

## UNIVERSITY STUDENT HEALTH SERVICES • Fact Sheet

**ALLERGIC RHINITIS****WHAT IS IT?**

Allergic rhinitis, or “hay fever”, is a common condition in which exposure to an allergen or irritant in the environment causes the mucus membranes lining your nose to become inflamed:

- After an allergen exposure, your body can form antibodies against that allergen. The antibodies then bind to certain cells in your respiratory tract and bloodstream.
- When you are re-exposed to the allergen, it attaches to these pre-formed antibody complexes, triggering a release of chemicals that results in allergy symptoms.

**WHO GETS IT?**

About 20% of people suffer from allergic rhinitis. Symptoms usually appear in childhood or early adulthood but can begin at any age. The severity of symptoms can vary throughout life.

The risk of developing allergic rhinitis is higher in people who have asthma or eczema and in those who have a family history of allergic rhinitis or asthma. Other risk factors include exposure to cigarette smoke in the first year of life and exposure to indoor allergens.

**WHAT ARE THE SYMPTOMS?**

Symptoms vary and can include:

- A runny or itchy nose, nasal congestion, sneezing
- Sore throat, hoarse voice
- Itchy throat or roof of mouth
- Postnasal drip, cough
- Congestion or popping of the ears
- Watery, itchy, and/or red eyes
- Facial pressure or pain
- “Allergic shiners” (dark circles under the eyes caused by increased blood flow near the sinuses)
- Fatigue, irritability (usually from poor sleep)

**WHAT ARE COMMON ALLERGENS?**

- ❖ **Perennial allergic rhinitis** occurs year-round and is commonly due to dust mites, cockroaches, animal dander, mold, or chemical irritants.
- ❖ **Seasonal allergic rhinitis** causes symptoms depending on the time of the year:
  - Allergies to tree pollens are common from February to early April.
  - Allergies to grasses and plant pollens often occur in late spring or summer.
  - Allergies to ragweed pollen usually cause problems in midsummer and early fall.

**WHAT CAN I DO TO REDUCE EXPOSURE TO ALLERGENS?**

The first-line treatment for allergic rhinitis is to identify and avoid allergy triggers. The following recommendations can help decrease symptoms:

**OUTDOOR ALLERGENS:** These are most likely due to pollen, other plant material, and molds.

- Monitor pollen and mold counts. A good source is the American Academy of Allergy, Asthma, and Immunology at [pollen.aaaai.org](http://pollen.aaaai.org).
- When counts are high, stay indoors and leave windows closed.
- Use air conditioners to filter air during peak symptoms. Remember to replace filter screens monthly.
- Use a high-quality mask when cutting grass, etc.
- Shower and wash your hair before bed to remove pollen and other allergens.
- Consider weather stripping windows and doors.

**INDOOR ALLERGENS:** Dust mites and animal dander are the most common culprits. Decreasing exposure is important for controlling symptoms, but it make take 3-6 months to see an improvement once allergens are removed.

- ❖ **Dust mites** are microscopic spider-like bugs that inhabit house dust. They require sufficient humidity and nests (invisible to the naked eye) in which to live. To reduce exposure to dust mites:
  - Encase pillows, mattresses, box springs, and comforters in mite-impermeable covers. Tightly woven fabrics with a pore size of 6 microns or less are very effective at controlling the passage of mites (and cat allergens). Fabrics with a pore size greater than 2 microns still permit good airflow.
  - Avoid feather pillows, down comforters, and woolen blankets. Avoid sleeping on upholstered furniture (like couches).
  - Wash sheets and blankets weekly with hot water and detergent, or run them through a hot dryer to eliminate mites.
  - Dust regularly, and use a vacuum cleaner with a HEPA filter. Consider wearing a high-quality mask while cleaning and for 15 minutes afterwards.
  - Limit clutter and other “dust collectors”, such as carpets, rugs, upholstered furniture, curtains, stuffed animals, etc.
  - Avoid horizontal blinds in rooms where you spend a lot of time. Use washable vinyl or roller shades instead. Wash curtains regularly as well.
  - Remove fish food deposits (also a great food source for dust mites) that build up under the cover of fish tanks.
  - Keep indoor humidity levels between 30-50%. Inexpensive humidity monitors are available at most hardware stores. Avoid using humidifiers.
  
- ❖ **Animal dander** is made up of dead skin cells constantly shed by animals (eg. cats, dogs, rodents, ferrets, birds, etc.). In cats, the allergen that causes the most allergic reactions is found in their saliva, skin glands, and urinary/reproductive tracts. Pets without feathers or fur rarely cause allergies.
  - If you are allergic to your pet, the best treatment is to remove the pet from the home.
    - Options include keeping animals outside, in the garage, in a kennel, or finding a new home. Keeping your pet out of certain areas (like your bedroom) is not very effective because animal allergens are carried on your clothing or spread in the air.
    - If the animal is removed, thorough cleaning of bedding, carpets, curtains, upholstered furniture, etc, must follow. It may take months for the level of cat allergens to drop because they tend to adhere well to indoor surfaces.
  - If it is not possible to remove your pet,
    - Bathing your dog twice a week may reduce symptoms.
    - Wipe your pets off with a towel before they enter your home.
    - Vacuum weekly with a HEPA filter vacuum (and ideally one with a double thickness vacuum bag).
    - Limit clutter and other “dust collectors” (see dust mites above) because they are also great reservoirs for animal dander.
    - Consider using an air filter with a HEPA filter.
  - **Note on air filters:** Air filters may reduce indoor allergens, but they have not been proven to significantly improve allergy symptoms.
    - Air filters (eg. ionizers) that produce ozone, which can be a respiratory irritant in some, are not recommended.
    - Air filters do not remove dust mites well because mites are only airborne for a few minutes.
    - Air filters are better at removing pollens and pet danders, but benefits may be minimal if allergen sources are continually present. Air filters work best in rooms where there are no carpets, drapes, upholstered furniture, pets, and access to outside air.
  
- ❖ **Indoor mold** thrives in damp, humid environments. Examples include air conditioning vents, shower stalls, leaky sinks, refrigerator drip trays, and damp basements. To reduce mold in the home:
  - Remove sources of standing water and dampness, like house plants, leaky plumbing, clogged drains, and bathroom rugs/carpeting.
  - Use exhaust fans while bathing.
  - Clean surfaces with visible mold (sinks, tubs, grout, etc.) with dilute bleach (1oz or 30ml bleach diluted in 1 quart or liter of water) at least every 4 weeks.
  - Regularly disinfect indoor garbage cans.
  - Discard or donate old books, newspapers, and clothing.
  - Keep indoor humidity levels below 50%. Use an electric dehumidifier to treat damp basements.

## **WHAT MEDICATIONS ARE AVAILABLE FOR SYMPTOMS?**

If it is possible to anticipate the onset of symptoms, begin taking allergy medications 1-2 weeks before your symptoms usually begin. This may prevent symptoms from developing.

- ❖ **Saline nasal sprays and irrigation kits** are used to rinse allergens from the nose and clean the nasal lining. A variety of options are available over-the-counter.
  - The larger volume available in a nasal irrigation kit is more effective than a saline nasal spray in relieving symptoms, especially postnasal drip, congestion, nasal dryness, and sneezing.
  - Saline irrigation used before applying medicated nasal sprays can also improve effects of the medication.
  - Common saline irrigation kits include the NeilMed Sinus Rinse kit and the Neti Pot.
    - Use only distilled, sterile, or previously boiled water (boil for 5 minutes then allow to cool) when making up the irrigation solution. **DO NOT USE** tap water or plain bottled water due to the risk of brain infection and death. Follow package directions for safe use.
    - Clean the sinus rinse bottle or Neti pot after each use, and leave it open to air dry.
- ❖ **Steroid nasal sprays** are considered the first-line medication for treatment of allergic rhinitis. They have been proven to be more effective than antihistamine pills and have few side effects.
  - Flonase, Nasacort, and Rhinocort (and their generics) are available over-the-counter. Other steroid sprays require a prescription. Though cost and dosing vary, all have similar efficacy.
  - Instructions for use:
    - Clear your nose of mucus before spraying if needed.
    - Keep your head in a normal position, or tuck your chin in slightly.
    - Direct the spray away from the nasal septum (the cartilage that divides your nose in two).
    - Sniff gently after spraying. Do not sniff too hard or the medication will be less effective (because it will drain down your throat instead of staying in your nose).
    - If the steroid spray is irritating or drying to your nose, use a saline nasal spray first, then apply the steroid spray.
  - Steroid nasal sprays can begin working on the first day of treatment, but it can take days to weeks to reach maximum effectiveness. Therefore, these sprays are most effective when used regularly.
- ❖ **Antihistamines**
  - Antihistamine pills decrease itching, sneezing, and runny nose. However, they are not effective for nasal congestion. They work well in combination with steroid nasal sprays.
  - Non-sedating antihistamines that are available over-the-counter include cetirizine (Zyrtec), loratadine (Claritin), and fexofenadine (Allegra). Levocetirizine (Xyzal) and desloratadine (Clarinex) require prescriptions.
  - Sedating antihistamines include diphenhydramine (Benadryl), brompheniramine (Dimetapp Allergy), and chlorpheniramine (Chlor-Trimeton). These medications are often used at bedtime.
  - Antihistamine nasal sprays (Astelin, Astepro, and Patanase) are available by prescription and often work within minutes. They are used to treat postnasal drip, congestion, and sneezing.
- ❖ **Decongestants** are generally not recommended for the treatment of allergic rhinitis.
  - Decongestant pills made from phenylephrine are not effective for allergies, can worsen hypertension, and cause palpitations or jitteriness.
  - Decongestant nasal sprays (Afrin) should not be used for more than 3 days at a time due to rebound congestion. Therefore, other allergy medications, like steroid nasal sprays, are preferred.
- ❖ **Montelukast (Singulair)** is a pill that can help reduce nasal congestion by blocking leukotrienes. Because nasal steroid sprays are more effective for treating allergic rhinitis, montelukast is usually reserved for patients who cannot tolerate nasal sprays or who have problems with asthma.
- ❖ **Allergy injections** are the only treatments that can decrease allergy symptoms over time. This treatment requires the care of an allergy specialist. VCU students may receive their injections at University Student Health Services if they have the prescribed allergy serum and documentation from their allergist.

**RECOMMENDED WEBSITES:** [www.aaaai.org](http://www.aaaai.org), [www.aafa.org](http://www.aafa.org)