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Ear, Nose, and Throat
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Drugs that are Incompatible with Allergy Testing and Treatment

We cannot test anyone who is taking BETA BLOCKERS, topical or by mouth. Beta blockers are commonly used for blood pressure and heart conditions. They can also be used for migraine headaches or in eye drops for glaucoma. Beta blockers can contribute to the exacerbation of allergic symptoms, impair the capacity of the body to mount responses that are required to react to an adverse stimulus, and increase the risk and severity of anaphylaxis in atopic as well as non-atopic individuals. If you are taking any beta blockers you need to inform us as soon as possible.

Trade Name

Beta-pace	Sotalol
Blocarden	Timolol Maleate
Breviblock Injection	Esmolol HCI
Cartrol	Carteolol
Corgard	Nadolol
Inderal	Propranolol
Ipran	Propranolol
Kerlone	Betaxolol HCI
Levatol	Penbutolol Sulfate
Lopressor	Metaprolol Tartrate
Normodyne or Trandate	Labetalol HCI
Spectral	Acebutolol
Tenormin	Atenolol
Toprol XL	Metoprolol Succinate
Trandate or Normondyne	Labetalol HCI
Zebeta	Bisoprolol Fumarate

Beta Blockers Combined with Diuretics

Corzide	Nadolol and Benflumethiazide
Inderide	Propranolol and Hydrochlorthiazide
Normozide	Labetalol HCI and Hydrochlorthiazide
Tenoretic	Anetolol and Chlorthalidone
Timolide	Timolol Maleate and Hydrochlorthiazide
Trandate and HCT	Labealol HCI and Hydrochlorthiazide
Ziac	Bisoprolol Fumate and Hyrochlorothiazide

Topical Beta Blockers

Betagan Liquifilm	Levobumolol
Betoptic	Betaxolol
Ocupress	Careolol
Timoptic	Timolol
Visken	Pindolol

Chemicals that are Beta Blockers and may be components of other drugs

Acebutolol	Penbutolol
Atenolol	Pindolol
Esmolol	Propranolol
Metprolo	Timolol
Naolol	Carteolol HCI

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The Allergic Person

Allergies are due to sensitivity that a person develops to normally harmless substances. A susceptible person who is exposed to these substances may have symptoms of the respiratory organs, the digestive organs or the skin. The most common of these disorders are hay fever, asthma, allergic conjunctivitis, stomach and intestinal disturbances, contact dermatitis, eczema and hives.

The range and variety of things to which susceptible persons may become sensitive are almost endless. Sensitivity usually occurs only after repeated exposure to the substance. Allergic patients usually are sensitive to more than one allergen. Allergens enter the body by various routes:

1. By being inhaled
   Example: Dust, pollen spores, and fumes
2. By being swallowed
   Example: Food, drinks, and drugs
3. By external contracts
   Example: Clothing, Cosmetics, and industrial products
4. By injection
   Example: Drugs, serums, vaccines, and insect venom

The tendency to become sensitized or allergic to some foreign substances is usually inherited. What one will become sensitive to depends in part upon the amount of exposure to any foreign substance or allergen. Thus, an individual who has inherited this tendency to become sensitive to foreign substances may become sensitive to cow's milk shortly after birth; become sensitive to dog hair after acquiring a dog; throughout life may develop new sensitivities as a new environment subjects one to new exposures. The previous sensitivities may remain or may be lost when exposure ceases.

The body produces antibodies to ward off infection and other diseases. When the immune system mis-identifies a normally harmless substance, it begins building antibodies toward that specific substance. When the allergic individual is re-exposed to the allergens, these antibodies trigger allergic changes in the susceptible tissues; for example, the nasal membrane, bronchial tubes or skin.

There are three basic methods of treating allergy. The first treatment is to identify the offending substances and then carefully avoid exposure to them. This can be very effective for allergies to animals and foods, but is not possible for some allergies such as pollens, mold spores, and dust. If it is house dust, you can reduce symptoms by minimizing the dust in the sleeping area and the rest of the house. Secondly, medications, such as antihistamines, oral decongestants, nasal sprays, and bronchodilators may be effective in controlling allergy symptoms. However, the sensitivities themselves are unchanged. The third method is hyposensitization via immunotherapy. This treatment is designed to build up the patient's resistance to the allergens to which one is sensitive by injection of small amounts of antigen at regular intervals. Hyposensitization is utilized when the offending allergen cannot be avoided, such as airborne seasonal pollen grains, mold spores, and dust.

The first step in treating an allergic patient is to detect which substances or allergens are the major offenders. Testing allergens on the skin will identify possible suspects. Skin test reactions are clues and must be interpreted cautiously. An accurate and close observation over a long period of time of the patient's environment, habits, and diet may help identify allergens. Treatment of the allergic individual seldom depends upon one factor, but on a thorough investigation of the history, environment, emotions, and hygiene of the patient.

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General Control of Your Environment

Dust Control

- Your bedroom needs to be as dust-free as possible
- Remove all upholstered furniture (chairs, sofa, etc.)
- Remove wool blankets, quilts, comforters, substitute Acrilan blankets, Dacron comforters, or other synthetic fiber coverlets
- Remove heavy draperies and Venetian blinds, use only light washable curtains
- Remove all stuffed animals from the children's rooms
- Remove dust-catching storage items such as old books, papers, boxes, etc.
- Cover the mattress and box springs with allergy-free covers which may be ordered (ask your allergy department). Use pillows made of Dacron® only
- Launder all bedding (including covers and mattress pad) once a week
- Keep the floors bare, if possible. If you have carpet or rugs, clean daily
- Clean house in the morning. This will allow the dust to settle by bedtime
- Clean the closet, bookshelves, cabinets, desk, and night tables
- Keep the bedroom dust-free with frequent cleaning, wiping floors, shelves, tables, and other furniture with an oiled or damp cloth
- When vacuuming the rest of the house, have the patient stay away from the vacuum cleaner because it blows out small amount of dust. Use a wet or oiled mop whenever possible. Allow no sweeping
- Floor furnaces should be thoroughly cleaned before they are used in the fall
- The ducts in a central forced-air heating system should be suctioned out annually each fall; most heating companies do this type of cleaning. Cover heater vents with cheese cloth
- Electrostatic air filters may be attached to the heating/cooling system and are very beneficial. If possible add a filter system to your home. If this is not possible, consider a room filter for the bedroom

Humidity Control

Low humidity becomes a problem for the allergic patient during the winter. The more the furnace runs, the drier the air becomes and, in turn, this dries out the mucous membranes of the nose and chest. Therefore, the home should have some type of humidifier. One may be installed on a forced-air furnace, on the hot air side, controlled by a humidistat. If this is not possible, then a good portable cold-air humidifier should run continuously in the bedroom or nearby in a hall during the winter months.

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Environmental Controls of Allergens

Pollens

- Patients have symptoms when pollen counts are 20-100 grains/m³
- Insect-borne pollen which is larger is usually filtered out by the nose
    - i.e. Flowers

Season

- Trees- generally February through April (any 3 consecutive days of 65º or greater)
- Grasses- April through June
- Weeds- August through September

Environmental Considerations for Pollen

- Highest counts are on dry, hot days and windy days
- Counts are highest in the morning and also after a rain, and the lowest during rain
- Use your air conditioner when applicable and replace your furnace filters monthly
- Keep pets outside and bathe them every 2 weeks
- Use HEPA air filtration systems, especially in the bedroom
- When working outdoors use a cotton or HEPA face mask

Molds

- Mold spores are found indoors and outdoors
- Molds like damp, shady areas and decaying vegetative materials
    - i.e. leaves, fruit, vegetables
- highest counts found during humid weather
- 10-20% of homes surveyed showed abnormal mold growth
- Indoor temperature and humidity can foster mold growth in bathrooms, basements (dryer not vented outside), kitchens (condensation from cooking), window frames, plants frost-free refrigerator's water pan, A/C drain pan

Indoor Mold Prevention

- Keep humidity below 40% by using a dehumidifier
- Use air conditioning and exhaust fans in kitchen and bathrooms
- Repair water damage
- Use mold killer and mold retardant (Impregon, AFM X158, Rep 70) to prevent growth for 2-3 months
- Use mold retardants in your paint, wallpaper glue, A/C in cars

Outdoor Mold Prevention

- Keep vegetation cleaned up and away from the house
- Ventilate your crawl spaces under your home to dry out any standing water
- Drain low-lying areas around your house

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Mold Allergy

Molds are microscopic fungi, which, unlike plants, are unable to produce their own food from sunlight and air. Molds are made up of clusters of filaments and live on plant or animal matter that they decompose for their nourishment. With tens of thousands of different varieties, molds are among the most widespread living organisms. Many molds reproduce by releasing spores into the air which then settle on organic matter and grow into new mold clusters. These airborne mold spores are far more numerous than pollen grains, and when inhaled, produce allergic symptoms.

In people allergic to mold, an attack may be brought on or worsened by eating certain foods. These include cheese, alcohol, vinegar, yeast-produced medicines (vitamins and antibiotics), animal products, mold foods (mushrooms), and mold containing foods such as salami, leftovers, buttermilk, dried fruits, yeast or soy sauce.

For mold spores to be allergenic, they must be abundant, carried by air currents, and must be allergenic in their chemical makeup, i.e. pollen. Mold spores are so numerous in some areas that they outnumber the pollens in the air.

Symptoms from mold spore allergy can worsen in the cool, the early evening, in damp and foggy places, around freshly cut grass or when raking up old leaves. Molds don't always disappear with the first cold weather or frost, unlike pollen, frost actually encourages certain molds to grow by increasing the amount of drying vegetation. Snow lowers the outdoor mold count drastically, but once thawing occurs with it accompanies dead vegetation, and increases mold growth.

Molds can be found in most environments and unlike pollens, do not have a strictly limited season. Mold growth is encouraged by warmth and high humidity and therefore, growth is most prevalent during the humid seasons of the year. Mold spores produced outside become widely dispersed through the air, and can enter the home. Other molds are produced in the home, especially in areas of high humidity, such as showers and basements. Old foam rubber pillows and mattresses also harbor mold spores.

Avoidance Measures

One cannot completely avoid the contact of mold and mold spores on a day-to-day basis. Desensitization with immunotherapy using mold extracts is a great help, but is most effective when used in conjunction with mold avoidance.

Throughout the House

- Keep humidity low, if possible at 35-40%, but in no case should it go over 50%. Use a gauge to monitor relative humidity
- Allow adequate ventilation
- Use an air-conditioner or dehumidifier in times of high humidity. To help trap airborne allergens, use a special air-conditioner filter and/or a HEPA room air cleaner
- Convention heater units can make mold spores non-viable and help reduce the spread of mildew

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DUST ALLERGY

The symptoms that result from allergy to dust are usually year round. They may manifest as allergic rhinitis which include sneezing, runny nose or nasal obstruction, and/or asthma. Dust allergies may become worse during extremely heavy pollen seasons.

Dust is a composite of potentially antigenic material rather than a single substance. Recent research has shown that the major allergenicity of dust is related to the dust mite, a minute sub-microscopic spider-like insect. Dust mites are most prevalent in mattress dust, as compared to carpet dust, furniture dust, etc. A common medium for dust mite growth is one comaining human dander and skin scales most commonly found in beds and mattresses.

Dust mites are an integral part of our environment, increasing in numbers as temperature and humidity reach an optimum level (for example, at the end of summer and during the winter).

Successful desensitization has been accomplished by using mite extracts.

Avoidance

There is no good way to avoid dust completely because it is perennially in all our houses and places of business and is not easily eradicated. Knowing what is in the "makeup" of dust should give you a hint of what to be careful of, and what to avoid when possible.

An indication of dust allergy is: worsening of symptoms indoors, improvement when going outdoors, worsening after going to bed, recurrence of symptoms each year with the return of cold weather when the heat comes on, worsening in air conditioning and aggravation of symptoms in dusty places.

Some useful measures for dust control are:

- Clean the bedroom thoroughly, including all closets
- Eliminate under-bed storage
- Encase bedding, especially mattresses, pillows, and box springs
- Dust the bedroom at least once a day and vacuum frequently
- Use a damp mop to reduce the movement of dust anywhere in the bedroom using a gentle containing action rather than a vigorous spreading action
- A mask should be worn if the cleaning is done by the dust-allergic person
- Avoid damp and dusty areas such as attics, basements, and storage places

Remember: dust in the bedroom is the most important source of allergic problems

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Pollen Allergy

Pollens are small, spherical or egg-shaped grains. They are the male germ cells of plants and are necessary for plant fertilization. However, not all pollens cause an allergy. The ability to cause an allergy is dependent on a number of different factors. Pollens may be divided into two different groups: those carried by insects and those carried by the wind. People often think that pollens of colorful, scented flowers, like roses, are the source of their allergies. This is true only for people like gardeners or florists, those who spend a lot of their time close to these kind of flowers. Most flowers have heavy, large, waxy pollens that are carried from plant to plant by insects, for example, bees. These pollens are too heavy to be carried in the wind and are usually not responsible for pollen allergy.

Generally the most frequent cause of pollen allergy are from trees, grass, and weeds. These pollens are much smaller than flower pollen and are carried in the air by the wind. Samples of Ragweed pollen have even been obtained 400 miles at sea. These pollens can be carried for long distances so attempts to eradicate them at the town, city or country level are usually futile

In addition to buoyancy, two other factors that contribute to pollen's importance as an allergen is the ability of a common plant to produce pollen in large quantities, and pollens must be allergenic in their chemical makeup. Thus, a single plant of Ragweed has been estimated to produce one million grains of pollen in one day, and some trees have light pollens, which are wind-carried, yet cause no allergy symptoms because they are not chemically allergenic.

While pollen allergy usually starts during childhood, it may develop at any age. It is important to realize that one or two seasons of exposure to particular pollen are needed to build up an allergy to that pollen. An indication of pollen allergy is: worsening of symptoms when going from indoors to outdoors, being outdoors from 7:00-11:00AM (highest pollen count), and on clear days. Another indication is an improvement in symptoms when going from outdoors to indoors, and in air-conditioned places. The following are several tips for pollen allergy sufferers.

- Avoid exercising outdoors early in the day, as most pollens are emitted by plants between 5-10AM
- After being outdoors, bathe and wash your hair, especially before bed. Pollen clings to your hair and can be rubbed off on your pillow and trigger allergies overnight. Wash your exercise clothes also
- Keep windows closed if possible. Use air-conditioning to filter pollens from the air. If you have to open your windows, close them especially between 5:30 to 10AM and 5:03-8:30PM
- Don't hang sheets or clothes out to dry on an outdoor line. Pollens and molds collect on these materials
- If you have to work outside, take an antihistamine at least 30 minutes beforehand
- Look for pollen counts on TV news reports. When pollen counts are high, try to limit your time outdoors
- Have someone else mow your lawn. A particle mask will help filter the air if you have work outside, and glasses will help protect the eyes
- Washing the eyes with plain water or artificial tears removes pollen; a cool compress can help relieve itching