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Founded 1925

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SPECIALIZING IN THE EVALUATION
AND MANAGEMENT OF
ALLERGIES AND ASTHMA
IN ADULTS AND CHILDREN

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RESPIRATORY SYMPTOMS FROM INHALED SUBSTANCES

Susceptible persons may have nose and/or chest symptoms caused by many inhaled substances. These can be divided into two major categories: allergens and irritants.

ALLERGENS — An allergen is a substance which is capable of initiating an allergic reaction. The most important inhaled allergens are tiny invisible pollen grains, mold spores, house dust and animal danders.

Allergy-causing **pollens** come from plant flowers which at certain times of the year release large quantities of light buoyant pollen which can be carried for miles by the wind. These flowers are inconspicuous and often don't really look like blossoms. They include trees which pollinate in spring, grasses in summer, and weeds in the fall. (See OAAC educational material handout Pollen Seasons) Ornamental flowers are generally not very important in allergy. They have large sticky pollen grains that are carried to other flowers by insects. They are not sufficiently abundant in the air to cause symptoms unless an allergic person is very close to them. However, some ornamental flowers are related to weeds. This is why some ragweed-allergic patients have symptoms when they are close to chrysanthemums, zinnias, asters, daisies, etc.

There are many types of **molds** in our environment. They have varying preferences for the types of places and conditions under which they grow into colonies. Some prefer to colonize indoors, some outdoors. The spores released by colonies are carried through the air to new places suitable for new colony formation. These spores are smaller than pollen grains but like pollens can cause allergic symptoms when they are inhaled.

The important constituents of **house dust** are the products of microscopic organisms found in most homes. House dust mites and molds thrive in warm moist conditions.

Like humans, fur-bearing animals continually grow new layers of skin. The indoor **pet's "dander"** (tiny flakes of the outer layer of skin) falls off, disintegrates, and causes symptoms when inhaled. During early stages of allergy to a pet, patients are often unaware that the animal is contributing to their symptoms.

If a person is allergic to a pet, he/she should strictly avoid the animal. Outdoor pets are not of major concern. Pets that are confined to a limited part of the house (such as a tiled or wood-floored utility room and kitchen) are better then pets that contaminate the entire house. At the very least, pets should be kept out of the allergic person's bedroom at all times. (See OAAC educational material handout Environmental Controls for Indoor Allergens)

IRRITANTS — An irritant is a substance which may trigger certain symptoms strictly because of its irritating effects. The symptoms mimic allergy, but in fact they are not really the result of an allergic reaction. Some individuals are extremely sensitive to these inhales substances (which incidentally bother the average person very little). The basis for this extreme membrane sensitivity is not well understood, but it is not allergy.

The most common offenders are **smoke, cold air, wind, temperature changes, and weather fronts**. Other provoking factors which bother some people in varying degrees include sharp pungent odors (paint, turpentine, aerosol sprays, perfumes, cleansers, cosmetics, chemical odors, exhaust smoke, insecticides, detergents and new fabric odors).

Respiratory infection is included in this category as is external wheezing in asthmatics.

Some substances are not only allergens or irritants but can be both. Examples include house dust, feed and grain dusts, and live Christmas trees. In any given patient allergens, irritants or a combination of both may be of major importance in the production of either asthma or nasal symptoms.

Occasionally patients who are sensitive to both irritants and allergens will have useful reduction in nasal and chest symptoms caused by irritants when their allergies are successfully treated. More commonly their susceptibility to irritants remains a separate problem and the treatment is by appropriate medication and avoidance. Irritant induced symptoms are more difficult to treat than those from allergens.