephaelis ipecacuanha</i> (Ipecac, <i>Rubiaceae</i>, Madder Family) Historically used to promote emesis for poisoning or or sickness, but proper dosing yields an effective expectorant. South American herb, also induces <b>emesis</b> &amp; makes lungs itch.</p>
<p><i>Glycyrrhiza glabra</i> (Licorice, <i>Fabaceae</i> or <i>Leguminosae</i>, Pea Family) Saponins(irritative), soothing, cooling, relaxing. Also brings on cough.</p>
<p><i>Inula helenium</i> (Elecampane, <i>Asteraceae</i>, Aster or Composite Family) Saponins (irritating), also soothing sugars. Antibacterial. Particular for wanting to cough because of fluid build up (pneumonia), gets moisture to move. Useful for indigestion associated with swallowing expectorated mucus.</p>
<p><i>Lobelia inflata</i> (Pukeweed, <i>Campanulaceae</i>, Bellflower Family) Requires artful dosing. Creates a hard, expelling cough. Too much causes vomiting.</p>
<p><i>Marrubium vulgare</i> (Horehound, <i>Lamiaceae</i>, Mint Family) Improves constant, weak cough by making it more effective. Used in American south to make cough candies.</p>

<p><b><i>Populus candicans</i></b> (Aspen/Poplar Tree/Balm of Gilead, <i>Salicaceae</i>, Willow Family)  Pain relieving, stimulating expectorant Constituents in the resin are irritative.  Use resin boiled in water and drink as a tea or place on hot coals and inhale; also extracts into alcohol.</p>
<p><b><i>Primula veris</i></b> (Cowslip Primrose, <i>Primulaceae</i>, Primrose Family)  Grows close to water. Must boil.</p>
<p><b><i>Sanguinaria canadensis</i></b> (Bloodroot, <i>Papaveraceae</i>, Poppy Family)  irritating alkaloids, wildcrafted  <b>Use for dry lungs</b> as it will irritate to produce fluids. Great for chronic cough in smokers and miners, trying to expel very thick mucous..  also for <b>nasal polyps</b> – snort dry with <i>Hydrastis</i> to shrink polyps</p>
<p><b><i>Viola odorata</i></b> (Blue Violet, <i>Violaceae</i>, Violet Family)  relaxes cough also relaxing</p>
<p><b>EXPECTORANTS (relaxing): introduce fluids to stimulate cough reflex, movement of catarrh. Soothing, mucilaginous.</b></p>
<p><b><i>Asclepias tuberosa</i></b> (Pleurisy Root, <i>Apocynaceae</i>, Dogbane Family)  Demulcent fluids relax cough.</p>
<p><b><i>Echium vulgare</i></b> (Viper’s Bugloss, <i>Boraginaceae</i>, Borage Family)  Mucilage is vulnerary to lung tissue, helps people deal with the stress of smoking through adrenal support. Aerial parts are used. Is cousin of Comfrey &amp; Borage. Hairy plants, the flowers look like comfrey flowers. Excellent for people who smoke to relieve stress. Helps lungs and adrenal glands recover.</p>
<p><b><i>Glycyrrhiza glabra</i></b> (Licorice, <i>Fabaceae</i>, Pea Family)  mucopolysaccharides  soothing, cooling, relaxing, helps release endogenous cortisone</p>
<p><b><i>Grindelia camporum</i></b> (Gumweed, <i>Asteraceae</i>, Aster or Composite Family)  regulates mucus secretions, soothes and relaxes lungs</p>
<p><b><i>Hyssopus officinalis</i></b> (Hyssop, <i>Lamiaceae</i>, Mint Family)  activates mucociliary elevator</p>
<p><b><i>Lobelia inflata</i></b> (Pukeweed, <i>Campanulaceae</i>, Harebell Family)  <b>lobeline</b> alkaloids are similar to nicotine, antagonists to nicotinic receptors, bronchodilator – productive cough</p>
<p><b><i>Plantago major</i></b> (Plantain, <i>Plantaginaceae</i>, Plantain Family)  anti-histaminic, mucilage - affinity for lungs, this mucilage is more stable with alcohol(below 25%). Soothing, relaxing, slightly astringent</p>
<p><b><i>Prunus serotina</i></b> (Wild Black Cherry, <i>Rosaceae</i>, Rose Family)  reduces cough to just enough where you expectorate</p>
<p><b><i>Pulmonaria officinalis</i></b> (Lungwort, <i>Boraginaceae</i>, Borage Family)  mucilage, common in Europe, <b>tonic for lungs</b>, mild relaxant  minimal(if any) pyrrolizidine alkaloids,</p>
<p><b><i>Trigonella foenum-graecum</i></b> (Fenugreek, <i>Fabaceae</i>, Pea Family)  makes mucilage, astringent &amp; covers with moisture; soothing, relaxing but <b>drying over time</b> galactagogue, used in food, curry recipes</p>

<i>Tussilago farfara</i> (Coltsfoot, <i>Asteraceae</i> , Aster or Composite Family) mucilage, anti-inflammatory, antitussive – allows for productive cough & then you stop coughing
<i>Verbascum thapsus</i> (Mullein, <i>Scrophulariaceae</i> , Figwort or Snapdragon Family) mucilage, excellent for congestion. Adds demulcent, cooling, liquid quality to sputum when coughing.
<i>Viola odorata</i> (Blue Violet, <i>Violaceae</i> , Violet Family) mucilage
<i>Viola tricolour</i> (Heartsease, <i>Violaceae</i> , Violet Family) soothing
<b>IMMUNOMODULATORS:</b> long list of mushrooms plants that regulate immune system by rules of the body – allows body to make its decision which way it travels
<i>Astragalus membranaceus</i> (Milkvetch, <i>Fabaceae</i> ) Nourishing, modulates glandular responses through GI tract
<b>DEEP IMMUNE ACTIVATION</b>
<i>Ganoderma applanatum</i> (Reishi Mushroom, <i>Ganodermataceae</i> ) saponins, affinity for lung meridian(and spleen)(TCM) most common Ontario <i>Ganoderma</i>
<i>Ganoderma spp.</i> increase cells' ability to utilize Oxygen without expending energy
<i>Glycyrrhiza glabra</i> (Licorice, <i>Fabaceae</i> , Pea Family) immunomodulator is very useful for <b>respiratory system, plus added liver and adrenal support.</b>
<b>NERVINES:</b> Excess water in lungs = stagnation = infection water is emotion (cry – tears) from Breathe Free by Daniel L.
<i>Aster nova-anglae</i> (New England/Purple Aster, <i>Asteraceae</i> , Sunflower Family) relaxant, purple aster flower blooms at the end of August, blue with a yellow centre blow smoke into room from flowers to cause relaxation specific for caregivers – smudge or drink as a tea
<i>Hyssopus officinalis</i> (Hyssop, <i>Lamiaceae</i> , Mint Family) mildly sedating to nervous system, relieves the irritation of phlegm.
<i>Lactuca virosa</i> (Wild Lettuce, <i>Asteraceae</i> , Aster or Composite Family) analgesic for burning cough & sedates to induce sleep
<i>Leonurus cardiaca</i> (Motherwort, <i>Lamiaceae</i> , Mint Family) relaxing to heart for the nervous person, easily startled (includes thoughts); for person who snaps awake & cannot go back to sleep
<i>Lobelia inflata</i> (Pukeweed, <i>Campanulaceae</i> , Harebell Family) soothes tissue of digestive & urinary tract; anti-anxiety
<i>Piper methysticum</i> (Kava Kava, <i>Piperaceae</i> , Piper Family) anesthetic to mucus membranes, relieves anxiety(from thinking)
<i>Scutellaria lateriflora</i> (Skullcap, <i>Lamiaceae</i> , Mint Family) nervous emotional activity

**PULMONARY TONICS:**

will have restorative/nutritive properties  
 can be used in small doses for long periods (except *Hydrastis*)

***Echium vulgare*** (Viper's Bugloss, *Boraginaceae*, Borage Family)  
 for smokers – healing, trophorestorative.

***Equisetum arvense*** (Horsetail, *Equisetaceae*, Horsetail Family)  
 high mineral content (silica), trophorestorative.

***Glechoma hederaceae*** (Ground Ivy, *Lamiaceae*, Mint Family)  
 astringent, soothing oils, nutritive compounds

***Hyssopus officinalis*** (Hyssop, *Lamiaceae*, Mint Family)  
 oils are soothing, removing mucus is healing, clears lungs.

***Hydrastis canadensis*** (Goldenseal, *Ranunculaceae*, Buttercup Family)  
 Dries out saturated lungs. Not really a tonic but good for the tracheobronchio lining. Can be overdosed!

***Inula helenium*** (Elecampane, *Asteraceae*, Aster or Composite Family)  
 good for dry or wet lungs. antibacterial, particular for **wanting to cough because of fluid build up** (pneumonia), gets moisture to move

***Plantago major*** (Plantain, *Plantaginaceae*, Plantain Family)  
 vulnerary to skin, lungs, heals irritated tissue, adds mucilage, nutritive

***Pulmonaria officinalis*** (Lungwort, *Boraginaceae*, Borage Family)  
 cool, mucilaginous, heals, protective, nutritive.

***Tussilago farfara*** (Coltsfoot, *Asteraceae*, Composite or Aster Family)  
 cool, mucilaginous, trophorestorative.

***Verbascum thapsus*** (Mullein, *Scrophulariaceae*, Figwort or Snapdragon Family)  
 vulnerary to lungs, trophorestorative, nutritive

Irish moss is not included because of Carageenan  
 - an extract in irish moss and has been linked to cancer now  
 - retards crystal formation (like ice cream)

Ulmus fulva (Slippery Elm)  
 - limit to urgent care because it is so endangered  
 - dutch elm disease

**Fire cider as a antimicrobial**

- Onion, garlic, ginger, horseradish, cayenne blend with apple cider vinegar and let it sit, you may pour honey in because it is so spicy.
- Give in tsp. or Tbsp. doses if you or someone you know is coming down with a cold.
- Horseradish breaks down so may only last for one year in the fridge.

## SUMMARY OF ACTIONS

### ANTICATARRHALS

*Althea off. fol.*, *Capsicum spp.*, *Euphrasia off.*, *Inula helenium*, *Hyssopus off.*, *Petasites hybridus*, *Salvia off.*, *Sambucus nigra os.*, *Sambucus nigra fruc.*, *Thymus vulgaris*, *Tussilago farfara*, *Solidago spp.*, *Verbascum thapsus*

### ANTI-INFLAMMATORY (Demulcents)

*Alchornea cordifolia*, *Bidens pilosa*, *Cryptolepis sanguinolenta*, *Glycyrrhiza glabra*, *Marrubium vulgare*, *Nigella sativa*, *Petasites hybridus*, *Pimpinella anisum*, *Tussilago farfara*, *Verbascum thapsus*

### ANTIMICROBIALS

*Alchornea cordifolia*, *Asclepias tuberosa*, *Baptisia tinctoria*, *Bidens pilosa*, *Commiphora mol-mol*, *Cryptolepis sanguinolenta*, *Coptis chinensis*, *Echinacea angustifolia*, *Eucalyptus globulus*, *Hydrastis canadensis*, *Isatis tinctoria*, *Ligusticum porteri*, *Lomatium dissectum*, *Monarda didyma*, *Nigella sativa*, *Pimpinella anisum*, *Salvia off.*, *Sida condifolia*, *Thymus vulgaris*, *Usnea barbata*

### ANTISPASMODICS

*Alchornea cordifolia*, *Angelica archangelica*, *Asclepias tuberosa*, *Datura stramonium*, *Ephedra sinica*, *Grindelia camporum*, *Lactuca virosa*, *Lobelia in ata*, *Marrubium vulgare*, *Monarda didyma*, *Pimpinella anisum*, *Prunus serotina*, *Symplocarpus foetidum*, *Thymus vulgaris*, *Viburnum opulus*

### ANTITUSSIVES

*Asclepias tuberosa*, *Inula helenium*, *Petasites hybridus*, *Prunus serotina*, *Tussilago farfara*, *Verbascum thapsus*

### ANTIVIRALS

*Echinacea angustifolia*, *Hyssopus off.*, *Inula helenium*, *Isatis tinctoria*, *Ligusticum porteri*, *Lomatium dissectum*, *Sambucus nigra fruc.*, *Usnea barbata*

### ASTRINGENTS

*Euphrasia off.*, *Hydrastis canadensis*, *Prunus serotina*, *Salvia off.*, *Solidago spp.*, *Sorbus aucuparia*

### BRONCHODILATOR

*Ammi visnaga*, *Ephedra sinica*, *Eriodictyon californicum*, *Grindelia camporum*

### CARDIOTONICS

*Grindelia camporum*, *Leonurus cardiaca*, *Tilia europa*

### CIRCULATORY STIMULANTS

*Capsicum spp.*, *Zanthoxylum clava herculis*, *Zingiber off.*

### DEMULCENTS

*Althea off. fol.*, *Asclepias tuberosa*, *Glycyrrhiza glabra*, *Inula helenium*, *Petasites hybridus*, *Solidago spp.*, *Tilia europa*, *Tussilago farfara*, *Verbascum thapsus*, *Viola odorata*

### DIAPHORETICS

*Achillea millefolium*, *Asclepias tuberosa*, *Eupatorium perfoliatum*, *Mentha piperita*, *Monarda didyma*, *Sambucus nigra flos.*, *Sambucus nigra fruc.*, *Tilia europa*, *Zingiber off.*

### EXPECTORANTS (stimulating)

*Aralia racemosa*, *Glycyrrhiza glabra*, *Inula helenium*, *Marrubium vulgare*, *Populus candicans*, *Primula veris*, *Sanguinaria canadensis*, *Viola odorata*

### EXPECTORANTS (relaxing)

*Asclepias tuberosa*, *Echium vulgare*, *Glycyrrhiza glabra*, *Grindelia camporum*, *Hyssopus off.*, *Lobelia inflata*, *Petasites hybridus*, *Plantago major*, *Prunus serotina*, *Pulmonaria off.*, *Trigonella foenum-graecum*, *Tussilago farfara*, *Verbascum thapsus*, *Viola odorata*, *Viola tricolour*

**IMMUNOMODULATORS**

*Ganoderma applanatum, Glycyrrhiza glabra, DEEP IMMUNE ACTIVATION,*

**NERVINES**

*Hyssopus off., Lactuca virosa, Leonurus cardiaca, Lobelia in ata, Piper methysticum, Scutellaria laterifolia*

**PULMONARY TONIC**

*Echium vulgare, Equisetum arvense, Glechoma hederacea, Hyssopus off., Hydrastis canadensis, Inula helenium, Plantago major, Pulmonaria off., Verbascum thapsus*