

Eclectic & Specific Botanical Protocols For Asthma

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Asthma is a common respiratory disease that affects 12 to 16 million Americans. This condition is characterized by dyspnea, inflammation of the airways, bronchospasm with airway obstruction, increased mucus secretion, edema of bronchial walls, and bronchial hyperreactivity. The incidence of this condition has increased dramatically over the past 30 years and asthma-related deaths have doubled since 1976.

Although asthma is thought of as a disease that usually starts during childhood, at least 40% of new asthma cases are diagnosed in patients 40 years old or older.

Risk factors for asthma include genetic predisposition, air pollution (smog-particulates, dust, indoor pollution, and irritating industrial chemicals), smoking (tobacco, cannabis, and 2nd hand smoke), allergens (pollen, dust mites, possible food allergies), repeated viral respiratory infections, and low levels of dietary antioxidants. Common triggers for acute asthma episodes include perfumes, smog, cigarette smoke, humidity, exercise, dry air, cold air, viral infections (especially sinusitis), pollen, foods (especially dairy), and animal dander.

Asthma is generally divided into 2 types - allergic asthma and non-allergic asthma. In allergic asthma there are elevated serum IgE antibodies usually caused by reactions to pollen, animal dander, and dust mites.

In both types of asthma, the underlying pathogenesis is believed to be related to excessive eosinophil and mast cell activity. Th₂T Lymphocyte dominance may play a prominent role in asthma provoking an inflammatory response via various cytokines (interleukins, interferons, TNF) as well as histamine, leukotrienes, inflammatory prostaglandins and platelet activating factor (PAF). This phenomena creates increased reactive oxygen species (ROS), which can cause an imbalance between the autonomic mediated contraction and relaxation of pulmonary smooth muscle tissue. The ROS also can damage the cell walls of the small bronchi and bronchioli with significant loss of airway epithelium and increased capillary permeability.

Chronic and acute upper airway infections including sinusitis, rhinitis, and viral upper respiratory infections (syncytial, rhinovirus, and influenza) have also been shown to provoke bronchial hyperreactivity.

Asthma is divided into 4 stages and only stage 1 and mild stage 2 attacks are appropriate for self-treatment. More severe stage 2 and all stage 3-4 asthma attacks require immediate medical attention.

| SYMPTOMS OF ASTHMA ATTACKS | | | |
|--|---|--|--|
| Stage 1 | Stage 2 | Stage 3 | Stage 4 |
| Mild attack with dyspnea & intermittent wheezing. 50-80% of normal lung capacity. pH levels are normal & slightly rising. Pulmonary carbon dioxide (PaCO ₂) levels are normal and decreasing as are pulmonary oxygen (PaO ₂) levels. | Moderate attack-patient is using accessory muscles to breathe. Dyspnea & wheezing are more obvious. 50% of normal lung capacity. pH is rising, PaCO ₂ levels are falling, PaO ₂ levels start to rise. | Severe attack with respiratory distress, cyanosis from lack of O ₂ . Marked use of accessory muscles to breathe. Loud wheezing to no breath sounds (a danger sign). 25% of normal lung capacity. pH begins to drop, PaCO ₂ levels are normal or rising, and PaO ₂ levels are falling precipitously. | Respiratory failure with confusion, erratic pulse, & lethargy. Lung capacity is at 10% of normal. pH is plummeting, PaCO ₂ rises & PaO ₂ diminishes rapidly. |

Dietary suggestions for asthmatics:

- Avoid possible allergens or trigger foods
 - Common foods causing immediate onset sensitivities - eggs, fish, shellfish, nuts, peanuts
 - Common foods causing delayed onset sensitivities - dairy, chocolate, wheat, citrus, & food colorings
- Decrease animal fats, increase dietary Omega 3 fatty acids - to normalize faulty fatty acid metabolism, excessive arachidonic acid (from animal fats) stimulates leukotriene production. Leukotrienes are 1,000 times more potent than histamine as a trigger for bronchial constriction
- Avoid artificial food colors, additives and preservatives - especially sulfites which have been linked to asthma episodes (sulfites are common in wine, salad bars, prepared salads)
- Many asthmatics have low gastric HCL which contributes to food allergies and sensitivities. Increase digestive fire with Bitters, Orange Peel, Angelica, Ginger, Black Pepper, etc.

Useful dietary supplements for asthmatics:

- Omega 3 fatty acids - fish oils (EPA) help to reduce inflammatory prostaglandin production
- Magnesium helps to prevent muscle spasms including bronchospasm
- Antioxidants such as zinc, selenium, alpha lipoic acid, and vitamin C and E stabilize mast cells and reduce histamine response. They also reduce capillary permeability. Asthma patients routinely show low levels of antioxidants, especially Vitamin C and selenium
- Vitamin B-6 levels are often low in asthma patients. A study of 15 adults with asthma found that 50 mg. BID of B-6 reduced the frequency and severity of wheezing

Lifestyle suggestions:

- Avoid smoking and exposure to second-hand smoke, including poorly vented woodstoves
- Smog and high ozone levels can act as triggers for asthma. Air conditioners and air purifiers (with Hepa filters) can reduce particulates and indoor pollution.
- Avoid exposure to inhaled irritants - dust, powders, i.e., grain mills, wood shops.
- Replace wall-to-wall carpet with area rugs. Clean area rugs and bedsheets regularly to reduce dust mite populations. Hypoallergenic sheets, pillows, pillow cases, curtains, etc. are available from specialty stores.
- Keep pets out of bedrooms and vacuum frequently to reduce exposure to animal dander
- Humidify household air in the winter as dry air can act as a trigger
- Nasal breathing instead of mouth breathing warms cold winter air which can act as an asthma trigger
- Attempt to remove household triggers including mold, mildew, cockroaches, perfumes, high VOC paints, and many household cleaners
- Stress can trigger asthma attacks. Regular meditation, prayer, or biofeedback may help reduce the number and severity of asthma episodes
- Overexertion or excessive exercise may trigger an asthma attack - regular less intensive periods of exercise are more appropriate
- Avoid use of aspirin and other NSAID's which can provoke asthma attacks

SPECIAL RESPIRATORY REMEDIES FOR ASTHMA

Asafoetida (*Ferula asafoetida*) Oleo-gum-resin - Antispasmodic, expectorant, antibacterial, antiinflammatory. Cold/damp asthma, bronchospasm - a vinegar extract of equal parts Asafoetida and Lobelia is very effective for spasmodic coughs and asthma.

Dose: tincture (1:5) - 15-30 gtt. TID
vinegar tincture (1:5) - 20-40 gtt. TID

Black Cohosh (*Cimicifuga racemosa*) Root - Antispasmodic, anodyne. Useful for spasmodic coughs that cause muscular pain and soreness in the back, chest, or neck. Asthma triggered by exercise, back pain, or stress. Use with Lobelia and Asafoetida.

Dose: tea - 1 tsp. dried root, 8 oz. water, decoct 15-20 minutes, steep 30 minutes, take 4 oz. TID/BID
tincture (1:2) - 5-20 gtt. TID
(1:5) - 10-30 gtt. TID

Coleus forskolii Standardized Extract - Bronchodilator and PAF antagonist, use with Ephedra, Lobelia or Khella for asthma & chronic obstructive pulmonary disease.

Dose: standardized extract - provides 5-10 mg of forskolin per dose
fluid extract (1:1) - 2-4 ml. TID

Cordyceps (*C. sinensis*) Fungus - Lung qi tonic, mild bronchodilator, used for deficient yin (dry) asthma with persistent cough. Often combined with Bitter Almond seed, Fritillaria bulb, or Qian Hu (Peucedanum).

Dose: tea - usually used in formulas - 1/2 tsp. dried fungus, 10 oz. water, decoct at low temperature for 1 hour, take 4 oz. BID

Ginkgo (*Ginkgo biloba*) Standardized Extract - Antiinflammatory & bronchodilator - inhibits PAF and reduces inflammation in the lung tissue. Use in asthma and COPD with Khella, Schisandra, Lobelia, and/or Licorice.

Dose: standardized extract - 60 mg BID

Grindelia (*G. spp.*) Herb - Ellingwood states that this herb is "specific to asthmatic breathing. It must be given in full and frequent doses and the effects, although not striking from a single dose, are soon evident and are more or less permanent. It soon relieves the effort of breathing and produces expectoration, but on continued use the entire train of symptoms slowly abate and if persisted in the paroxysms do not soon recur." Breathing labored, hard cough, distinct mucus rales, sense of soreness in the chest. It combines well with Lobelia or Drosera.

Dose: tincture (1:5) - 2-3 ml. TID
tea - 1 tsp. dried herb/flower buds in 12 oz. water, decoct 15-20 minutes, reduce water to 8 oz., take 4 oz. TID

Horseradish (*Cochlearia armoracia*) Root - Bronchodilator for cold/damp asthma - use with Thyme, Osha, or Grindelia.

Dose: tincture (1:2) - 10-15 gtt. diluted in water 3-4 times per day

Khella (Amni visnaga) Seed - Antispasmodic to the small bronchi, it is a useful treatment for asthma, especially to help patients sleep through the night. It can also be used for emphysema and spasmodic bronchitis.

Dose: tincture (1:4) 10-20 gtt. TID

tea - 1 tsp. seed to 8 oz. hot water, steep 45 minutes, take 4 oz TID

Licorice (Glycyrrhiza glabra) Rhizome - Antispasmodic, antiinflammatory, expectorant. Very useful for dry, irritative spasmodic coughs and asthma. Use with other acrid herbs such as Skunk Cabbage or Lobelia to soothe tissue.

Dose: tea - 1 tsp. dried root, 8 oz. hot water, steep 40 minutes, take 4 oz. BID

tincture (1:5) - 10-20 gtt. TID

Lobelia (L. inflata) Seed or Fresh Plant - Antispasmodic, respiratory sedative, useful for asthma with irritable, spasmodic, and oppressed breathing. Patient is restless, irritable, anxious with a flushed face and contracted pupils. Avoid use in cardiac asthma.

Dose: fresh plant tincture (1:2) - 8-30 gtt. TID

seed tincture (1:5) - 5-20 gtt. TID

Osha (Ligusticum porterii) Root - Stimulating expectorant, antihistamine. Useful for cold/damp allergic asthma, allergic rhinitis, and post nasal drip.

Dose: tea - 1 tsp. dried root, 8 oz. water, decoct 10 minutes, steep 30 minutes. Take 4 oz. TID

tincture (1:5) - 1-3 ml. TID

Ma Huang (Ephedra sinensis) Twigs - Bronchodilator - used for asthma, especially cold/damp bronchial asthma - easily chilled, clear or white mucus, wheezing. Pulmonary edema & allergic rhinitis.

Dose: tincture (1:5) - 20-30 gtt. TID/QID

tea - 1/4-1/2 tsp. cut/sifted herb to 8 oz. water, decoct 15 minutes, steep 30 minutes,
take 2 oz. 3-4 times per day

Platycodon (Platycodon grandiflorum) Root - a.k.a. Balloon Flower. Antispasmodic (lungs), expectorant, anodyne (throat), antibacterial. Used in TCM for lung infections w/excessive dampness, i.e., bronchitis (hot/damp, cold/damp), wet asthma, damp pneumonia.

Dose: tea - 1 tsp. dried root, 8 oz. hot water, steep 30 minutes, take 4 oz. TID

Prince Ginseng (Pseudostellaria heterophylla) Root - Tai Zi Shen - Antiinflammatory, demulcent, lung Qi tonic. An important lung tonic in TCM, this plant is called "Ginseng of the Lungs". It is appropriate for chronic lung weakness, dry, deficient asthma with wheezing, and to help repair damage from chronic asthma or respiratory infections.

Dose: tea - 2 tsp. dried root, 8 oz. water, decoct 20 minutes, steep 40 minutes, take 2-3 cups
per day

Tincture (1:5) - 3-5 ml. QID

Schisandra (S. chinensis) Fruit - Adaptogen, astringent, antiinflammatory. Used in TCM for asthma with wheezing. "Kidneys not grasping the lung Qi". Patient never feels like they can take a full breath. Reduces side effects of steroidal inhalers and improves their activity. Use with Licorice and Ginkgo.

Dose: tincture - 1:5 - 2-4 ml. TID

tea - 1 tsp. berries to 8 oz. hot water, steep 1 hour, take 2-3 cups per day

Skunk Cabbage (Symplocarpus foetidus) Fresh Root - Antispasmodic, anodynes, and expectorant. Small doses are an effective remedy for pertussis, spasmodic bronchitis, and damp/spasmodic asthma.

Dose: fresh tincture - 5-15 gtt. well diluted in juice or water TID

Yerba Santa (Eriodictyon spp.) Leaf - Expectorant, bronchodilator. Used for irritative, ticklish coughs (damp or dry). Use with Licorice & Grindelia.

Dose: tea - 1 tsp. dried herb, 8 oz. hot water, steep 30-40 minutes, take 4 oz. TID
tincture (1:5) - 2-3 ml. TID

| ENERGETICS OF ASTHMA | | | | |
|--|---|--|---|--|
| Wind | Hot/Dry | Hot/Damp | Cold/Dry | Cold/Damp |
| Spasmodic cough, bronchospasm | Little or no sputum (yellow & sticky), dry cough, dry mouth, worse in dry conditions, dry, furred, red tongue | Profuse yellow sputum. Wet cough, exacerbated by humidity, red tongue, yellow moss | Little or no sputum (white, sticky), dry cough, dry mouth worse in dry conditions, dry, furred, pale tongue | Profuse white or clear sputum. Wet cough, exacerbated by humidity, pale tongue, white moss |
| Lobelia Skunk Cabbage Asafoetida Khella Black Cohosh | Irish Moss Elecampane Prince Ginseng Glehnia Mulberry bark | Horehound Platycodon Elecampane Black Cohosh Skunk Cabbage | Licorice Saw Palmetto Astragalus Schisandra Panax Yerba Santa with Licorice | Grindelia Osha Horseradish Ma Huang Platycodon Thyme |

Allergic Asthma - use herbs which inhibit Th₂T Lymphocyte dominance:

Scutellaria baicalensis
Curcuma longa
Bupleurum chinense
Salvia miltiorrhiza
Panax ginseng
lucidum
Grifola frondosa
Glycyrrhiza glabra
Withania somniferum

Systemic antiinflammatory agents may be useful in reducing underlying inflammation & irritation:

Carotenoids
Flavonoids: Green Tea - also contains Theophylline which acts as a bronchodilator
Blueberry Solid Extract
Ganoderma
Hawthorn
Turmeric
Grape Seed Extract
Ginkgo

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