

DO YOU SUFFER FROM SEASONAL ALLERGIES?

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Abstract

Seasonal allergies are those for which the symptoms come and go as the seasons change. The major cause for these allergies is pollen of grasses, weeds, and trees. In addition to the pollens, special chemicals in both the pollen and the parent plant play a role. Terpenes, phenolics, and other chemicals are responsible for some of the symptoms of seasonal allergies. Some of the symptoms of seasonal allergies include sneezing; congestion; runny nose; itchiness of the nose, ears, and mouth; scratchy throat; and watery/itchy eyes. Perennial allergies are present year round and include allergy to mold, animal dander, dust and dust mites, and other substances. NAET® is a valuable and effective tool for treating and eliminating both seasonal and perennial allergy.

Introduction

Seasonal allergies are caused by airborne substances that appear during certain times of the year. The symptoms of these allergies occur only during the spring, summer, or fall, depending on which plants are pollinating and what the allergies of a person are. These allergies are frequently referred to as “hay fever,” and affect about 40 million people in the United States, including both adults and children (Mayo Clinic Staff, 2006). Hay fever is the most common allergy in the United States (Haines, 2006). Some people may be only mildly affected, while others may really suffer from their symptoms. Millions of school and work days are lost each year

because of symptoms from hay fever. Hay fever is a misnomer because symptoms do not occur only in the summer when hay is being harvested, and very seldom produces a fever (Shiel, 2006).

The most common symptoms of hay fever include coughing, runny nose, watering eyes, sneezing, and itching. Some hay fever patients are quite sensitive to changes in temperature and weather and frequently feel chills (Nambudripad, 2002, 2003).

Symptoms affecting the membrane lining of the nose, cause allergic rhinitis. They may also affect the membrane lining the eyelids and the membrane covering the conjunctiva, the whites of the eyes. When the eyes are affected, the condition is called allergic conjunctivitis

(Friedman, 2005).

Hay fever is commonly thought of as a reaction to the pollen of grasses. However, in many parts of the United States, hay fever may be caused by the pollen that is released from trees from late winter into the spring. Pollen from grasses may trigger symptoms in the spring and summer. Weeds are the culprit in summer and fall (Krohn, Taylor, and Larson, 2000). Hay fever, or seasonal allergic rhinitis, can also be a response to fungus that release spores from late March until November (Haines, 2006).

Allergic rhinitis may also be perennial, or year round. This rhinitis is triggered by allergens that are present year round and may include dust, dust mites, cockroaches, mold, animal dander, and feathers (Haines, 2006; Nambudripad, 2002, 2003). Many patients have both seasonal and perennial allergies (Nambudripad, 2002, 2003).

Pollen

Pollen is produced by all seed-bearing plants as part of their reproductive cycle. This pollen is analogous to human sperm and is supposed to fertilize parts of other plants. Many pollen grains do not reach another plant but enter human noses and throats. Here, they can trigger an allergic reaction in a sensitive person (U.S. Department of Health and Human Services 2007). However, not all pollen produced causes allergic symptoms; only a small percentage of pollen produced is allergenic. For the pollen of any plant to be important in seasonal allergies, it must meet the criteria set forth in Thommen's Postulates, proposed in 1931 by A. A. Thommen (Miles Laboratories, 1983).

The following postulates are useful in determining whether or not a given pollen is allergenic and contributes significantly to allergies (Miles Laboratories, 1983).

1. The pollen must be wind borne (anemophilus). This eliminates the pollen from
showy flowering plants with sticky pollen, which is carried by insects.
2. The pollen must be produced in large quantities, which is a characteristic of wind
pollinated plants.
3. The pollen must be sufficiently buoyant to be carried considerable distances. The pollen grains

that are in the 15 to 58 micron range float well.

4. The plant producing the pollen must be widely and abundantly distributed.
5. The pollen must contain specific excitants or allergens for hypersensitivity.

Thommen's postulates are quite accurate and are still in use today, with some modification. Because wind pollination is inefficient, large quantities of pollen must be produced by the plants, and sometimes this pollen is carried by the wind for 30 to 40 miles. Plants that are wind pollinated have nonfragrant, inconspicuous flowers that lack odor or nectar. Their pollen grains are "dry," and contain no fats, pigments, or waxes. Plants pollinated by insects have colorful, showy flowers with pollen that sticks to the bodies of insects. It is also heavy pollen that is too large to remain airborne and cannot blow into human noses. (Krohn, Taylor, and Larson, 2000; Wikipedia, 2007). There are exceptions and variations of this, one example being the various "pine trees." They have inconspicuous flowers and produce large amounts of pollen, but it is heavy and falls to the ground rather than being windborne. Because of this, it does not reach human noses, and, in addition, its composition is less allergenic than other types of pollen (U.S. Department of Health and Human Services, 2007).

A predisposition to allergy is attributed to heredity and environmental exposures. The development of seasonal allergy and allergic rhinitis depends on individual sensitivity and geographic differences in local plant populations. It also depends on the amount of pollen in the air, which is referred to as the pollen count. Increased amounts of pollen occur in the air on hot, dry, windy days. On cool, damp, rainy days most pollen is washed to the ground (Wikipedia, 2007). Heavy rains help destroy pollen and prevent distribution. Most pollen is released between 6:00 and 9:00 am and the plants producing windborne pollen can fill the air with tons of pollen, composed mainly of protein. Some pollen may contain as many as 15 or more allergenic compounds, while others contain only one or two. Eighty-five of the pollen inhaled ends up in the stomach (Krohn, Taylor, and Larson, 2000).

Pollination dates depend on weather conditions, and vary only slightly from year to year, according to the timing of the first and last freeze. These dates usually fall within a given time span and make it possible to predict, with limits, when specific plants are pollinating. Rainfall

and temperature affect the amount of pollen produced. Spring flowering plants bloom and pollinate from south to north, and fall-flowering plants bloom and pollinate from north to south (Krohn, Taylor, and Larson, 2000). Pollen concentration in a given area can be changed by land use, tree plantings and cutting, population growth, industrialization, and pollution (U.S. Department of Health and Human Services, 2007).

Weeds are the most prolific producers of allergenic pollen in North America. Ragweed is the major culprit, followed by sagebrush, redroot pigweed, lamb's quarters, Russian thistle (tumbleweed), and English plantain. Of the 1000 species of grasses in North America, only a few have highly allergenic pollen. Bermuda grass, Johnson grass, Kentucky bluegrass, orchard grass, redtop grass, sweet vernal grass, and timothy grass are the worst offending grasses. Ash, box elder, cottonwood, elm, hickory, mountain cedar (a juniper species), and pecan are among the trees producing allergenic pollen (U.S. Department of Health and Human Services, 2007).

Patients should suspect a pollen allergy if they experience symptoms or the symptoms are worse in the early spring when trees pollinate, in late spring and early summer when grasses and weeds pollinate, and in the autumn when weeds are a continuing factor. Symptoms will be worse when outdoors from 8 am until noon; worse on clear, windy days and better on rainy days; better indoors, with the house closed and air-conditioning and filtration units on; worse when going from an air conditioned room to the open air during a period of high pollen count; worse at specific pollen peaks; and improve after the first frost (Krohn, Taylor, and Larson, 2000).

Terpenes, Phenolics, and Other Compounds

Many patients complain bitterly of their seasonal allergy symptoms long before the pollen actually appears. These symptoms are triggered by chemicals that occur in all parts of the plant, as well as the pollen. Terpenes, phenolics, and other compounds are responsible for these symptoms. These compounds occur in animals also, but are more of a problem in plants. These chemicals are present all year long, as they give the plant its smell, taste, and sometimes its color. However, the levels rise a month or more before the pollen appears and are responsible for triggering these early symptoms (Krohn, Taylor, and Larson, 2000).

Terpenes are unsaturated hydrocarbons and contain an isoprene ring. They occur in plants and pollen in varying amounts and are classified according to their structure and complexity. The blue haze seen over mountains is attributed to terpenes being baked out of the trees by the sun (Dickey, 1976). Camphor, limonene, menthol, and pinene are common terpenes, as is turpentine. Thymol is a terpenoid that may play a role in seasonal allergies. Patients who are terpene sensitive will also be chemically sensitive (Krohn, Taylor, and Larson, 2000; Krohn and Taylor, 2001; Rea, 1995).

Phenolics are compounds that contain a benzene ring and one (or more) hydroxide group along with other chemical groups. Although they can trigger allergic responses in people, both terpenes and phenolics have an antioxidant function that helps protect the plant from insect and animal damage, chemical injury, and sometimes help in repairing these injuries (Gardner, 1994; Harborne, 1993; Robinson, 1983). Apigenin, apiole, caffeic acid, chlorogenic acid, cinnamic acid, cinnamaldehyde, coumarin, ferulic acid, gallic acid, genistein, hesperetin, hesperidin, isorhamnetin, kaempferol, luteolin, malvin, naringenin, naringin, menadione, phloridzin, quercetin, rutin, umbelliferone are among the phenolics that participate in seasonal allergies. Many of these compounds also occur in foods and play an even larger role in food allergy. Patients who are sensitive to phenolics will be both food and pollen allergic (Krohn and Taylor, 2001).

Coniferyl alcohol, which is an alcohol as the name implies, also plays a role in seasonal allergies. Myristic acid and palmitic acid are both fatty acids that occur in pollen. Myristic acid is particularly helpful with ragweed allergy. Indole, an amine, is in the pollen of clover, cottonwood, elm, redtop grass, black locust, and pine. Valeric acid, a carboxylic acid, occurs in pollen. Thujone, which is a dicyclic ketone, plays a role in allergy to juniper and sage (Krohn and Taylor, 2001).

Immunoglobulins

Most seasonal allergies are Immunoglobulin E or IgE mediated, and many people with severe seasonal allergies will have high blood IgE antibody levels. Only small amounts of IgE are produced in nonallergic people (U.S. Department of Health and Human Services, 2007). These IgE molecules attach to tissues, including the lung and nasal passage tissues. When the pollen attaches to

two adjacent IgE molecules on a mast cell or a basophil, chemicals are released and cause the symptoms of an inhalant allergy. Released substances may include histamine, heparin, kinins, enzymes, and leukotrienes. Serotonin and acetylcholine are also released in small amounts (Krohn, Taylor, and Larson, 2000; Wikipedia, 2007).

Symptoms from IgE mediated seasonal allergy may include sneezing; hoarseness; increased mucus production; scratchy or itchy throat; runny and/or itchy nose; hay fever; itching mouth, including the roof of the mouth; and sinus symptoms of headache, pressure behind the eyeballs, pain in the frontal area, tenderness over the cheekbones, and aching teeth. Smell may be impaired and in a few cases loss of taste occurs. There may be coughing and wheezing, and allergic conjunctivitis may accompany the nasal symptoms (Krohn, Taylor, and Larson, 2000).

Allergic conjunctivitis is an inflammation of the whites of the eyes and the membrane that lines the eyelids. This causes itchy, red, watery eyes and red-rimmed eyelids. If the whole eye itches, pollen allergy is likely the cause. Itching of the inner canthus (inside corner) of the eye suggests food allergy even though it might be pollen season (Krohn, Taylor, and Larson, 2000).

Many affected patients have allergic shiners (dark circles under the eyes), and children, particularly, will have evidence of an "allergic salute." The allergic salute produces a horizontal crease across the nose from wiping a runny nose upwards with the palm of the hand. In some patients symptoms become worse with each succeeding pollen season (Krohn, Taylor, and Larson, 2000; Nambudripad, 2002, 2003; Wikipedia, 2007). Because of blocked nasal passages, children with seasonal allergies breathe through their mouths and sometimes have a nasal twang to their voices (Nambudripad, 2002, 2003).

A second group of patients may experience significant symptoms but have low IgE levels in their blood. Their reactions may be Immunoglobulin G or IgG mediated. Their allergic response to pollens can appear as multiple systemic symptoms, including eczema, cold and flu-like symptoms, insomnia, asthma, fatigue, depression, cramps and diarrhea, headaches, hives, swollen lymph glands, flushing, skipped heartbeats, panic attacks, and many others. Irregular menstrual periods, vaginal itch, toxemia of pregnancy, or uterine hemorrhaging during pollen season, particularly when

ragweed is pollinating, are also possibilities (Krohn, Taylor, and Larson, 2000).

The presence of seasonal allergy, regardless of how it is mediated, interferes with health and quality of life. The symptoms are unpleasant, annoying, and in severe cases seasonal allergies can be debilitating. Many people have difficulty concentrating, and social and physical activities can become adversely affected (U. S. Department of Health and Human Services, 2007; Shiel, 2006).

Managing Seasonal Allergies

Avoidance of allergenic pollen and the allergenic compounds in pollens and plants by moving to a place where the offending plants do not grow can afford temporary relief for the allergy patient. However, most people are allergic to more than one pollen, and exposure to new pollen will result in sensitization to that pollen in just a matter of time, usually two years. Vacationing during the height of pollen season in a location where exposure is minimal can be helpful (Krohn, Taylor, and Larson, 2000; U.S. Department of Health and Human Services, 2007).

Evading pollen by remaining indoors in the morning and evening, and wearing a mask outdoors are helpful for some people. Pollen can enter the house through open windows and doors, as well as on shoes, clothing, and pet fur. The use of air conditioners and air cleaners or filters, as well as keeping the windows and doors closed in the house and car, will reduce the amounts of pollen present. Avoiding yard work of any kind and not drying clothes outdoors will reduce exposure to pollen. Washing the hands and face removes pollen and keeps it from entering the nose. Washing out the nose with saline removes pollen from the nose. Keeping the hair covered outdoors keeps pollen from reaching the hair, and washing it after being outdoors removes pollen (Krohn, Taylor, 2000; Krohn, Taylor, and Larson, 2000; Wikipedia, 2007).

There are medications that can help seasonal allergies, but they are only palliative and do not eliminate the allergies. Antihistamines help relieve the symptoms, but short-acting preparations can cause drowsiness. Longer acting antihistamines cause less drowsiness. Nasal decongestants can be helpful but can cause side effects, including a rebound effect in which the initial shrinking of the nasal passages is followed by increased

swelling and congestion (Haines, 2006). Expectorants are available both as a prescription and nonprescription, but their effectiveness is doubtful. Cromolyn sodium prevents the mast cells from releasing histamine and is helpful for some people. Nasal steroids are frequently used for seasonal allergies. However, their prolonged use can result in serious side effects including perforation of the nasal septum, particularly if the person has a deviated septum. (U.S. Department of Health and Human Services, 2007; Wikipedia, 2007). Singulair, which is a leukotriene inhibitor, is frequently prescribed (PDR, 2007).

Eye drops containing cromolyn are used to prevent allergic conjunctivitis. Bathing the eyes with eyewashes, such as artificial tears, can reduce irritation. Sometimes antihistamine eye drops are used, but they can make the condition worse. Prescription eye drops containing a corticosteroid may be used for very severe symptoms of allergic conjunctivitis. During episodes of conjunctivitis, contact lenses should not be worn (Merck, 2007), and people who frequently have allergic conjunctivitis should not consider Lasik surgery.

Immunotherapy is one of the more common treatments for seasonal allergy, and is usually suggested if a person has symptoms more than 3 months out of the year. There are several different types of testing and immunotherapy, some more helpful than others. Some types afford immediate relief, and others require several years to become effective. While some types of immunotherapy can be very helpful, all types require repeated administration and those given by injection may have side effects and drawbacks for some people. Some people are able to desensitize with immunotherapy, while others do not (Krohn, Taylor, and Larson, 2000).

There are helpful herbal preparations such as Eyebright (*Euphrasia officinalis*), Nettle (*Urtica dioica*) and Bayberry (*Myrica ceriferra*) that can help reduce symptoms of congestion (Krohn and Taylor, 2002; Wikipedia, 2007). Homeopathic remedies, both classical and complex can also help with the symptoms of seasonal allergy. The classical remedies of Arsenicum album, Arsenicum iodatum, Euphrasia, Natrum muriaticum, Sabadilla, and Sinapis nigra are among those that help with seasonal allergy. Euphorbium compositum nasal spray affords relief of nasal symptoms, and BHI Allergy is one of the helpful complex remedies (Krohn and Taylor, 2002).

There are several nutrients that help alleviate

symptoms of seasonal allergy. Among them, Quercetin, taken between meals (1 hour before or 2 hours afterward) will have an anti-histamine effect. However, some people are sensitive to Quercetin and may need to be treated for it before it is used. Pantothenic acid and vitamin C are also very helpful. Vitamin C has an anti-histamine like effect and helps to control allergies and repair tissues. In large doses pantothenic acid has an anti-histamine effect (Krohn and Taylor, 2002).

Even diet can be a help to an extent with seasonal allergy. There are foods that are a problem only when eaten while a given plant is pollinating. These common concomitant pollen/food combinations include juniper and cedar/beef; ragweed/milk and egg; grasses/grains and legumes; and sage/potato and tomato. Avoiding these foods during the pollination of the indicated plant will help lower the severity of seasonal allergy (Krohn, Taylor, and Larson, 2000; Krohn and Taylor, 2002).

NAET® and Seasonal Allergies

NAET® treatment of pollen allergy and allergy to terpenes, phenolics, and other compounds in pollen and plants affords the most relief. It is not necessary to treat for allergy to every allergenic plant in that there is some cross reactivity. For example if plants are in the same family and have a common genus name, there will be 95 percent cross-reactivity between their pollen and treating for one will give protection for other members of the family. Even for plants in the same family but with a different genus name, there is 75 percent cross-reactivity. There are twelve tribes of grasses, and treating for one member of a tribe will help protect for other members of the tribe (Krohn, Taylor, and Larson, 2000).

NAET® treatment for seasonal allergies allows patients to be cleared of these allergies, eliminating totally their allergy and symptoms to the pollen. Seasonal allergies can be treated on an emergency basis, but are best done after treating the basics and phenolics. Treating foods and phenolics, terpenes, and other compounds that occur in foods can significantly reduce the allergic load caused by exposure to pollen containing these compounds. If foods have been treated first, food avoidance containing substances related to pollens is minimized. Also, treating spices will help with both food and pollen allergies as the terpenes and phenolics give spices their flavor. Pollen allergy is more difficult to treat and control if foods and chemicals are not under

control (Clinical observation).

Pollens are more easily treated out-of-season because of the 24 hour avoidance period. Pollens can be very difficult to avoid if there are any plants pollinating at the time pollens are treated. The patient will have to be treated at the office then self-treated at home by holding the appropriate vial and self-balancing the gate points every two hours during the time they are awake (Nambudripad, 2005). The patient should wear a mask and avoid going outdoors. Staying indoors where there is an air cleaner that removes pollen will increase chances of clearing the treatment.

It is important that a patient seek treatment for seasonal allergies as they tend to become worse with time and with each season. Severe attacks of hay fever or seasonal allergies increase the possibility of serious complications including nasal polyps. Nasal polyps are swellings or growths of the mucous membrane of the nose and tend to grow or shrink with the severity of the symptoms. In addition, new allergens develop in untreated patients, adding to the severity of their symptoms (Nambudripad, 2000, 2003).

NAET® treatment for seasonal allergies affords relief for the patient without their having to constantly employ immunotherapy or drug treatment. However, some drug or nutrient therapy may be required for symptom control until the NAET® treatments have been completed.

Conclusion

Seasonal allergies affect many people and can cause symptoms that range from annoying to severe and debilitating. Seasonal allergy may be either IgE or IgG mediated. Although there are treatments that are helpful, and others that are palliative, NAET® provides permanent relief from pollen allergy as well as allergies to terpenes, phenolics, and other compounds contributing to seasonal allergy. Perennial allergy can also be effectively treated with NAET®.

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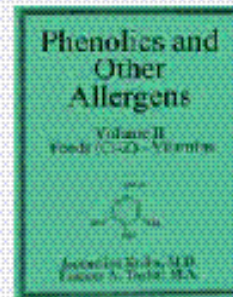
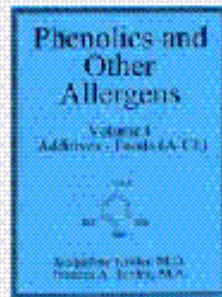
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