



Herbal Medicine Approach to Respiratory Dysfunction

(Part IV in a series on Herbal Medicine)

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“Minor common disorders of the respiratory system can often be successfully treated with phytotherapy and it can be helpful as a supportive measure in more serious disease, such as bronchitis, emphysema and pneumonia.”ⁱ Cold and flu-like virus infections, decongestants (e.g. menthol and eucalyptus), broncholytics and expectorants (including ipecacuanha, thyme and senega), demulcents (e.g. mallow), antibacterials and antivirals (e.g. linden and elder flowers, pelargonium) and immune system modulators (e.g. echinacea, andrographis) are popular and effective.ⁱⁱ

Herbal treatment and management strategies (caution in individuals with known allergic reactions to specific herbs):

- Inflammatory catarrhal (mucous) conditions of the upper respiratory mucosa (e.g. common colds, rhinitis, sinusitis, otitis media)
- Acute bronchial and tracheal infections
- Allergic rhinitis
- Nervous coughing patterns
- Chronic obstructive pulmonary diseases (e.g. chronic bronchitis, bronchiectasis, emphysema, silicosis)
- Asthma
- Chronic tracheitis

Definitions

- Stimulating (reflex) expectorants – provoke increased mucociliary activity by reflex stimulation of the upper digestive wall
- Warming expectorants – increase blood flow to the respiratory mucosa
- Respiratory demulcents – soothing and anti-inflammatory action
- Respiratory spasmolytics – relaxation of the bronchioles
- Anticatarrhal – treatment of mucosal conditions
- Antitussive – allay coughing
- Decongestants - remove congestion of mucous membranes

- Antiallergic - treatment of over-reactive immune response
- Anti-asthmatic – treatment of mild to moderate asthma
- Respiratory tonics – general tonic for the lungs and respiratory system

Stimulating Expectorants

- *Indications:* Cough linked to bronchial congestion; bronchitis; emphysema
- *Contraindications:* dry and irritable conditions of the lungs; asthma; young children; dyspeptic conditions
- *Application:* best taken in hot infusions or as tinctures of fluid extracts, before meals
- *Primary Herbal Medicine(s):*
 - Angelica archangelica (angelica root),
 - Asclepias tuberosa (pleurisy root),
 - Inula helenium (elecampane),
 - Polygala tenuifolia (polygala),
 - Glycyrrhiza glabra (licorice),
- *Adult Dosage Considerations:*
 - Angelica root > 5 to 20 mL/week (1:2 liquid)
 - Pleurisy root > 10 to 20 mL/week (1:2 liquid)
 - Elecampane > 20 to 40 mL/week (1:2 liquid)
 - Polygala > 20 to 60 mL/week (1:2 liquid)
 - Licorice > 10 to 40 mL/week (1:1 liquid) or 2.0 to 3.0 g/day (tablet)

Warming Expectorants

- *Indications:* productive cough associated with cold; bronchitis; emphysema; profuse catarrhal conditions; congestive chronic infections and inflammatory conditions
- *Contraindications:* gastroesophageal reflux disease
- *Application:* Best taken immediately before meals (hot infusions)
- *Primary Herbal Medicine(s):*
 - Allium sativum (garlic)
 - Foeniculum vulgare (fennel)
 - Pimpinella anisum (aniseed)
 - Zingiber officinalis (ginger)
 - Cinnamomum zeylanicum (cinnamon)
- *Adult Dosage Considerations:*
 - Aniseed > 20 to 40 mL/week (1:2 liquid) or 350 to 700 mg essential oil/day
 - Cinnamon > 10 to 30 mL/week (1:2 liquid)
 - Garlic > 40 to 80 mL/week (1:1 fresh plant liquid) Allicin-releasing enteric-coated tablets containing 6 to 18 mg alliin per day
 - Ginger > 5 to 15 mL/week (1:2 liquid) or 0.9 to 1.2 g/day (tablet)
 - Fennel > 20 to 40 mL/week (1:2 liquid) or 20 to 50 mg essential oil/day

Relaxing Expectorants

- *Indications:* spasmodic coughing, bronchitis, pneumonia causing inflammation and irritation to the respiratory tract
- *Contraindications:* specific to herb
- *Application:* best taken before or with food as a warm infusion
- *Primary Herbal Medicine(s):*
 - *Pimpinella anisum* (aniseed)
 - *Glycyrrhiza glabra* (licorice)
 - *Drosera rotundifolia* (sundew)
 - *Marrubium vulgare* (white horehound)
 - *Euphorbia hirta* (euphorbia)
- *Adult Dosage Considerations:*
 - Aniseed > 20 to 40 mL/week (1:2 liquid) or 350 to 700 mg essential oil/day
 - Euphorbia > 5 to 12 ml/week (1:2 liquid)
 - Licorice > 10 to 40 mL/week (1:1 liquid) or 2.0 to 3.0 g/day (tablet)
 - Sundew > 10 to 20 mL/week (1:5 liquid)
 - White horehound > 15 to 40 mL/week (1:2 liquid) or 0.6 to 1.2 g/day (tablet)

Respiratory Demulcents

- *Indications:* dry, irritable, non-productive cough; asthmatic wheezing/tightness; cough in children
- *Contraindication:* profuse catarrhal or congestive conditions of the mucosa
- *Application:* best taken before meals; cold aqueous infusion
- *Primary Herbal Medicine(s):*
 - *Althea officinalis* (marshmallow leaf),
 - *Drosera longifolia* (sundew)
 - *Glycyrrhiza glabra* (licorice)
 - *Plantago lanceolata* (ribwort)
 - *Ulmus spp.* (slippery elm)
- *Adult Dosage Considerations:*
 - Marshmallow root > 20 to 40 mL/week (1:5 liquid)
 - Sundew > 10 to 20 mL/week (1:5 liquid)
 - Licorice > 10 to 40 mL/week (1:1 liquid) or 2.0 to 3.0 g/day (tablet)
 - Ribwort > 20 to 40 mL/week (1:2 liquid)
 - Slippery elm > 1.6 to 4.0 g/day (capsules)

Decongestants

- *Indications:* Asthma and related complaints; wheezing; congestion
- *Contraindications:* specific to herb
- *Application:* Taken anytime for immediate relief
- *Primary Herbal Medicine(s):*
 - *Armoracia rusticana* (horseradish),
 - *Capsicum* spp. (cayenne, chili)
 - *Hydrastis canadensis*; (goldenseal)
- *Adult Dosage Considerations:*
 - Horseradish > 25 to 50 ml/week (1:2 liquid)
 - Cayenne > 0.5 to 3mL/week (1:3 liquid)
 - Goldenseal > 15 to 30 mL/week (1:3 liquid) or 1.0 to 2.0 g/day (tablet)

Antitussives

- *Indications:* nonproductive, severe or persistent cough refractory to expectorants; cough due to external irritation or obstruction (e.g. tumor)
- *Contraindications:* specific to herb class and should be used only as needed and limited as soon as practical
- *Application:* best taken before meals; short-term only
- *Primary Herbal Medicine(s):*
 - *Prunus serotina* (wild cherry bark)
 - *Lactuca virosa* (wild lettuce)
 - *Althaea officinalis radix and folia* (marshmallow root and leaf)
- *Adult Dosage Considerations:*
 - Wild cherry > 15 to 30 mL/week (1:2 liquid)
 - Marshmallow root > 20 to 40 ml/week (1:5 liquid)
 - Wild lettuce > dosage varies (appears that tincture may be preferred)

Anti-Catarrhals (reduce the formation of mucus)

- *Indications:* catarrhal condition especially of the upper respiratory tract; sinusitis, otitis media, allergic and other hypersensitivity conditions
- *Contraindications:* anti-catarrhals are generally regarded as gentle and safe; see herbal class
- *Application:* best taken before meals; short to medium term
- *Primary Herbal Medicine(s):*
 - *Euphrasia* spp. (eyebright)
 - *Plantago lanceolata* (ribwort)
 - *Sambucus nigra* (elder berry)
 - *Nepeta hederacea* (ground ivy)
 - *Solidago virgaurea* (goldenrod)
 - *Verbascum thapsus* (mullein flowers)

- *Hydrastis canadensis* (goldenseal)
- *Adult Dosage Considerations:*
 - Elder berry > 4 to 8 g/day (tablet)
 - Eyebright > 15 to 30 mL/week (1:2 liquid) or 2.0 to 2.6 g/day (tablet)
 - Golden rod > 20 to 40 mL/week (1:2 liquid) or 2.0 to 2.6 g/day (tablet)
 - Goldenseal. 15 to 30 mL/week (1:3 liquid) or 1.0 to 2.0 g/day (tablet)
 - Ground ivy > 20 to 40 mL/week (1:2 liquid)
 - Mullein > 30 to 60 mL/week (1:2 liquid) or 1.5 to 2.0 g/day (tablet); ribwort > 20 to 40 mL/week (1:2 liquid)

Anti-Asthmatics

- *Indications:* asthma;
- *Contraindications:* specific to herb; severe cases of asthma may require co-management
- *Application:* best taken with meals; medium to long term
- *Primary Herbal Medicine(s):*
 - *Albizia lebbek* (albizia)
 - *Angelica polymorpha* (dong quai)
 - *Ephedra sinica* (ma huang)
 - *Hemidesmus indicus* (hemidesmus)
 - *Ganoderma lucidum* (reishi)
 - *Tanacetum parthenium* (feverfew)
 - *Tylophora indica* (tylophora)
- *Adult Dosage Considerations:*
 - *Albizia* > 25 to 60 mL/week (1:2 liquid) or 2.4 to 4.0 g/day (tablet)
 - *Dong quai* > 30 to 60 mL/week (1:2 liquid) or 2 to 4 g/day (tablet)
 - *Feverfew* > 7 to 20 mL/week (1:5 liquid)
 - *Hemidesmus* > 25 to 60 mL/week (1:2 liquid) or 1.5 to 2.5 g/day (tablet)
 - *Reishi* > 20 to 27 g/day (tablet)
 - *Tylophora* > 5 to 15 mL/week (1:5 liquid) for the first 10 day to 14 days of each month (dispense separately from other liquid herbs)

ⁱ Heinrich M, Barnes J, Gibbons S, Williamson EM. *Fundamentals of Pharmacology and Phytotherapy*. 2nd Ed. Edinburgh: Churchill Livingstone; 2012. p. 227.

ⁱⁱ Ibid.