Breathing Easier: Asthma and Allergy Solutions

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Asthma is an over-reaction of the immune system induced by exposure to a particular allergen (antigen). It is a very common problem, affecting at least two of every 10 Americans. About 10 percent of children in the United States are allergic to one or more substances. Most allergies are inherited; when one parent is allergic, the child has a 50 percent chance of having allergies. That risk jumps to 75 percent if both parents have allergies.

An allergen is a substance that the body perceives as foreign and dangerous and causes allergic reaction. Common allergens include pollen (a fine, powdery substance released by plants and trees), animal dander, feathers, mites, chemicals, drugs, and a variety of foods. Pollens that cause allergic reactions come from plants: trees (oak, elm, birch, maple, hickory, cedar, juniper), grasses (timothy grass, Bermuda grass, orchid grass, velvet grass), and weeds (ragweed, desert broom, feverfew, and marigold family).

Allergies' symptoms include respiratory problems, a stuffy and/or runny nose, sneezing, itchy skin, red and watery eyes, ache, fatigue, fever, diarrhea, stomachache, and vomiting. Symptoms could be seasonal or chronic depending on the allergen involved. Pollens from grass and trees usually cause seasonal allergies, while chronic allergies are usually caused by allergens present year-round, such as animal fur, dust, or feathers.

Asthma is an inflammatory disease that is characterized by narrowing of the bronchi (lung passageways) making airflow into and out of the lungs restricted, and hence making breathing difficult and causing a feeling of not getting enough air into the lungs.

There are two types of asthma. One is triggered by an allergy (referred to as allergic asthma) and the other has no known cause. Asthma can be triggered by inhaled allergens, such as pet dander, dust, cockroach allergens, and mold spores. It can also be triggered by rapid changes in temperature or humidity, upper respiratory infections, exercise, stress, or smoke (cigarette).

Asthma is found in 3-5 percent of adults and 7-10 percent of children. Half of those with asthma develop it before age 10. Anyone can get asthma, although it tends to run in families. An estimated 12 million adults and children in the United States have asthma.

Symptoms include wheezing, shortness of breath, tightness in the chest, and frequent coughing.

There is no known way to prevent an episode of asthma, except keeping away from foods, irritating substances, or environmental allergens that might be suspected to trigger another episode.

### NUTRITIONAL SUPPORT

People with asthma or allergy should eat a healthy diet and avoid foods such as nuts, yeast-based foods, seafood, dairy foods, and foods containing preservatives or dyes. Certain food additives, especially meta-bisulfite, can be dangerous for the child with asthma. Monosodium glutamate can also cause problems for some people with asthma.

Nutrients that may help asthma and allergy include: bromelain, magnesium (aspartate, ascorbate, citrate, gluconate), B vitamins, antioxidants such as vitamin E and vitamin C, and selenium.

Magnesium has been used to treat acute asthma attacks. Intracellular magnesium levels are usually low among asthmatics. Intracellular magnesium was assessed in 22 asthma patients and compared with 38 controls. Magnesium levels were significantly lower in individuals with asthma versus controls. Magnesium helps relax smooth muscles in the bronchial tubes. A therapeutic daily dose of 400 to 800mg is recommended.

**Vitamin B-1** plays a key role in the body's metabolic cycle for generating energy through the breakdown of carbohydrates, and the formation of red blood cells. The suggested daily intake (RDA) for B-1 is 1.2 to 1.5 mg for males and 1 to 5 mg for adult women.

**Vitamin B-2** helps metabolism of fats, carbohydrates and proteins for energy production. Vitamin B-2 is also required for the production of antibodies, and boosting the immune system. Deficiency mainly affects skin and mucous membranes. The suggested daily intake of B-2 for adults is 1.7 mg.

**Vitamin B-5** supports adrenal function and the central nervous system, and boosts energy. Vitamins B-5 and C are the nutrients most needed by the adrenal glands. The recommended dosage of B-5 is 500 mg a day.

**Vitamin B-6** plays an essential role in the production of red blood cells and the cells of the immune system. A study on
76 children with asthma showed that supplementation with 100 mg B-6 twice daily resulted in fewer asthma attacks, less wheezing, cough, and less use of bronchodilators and steroid medications.2 Vitamin B-12 deficiency has been linked to some types of asthma. Vitamin B-12 is necessary for the proper digestion and absorption of foods, for protein synthesis, and for the normal metabolism of carbohydrates and fats. Vitamin B-12 protects against toxins and allergens. It has been shown to effectively block most adverse reactions to sulfites, which can produce headache, congestion, drippy nose, and bronchial spasms. In one study, 18 sulfite-sensitive subjects were given 2 mg of B-12 and then were given sulfites. All but one had no adverse reaction, indicating its benefits to food related allergies. For people with sulfite allergies, a 2- to 4-mg dose of vitamin B-12 once a day was found adequate to prevent most symptoms.3

Bee pollen, when taken in small amounts, acts in the same manner as conventional immunotherapy (allergy shots).

Beta glucan is a polysaccharide derived from the cell wall of common baker’s yeast, which has been shown to activate and modulate the immune system.

Coenzyme Q10 (CoQ10). In a recent study, CoQ10 concentrations in both plasma and whole blood of 56 men and women, ages 19 to 72, suffering from allergic asthma were found to be significantly lower compared to 25 healthy subjects ages 25 to 50. The study suggested that supplementation with CoQ10 might help patients with asthma.4

Quercetin, a bioflavonoid, is antihistaminic and anti-allergic. It was shown to inhibit mast cells from releasing inflammatory compounds.5 The recommended dose is 500 mg twice daily.

Essential fatty acids (EFA) are thought to inhibit production of inflammatory substances,6 and supplementation with fish oil or evening primrose oil or black currant may help people with asthma.

MSM (Methyl-sulfonyl-methane) is composed of sulfur, which helps alleviate allergies through detoxification and elimination of free radicals. In a recent study, 50 subjects with seasonal allergy were given 2,600 mg of MSM orally per day for 30 days. All respiratory symptoms were significantly improved by the third week. The study concluded that MSM might be efficacious in the reduction of symptoms associated with seasonal allergy.

Probiotics are thought to improve the balance of germs in the intestines, which may enhance the immune system. In a Finnish study published in the Lancet medical journal (2001), 159 pregnant women with a family history of allergies were randomly given either Lactobacillus GG or placebo twice a day for three weeks before they gave birth. After they delivered, breast-feeding mothers took the probiotic capsules for six months, while bottle-fed babies were fed the contents of the capsules mixed with water for the same amount of time. By age 2, 23 percent of those fed probiotics had developed eczema, compared with 46 percent of the infants given placebo treatment.8

BOTANICALS

Herbs which have been suggested to relieve distress due to cough, or infection, or inflammation, include standardized extracts of astragals, Sida cordifolia, licorice root, ginger root, eyebright, nettle root, mullein leaf, and cayenne.

Astragalus (Astragalus membranaceus) helps to boost energy and strengthen the lungs. This herb should not be used if a fever or any other sign of infection are present.

Belladonna (Atropa belladonna) contains the active ingredients atropine and scopoline, which are anticholinergic, meaning that they work by blocking certain nerve impulses involved in the parasympathetic nervous system, which regulates certain involuntary bodily functions or reflexes, including pupil dilation, secretion of glands, and the relaxation of the bronchioles in the lungs, and thereby alleviates the wheezing symptoms of an asthma attack.9 Caution should be exercised since ingestion of high concentration of atropine can cause severe illness and death.

Black cumin seed oil (Nigella sativa) is known to inhibit the contraction of tracheal smooth muscle that is stimulated by histamine and acetylcholine.10 It has always been a primary treatment for asthma and allergies in the Middle East. A Middle Eastern herbal blend comprising black cumin, chamomile (Matricaria recutita), cinnamon (Cinnamomum cassia), cloves (Syzygium aromaticum), rosemary (Rosemarinus officinalis), sage (Salvia officinalis), spearmint (Mentha spicata) and thyme (Thymus vulgaris) has been shown to relax tracheal muscles. Black cumin seed and oil bioactive constituents nigellone and thymoquinone strongly inhibit lipooxygenase, and prevent the release of histamine from mast cells.11

Boswellia, an Indian herb, was shown in a double-blind, placebo-controlled study to significantly reduce the symptoms of asthma. Seventy percent of 40 subjects who took 300 mg of a boswellia preparation three times a day for six weeks showed improvement of asthma symptoms, fewer attacks, and easier breathing.12

Butterbur (Petasites hybridus). Extracts have been used in bronchial asthma, and studies have shown that they inhibit the biosynthesis of the inflammatory leukotrienes.13

Elderberry (Sambucus nigra) has been popular since ancient Egypt. Both the flowers and berries ease the congestion and inflammation associated with hay fever.14

Eyebright (Euphrasia officinalis) has been used as a tonic and as a mild astringent since the Middle Ages. It can greatly relieve runny, sore, itchy eyes due to colds or allergies.15 Eyebright is usually used in combination with goldenseal and mullein for alleviating allergy symptoms.

Fenugreek/Thyme. A tea of fenugreek and thyme, twice daily, acts as a mild decongestant to relieve nasal and sinus congestion.

Ginger root (Zingiber officinale) has been used in the in Asian medicine to promote cleansing of the body through perspiration. Ginger is also a circulatory stimulant, relaxes peripheral blood vessels, promotes sweating, and eases cold symptoms.

Licorice root (Glycyrrhiza glabra) soothes the lungs and helps to strengthen adrenal function. This herb should not be given to people with high blood pressure. Licorice root helps to protect & heal distressed mucous membranes of the intestinal tract. Licorice and astragals are usually used combined.

Lobelia (Lobelia inflata), also known as Indian tobacco, is popular as an expectorant and antispasmodic. Its extract containing lobeline and related alkaloids has been used for acute bronchial asthma.15

Khella (Ammi visnaga) contains the active compound khellin, a prototype for...
the drug cromolyn, a bronchodilator and antispasmodic that makes it useful for asthma sufferers. Khella is a traditional Egyptian remedy for kidney stones. A daily dose of 250 to 300 mg of a standardized extract for 12 percent khellin is recommended. Khella works better with hawthorn extracts, which help dilate the bronchial, urinary, and blood vessels without affecting blood pressure.

Ma huang (Ephedra sinica) is a natural decongestant that contains pseudoephedrine (the active ingredient in Sudafed). This herb can stimulate the nervous system, causing an increased heart rate. Individuals with high blood pressure or arrhythmias (irregular heartbeat) should refrain from taking ephedra.

Minor bupleurum helps to strengthen the immune system. This herb should not be used if a fever or any other sign of acute infection are present.

Mullein leaf (Verbascum thapsus) is an old-time remedy for bronchitis and dry, unproductive coughs. It is a good expectorant, and in the process of clearing out the congestion, it also soothes irritation in the throat and bronchial passages.

Nettle root (Urtica dioica) helps reduce the inflammation in the sinuses and alleviate allergy symptoms. Nettle root may also help stabilize mast cells, support the adrenals, and dry out the sinuses. In a randomized, double-blind study, freeze-dried Urtica dioica (stinging nettles) was found to effectively relieve symptoms associated with allergic rhinitis.

Sida cordifolia has been used for over 2,000 years to treat bronchial asthma cold & flu, chills, lack of perspiration, headache, nasal congestion, aching joints and bones, cough, wheezing, and edema. Sida cordifolia is considered to have diaphoretic, diuretic, central nervous system stimulating and anti-asthmatic activity. The stem of this plant contains a number of active compounds, including small amounts of an essential oil, and most important, 1-2 percent alkaloids composed mainly of ephedrine and pseudoephedrine, with ephedrine ranging from 30-90 percent, depending on the source. The effects of ephedra are generally attributed to the alkaloid “ephedrine” which produces central nervous system (CNS) stimulation, peripheral vasoconstriction, elevation of blood pressure, bronchodilation, and cardiac stimulation.

Saiboku-To, a mixture of extracts from 10 medicinal herbs, including ginger, Korean ginseng (Panax ginseng), magnolia (Magnolia obovata), baikal skullcap (Scutellaria baicalensis) and licorice, has been used for the treatment of bronchial asthma in Japan. It has also been shown to selectively inhibit 5-lipoxygenase activity.

Tylophora asthmatica. The leaves of this Indian plant are used in Ayurvedic medicine for the treatment of asthma, bronchitis, and arthritis. It can have an irritant effect on the gastrointestinal mucosa, and in large doses will act as an emetic. In smaller doses, however, it acts as an expectorant and anti-inflammatory, and may provide benefit in asthma cases. Ingestion of tylophora leaf in asthmatic patients resulted in decreased nocturnal symptoms, as well as significant improvements in lung function indices compared to placebo in a double-blind, crossover study. These improvements continued for weeks beyond the short-term trial period.

A number of companies now offer homeopathic remedies for allergies and asthma. P & S Laboratories in Los Angeles sells Hyland’s Hayfever, which combines echinacea, and sabadilla. Long Island City, New York-based Bioforce USA markets and distributes Allergy Relief, containing cardboard, shown in clinical trials to have an effect similar to cortisone, and is effective in alleviating allergic reactions. Other remedies include Ammonium muriaticum, Arsenicum album, euphrasia, Hydrastis (goldenseal), Natrum muriaticum, and sabadilla.

References
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