



Spring Allergy Season is Here

by Chaitali Savjani, MS, Director of Nutrition; InVite Health Woodbridge
Edited by Jerry Hickey, R.Ph., Scientific Director / InVite Health

Runny nose, red-itchy eyes, sneezing, coughing, headache or worse - for a lot of people "Allergy Season" has returned. The incidence of allergies is going up in the U.S. Statistics show that about 75 million Americans, or 1 out of 3 people, suffer from some type of allergy. Moreover, drugs for allergy relief are among the best-sellers in the pharmaceutical industry. Unfortunately, these drugs are related to numerous side effects including memory disturbances, periodontal disease (due to a dry mouth), weight gain, and interference with kidney function.

What Are Allergies?

An allergy occurs when a person is sensitized to a substance such as a food, medication, pollen, or animal saliva. The next time they are exposed to the substance they have an allergic reaction. The person's immune system tends to consider this something that can often be totally harmless as a threat and reacts - producing antibodies which would normally help eliminate a threatening substance from the body. During this process, we produce a cross section of inflammation-associated chemicals like histamine, leukotrienes, interleukins and tumor necrosis factor. It's the release of these chemicals which produces the various symptoms.

The immune cells involved with allergies are largely found in the mucous membranes causing the typical allergy symptoms including itchy eyes, sneezing, runny nose, coughing, sometimes breathing problems, and intestinal upset.

The most common allergens include pollens from trees, grasses, and weeds, also molds, house dust mites, animal dander or saliva (cat, dog, horse, rabbit), industrial chemicals, some foods, some medications, and insect venom.

Airborne allergies:

By far, airborne allergies are the most common. Hayfever is an allergic reaction to an airborne allergen, usually pollen. According to conservative estimates nearly 15 million Americans have hayfever.

Pollen seasons in the Northeast (In warmer areas they can start earlier and last longer):

- Tree pollen - March through June
- Grass pollen - May through July
- Weed pollen - July through October, even November if it is a particularly warm fall.

Some useful pollen allergy tips:

- Individuals with an allergy to Birch tree pollen may also react to apple skins - this is called cross reactivity, if you have an allergy to birch pollen you may want to avoid apples during tree pollen season.
- Individuals with an allergy to grass pollen may also react to honeydew and cantaloupe melon.
- Tree, grass, and weed pollen are highest between the hours of 5:00 a.m. and 10:00 a.m. If it is your allergy season you may want to plan your outside activities around these hours.



Food allergies:

Although far less common than airborne allergies, food allergies can seriously impact your health. Food allergies are thought to be more common in children than adults according to researchers who have examined the prevalence, affecting about 1.5% of adults and about 6% of children under the age of 3. As children grow older, the symptoms tend to decrease in most cases, in fact, some experts feel that many children will outgrow their food allergies, although this is unlikely in the case of nuts or fish. Common food allergens include milk, eggs, peanuts, tree nuts, wheat, shellfish, legumes, and corn.

Food allergy versus intolerance:

Food intolerance is different from an allergy. In an intolerance a person's system is not able to digest specific ingredients in a food family. You can have intolerance to lactose, the sugar in milk, because you cannot digest it resulting in the typical lactose intolerance symptoms, whereas you can have an allergy to the protein in milk. Symptoms of a food intolerance include nausea, vomiting, diarrhea and sometimes severe cramping.

Anaphylaxis:

Some allergic reactions can take a serious, sometimes even a fatal form known as "anaphylaxis." In anaphylactic reactions blood pressure can dramatically drop and breathing can become impossible; if not treated these reactions can become deadly. Anaphylactic reactions are sometimes seen with peanut allergy (rarely with other foods), insect bites, the contrast media used in diagnostic procedures, allergy injections, and some drugs (classically penicillin).

Things You Can Do:

Following are some household measures you can take to try and prevent allergies:

- Make sure ventilating areas including windows are kept shut whenever possible during your pollen season and that you change the clothing you wore outdoors once you are back in the house.
- In case of allergies to dust mites, use the special seal covers for bed accessories like non-reactive pillows and mattress covers.

- Keep the areas where you spend most of your time as free from dust as possible. If needed get rid of dust savers such as rugs, carpets, heavy drapes, and stuffed animals where there is a high probability of accumulation.
- If you have pets, make it a habit to keep them clean and away from your bedroom and den.
- Drinking adequate amount of fluids is also very important especially for food allergies; this helps your body remove these triggers.
- Children with food allergies should be warned not to share food items at school or accept foods at friend's homes (unfortunately allergen labeling needs to be improved on food products so totally shielding them is problematic).
- If you or a person in the family has a severe allergy, make sure people around you are aware of it and store fresh supplies of emergency, life saving medication (such as auto-injectors of epinephrine) and know where it is and how to use it.

The Natural Way:

Stinging Nettle:

Stinging nettle leaf is complex and supplies many factors including scopoletin, and various flavonoids. It has been widely shown to help relieve allergy symptoms, especially with hay fever. The mode of action seems to be obstructing the production of histamine which is the major component with any allergic symptom. Scopoletin is one of the natural anti-inflammatory agents found in Stinging Nettle.

Quercetin:

Quercetin is a very beneficial plant constituent. It is the mane flavanol-polyphenol in our diet. Quercetin inhibits the formation of allergy promoting factors including leukotrienes, and the lipoxygenase and cyclooxygenase enzymes thereby greatly attenuating the allergic response and modifying inflammation. It is very useful in relieving allergic symptoms. Moreover, it has also been shown to decrease histamine release in the body along with helping conditions such as asthma, prostatitis, and inflammation of the eye lens seen in diabetes. Quercetin is useful for improving lung function in most lung conditions.

Vitamin C:

Along with having antihistaminic properties, this vitamin found in citrus fruits also increases the activity of many immune managing cells in the body. This includes the phagocytic T cells which literally gobble up the invader immune cells leading to improved control of improper reactivity in the body. Vitamin C is widely recommended as an immune supporter and taking it together with Quercetin truly helps inhibit many allergies to pollens and pets and it also helps improve asthma.

Pantothenic Acid:

In patients with allergic rhinitis, Pantothenic acid helps with nasal congestion and mucous secretion. In a study quoted In the Townsend Letter for Doctors, giving Pantothenic Acid to allergy patients offered very quick relief from allergy symptoms.

N-acetylcysteine (NAC):

NAC is a precursor to the detoxifying nutrient glutathione. Thus NAC supplements have a strong effect in raising glutathione levels which play a key role in reducing the factors involved in the production of antibodies. These factors are involved in many allergic reactions including hay fever, asthma and also to a degree, anaphylactic shock. The lining of the lung is rich in glutathione and by taking NAC and thereby improving Glutathione levels you help alleviate inflammation caused in the lungs by particulate matter, pollution, and allergens. NAC also soaks up Lipoxygenase, the irritant chemicals released in an allergic reaction, so while Stinging Nettle, Quercetin, Pantothenic acid and Vitamin C work towards inhibiting the release of these factors. NAC is there to soak up any that may have gotten by. Moreover, research has shown that NAC being a disulphide-antioxidant-reducing agent, decreases the viscosity (thickness) of mucus and aids in its expulsion, supporting patients with allergies, asthma, COPD and bronchitis.

Fish Oil:

Fish oil supplements provide the omega-3 fatty acids (EPA and DHA) which are natural anti-inflammatory agents for individuals with allergies, sinusitis, and lung conditions. Due to these strong anti-inflammatory properties fish oils have demonstrated benefit for controlling allergic symptoms in clinical studies.

Research demonstrates a very beneficial role for omega 3's in lessening inflammation of the lungs.

Perna Canaliculus:

Perna Canaliculus is the name for the New Zealand green-lipped muscle. Perna Canaliculus is rich in omega-3 fatty acids such as EPA which appear to be more active in inhibiting inflammation than those in fatty fish. Studies show that Perna is very beneficial for arthritis, rheumatoid arthritis and other autoimmune diseases, inflammation in the intestines, and also for improving lung function. Perna inhibits the pro-inflammatory prostaglandins and other immune system chemicals involved with allergies, asthma, and arthritis.

Perilla Seed Frutescens:

Perilla is used as a culinary herb and medicinal herb in many parts of Asia. Perilla seed frutescens supplies the ingredients luteolin and rosmarinic acid - two substances that have a powerful impact on decreasing allergy symptoms in laboratory studies and in people. Interestingly, in Japan Perilla leaves are added to seafood as a garnish and to inhibit shellfish allergies.

Vitamin E as Gamma-Tocopherol:

Gamma-Tocopherol is one of the 8 isomeric forms of Vitamin E, a supplement widely used for various health conditions. Research has demonstrated that this version of Vitamin E may help in preventing allergic symptoms especially with asthma. This is due to the role Vitamin E plays in blocking activation of the immune cells called neutrophils (the producers of leukotrienes - major immune factors contributing to asthma and allergy symptoms such as chest tightening and wheezing).

Magnesium:

Magnesium is one of the most frequently used minerals in the body vital for more than 350 enzymatic processes. Magnesium supplements are beneficial for many allergic symptoms particularly those resulting in inflammation in the body. Studies have shown magnesium deficiency to be directly related to many allergic reactions in people. Asthma patients taking magnesium supplements have a greater level of reducing their symptoms.

References:

- Calder PC. Polyunsaturated fatty acids and inflammation. *Biochem Soc Trans* . 2005 Apr; (pt 2): 423-7.
- Dunstan JA, Mori TA, Barden A, et al. Fish oil supplementation in pregnancy modifies neonatal allergen-specific immune responses and clinical outcomes in infants at high risk of atopy: a randomized, controlled trial. *J Allergy Clin Immunol*. 2003;112:1178-1184.
- Fujimura Y, Tachibana H, et al. A difference between epigallocatechin-3-gallate and epicatechin-3-gallate on anti-allergic effect is dependent on their distinct distribution to lipid rafts. *Biofactors* . 2004;21(1-4):133-5.
- Gazdik F, Gvozdjakova A, et al. Decreased levels of coenzyme Q(10) in patients with bronchial asthma. *Allergy* . 2002 Sep;57(9):811-4.
- Graham HN. Green tea composition, consumption, and polyphenol chemistry. *Prev Med* 1992;21:334-350.
- Hamilton-Miller JM. Antimicrobial properties of tea (*Camellia sinensis* L.). *Antimicro Ag Chemo* 1995;39(11):2375-2377.
- Kono S, Shinchi K, Ikeda N, et al. Green tea consumption and serum lipid profiles: A cross-sectional study in Northern Kyushu, Japan. *Prev Med* 1992;21:526-531.
- Mickleborough TD, Murray RL, Ionescu AA, Lindley MR. Fish oil supplementation reduces severity of exercise-induced bronchoconstriction in elite athletes. *Am J Respir Crit Care Med*. 2003;168:1181-1189.
- Millar, A.B. et al. Effect of oral N-Acetyl Cysteine on mucus clearing. 1985; 79: 262-266. [PubMed]
- Richardson, P. Oral N-acetyl cysteine: how does it act? *Eur. J. Respir. Dis*. 1987; 70:71-72.
- Sagesaka-Mitane Y, Milwa M, Okada S. Platelet aggregation inhibitors in hot water extract of green tea. *Chem Pharm Bull* 1990;38(3):790-793.
- Stensvold I, Tverdal A, Solvoll K, et al. Tea consumption. Relationship to cholesterol, blood pressure, and coronary and total mortality. *Prev Med* 1992;21:546-553.
- Stoner GD, Mukhtar H. Polyphenols as cancer chemopreventive agents. *J Cell Biochem* 1995;22:169-180.
- Swain R, Kaplan-Machlis B. Magnesium for the next millennium. *South Med J* . 1999;92:1040-7
- Yamaguchi Y, Hayashi M, Yamazoe H, et al. Preventive effects of green tea extract on lipid abnormalities in serum, liver and aorta of mice fed an atherogenic diet. *Nip Yak Zas* 1991;97(6):329-337.
- Yim, C.Y. et al. Use of N-acetyl cysteine to increase intracellular glutathione during the induction of antitumor responses by IL-2. *J. Immunol*.1994; 152: 5796-5805. [PubMed]
- You SQ. Study on feasibility of Chinese green tea polyphenols (CTP) for preventing dental caries. *Chin J Stom* 1993;28(4):197-199
- Ziment, I. Acetyl cysteine: a drug that is much more than a mucokinetic. *Biomed Pharmacother*. 1988; 42(8): 513-519. [PubMed]
- <http://www.wholehealthmd.com>