

It's the Sneezing, Sniffling, Red Eye Time of Year—It's Spring

If you belong to a family one or more of whose members suffer from allergies and/or asthma, you are well aware that the warm days and flowers of spring also have side effects. Hay fever, 'seasonal allergic rhinitis' the term used for allergies caused by airborne pollens and molds, is the most common form of allergy. The numbers of diagnosed cases of allergies and asthma are increasing. These illnesses have detrimental effects in terms of lost work days or missed school days for the sufferer.

While there are medications that are highly effective if taken properly, the American Academy of Allergy, Asthma and Immunology states that the key to allaying allergy symptoms is the avoidance of substances that cause allergic reactions, including plant pollen. Avoiding plant pollen sounds like an instruction for spending the spring inside the home, but knowing something about plants and pollen helps to lessen the restriction of spring.

Pollen, the allergen that triggers many allergy and asthma incidents, is produced only by the "male" parts of the plant. Plants vary widely in their capacity to produce and disperse pollen and so to trigger allergies and asthma. There are three types of plants in terms of pollen production: "perfectly -flowered" plants, "monoecious" ('one house') plants and "dioecious" ('two houses') plants.

Many species of plants such as viburnum shrubs and roses have perfect flowers. Each individual perfect flower has both stamens and pistil (both sexes). When male (staminate) flowers and female (pistillate) flowers are borne on the same individual plant, the plant is called monoecious. Pine trees and cucumber plants are examples. In perfect flowered and monoecious plants, pollen is carried to the stigma of the same flower or of the female flower of the same plant by insects, birds or wind.

In dioecious plants, male flowers appear on one plant and female flowers on another. The most common examples of this type in Tidewater Virginia are the holly (*Ilex*) and yew (*Taxus*) plants. For those plants whose flowers don't set fruits, the reason may be that the plant is dioecious. Although both sexes need not necessarily be grown side by side, the closer the male and female plants stand to one another, the better the fruiting may be. These plants are most significant in pollen allergies, ***because they create far more pollen than do the other two types of plants and because the pollen is almost always windborne.*** The great majority of windborne pollen grains of all species are deposited quite close to their source; two-thirds of all pollen is distributed within 60 feet and 90% of the pollen falls within 90 feet of its source. For grasses or other herbaceous plants, dispersal is still more concentrated, with most pollen falling a few feet from the host plant.

There are other factors that contribute to the pollen in the air. Some plants may produce pollen for only 2 to 3 days a year while others bloom intermittently throughout the year and may release pollen for six to seven months. The distance the pollen travels depends upon the weight of the pollen. Heavier pollens land close to the plant while pollens that are light in weight float easily in the wind and are more likely to cause allergies. The moisture level of the pollen also affects the distance the pollen travels. Sticky moist pollen clings readily to nearby surfaces while dry pollen floats and sticks to available moist surfaces. The atmospheric conditions such as humidity and wind speed also affect the dispersion of the pollen.

In the recent past, the types of plants selected by homeowners, landscapers and government agencies have been the male dioecious plants, because they are “clean” plants, i.e., they do not generate seeds or fruit to litter the sidewalks and streets and attract rodents or undesirable wildlife. However, these plants produce pollen more heavily and so “litter” the air and correspondingly increase the incidence of allergies and asthma.

For the family with allergies, knowledge of the plant characteristics and the selection of appropriate plants around the home will help to make the spring pollen season more bearable. Selecting female dioecious plants when a particular shrub or tree is desired, or selecting perfect-flower plants will help reduce the amount of pollen in the air. One cannot and would not want to eliminate all sources of pollen; reduction in the concentration of pollen producing plants around the home will help to make life more bearable for the pollen sensitive person.

Numerous internet sites offer information on allergenic pollen in the landscape. As with all information obtained on the internet, be sure that statements are research based and not just the opinion of “some expert from out of town”. The Chesapeake Office of Virginia Cooperative Extension has publication 430-020 “Trees That Cause Allergic Reactions” which we will be glad to send to you. For this and other information please contact the Chesapeake Master Gardeners at 382 -6348 or at gardener@agri.chesapeake.city.va.us. This local information will be a good starting point in your search for plants that help with the allergy problem.