

# Respiratory Allergies

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*Editor's note: This column is adapted from an article on [www.AviationMedicine.com](http://www.AviationMedicine.com).*

**R**espiratory allergies may affect 40 million people in the United States. Canadian authorities report 2.7 million Canadians have asthma, a more severe respiratory condition frequently associated with allergies. The symptoms range from a runny nose and sneezing to life-threatening obstruction of breathing. Many people only have allergy symptoms for a few weeks per year, while others suffer repeated sinus infections or asthma. Effective treatments for almost the entire spectrum of allergic symptoms are available that will not ground a pilot, or for which the FAA will provide a waiver after proper reporting.

## Terminology

The most common manifestations of allergies are runny nose (rhinitis), sneezing, and

ously regardless of the season (perennial allergic rhinitis). They may be sensitive to dust, animal dander, or other common materials.

Nonallergic rhinitis (vasomotor rhinitis or irritant rhinitis) may be caused by smoke, fumes, odors, chemicals, or other sources, and may result in symptoms year-round. Common colds, caused by rhinoviruses, may include similar symptoms of congestion and runny nose but usually are not associated with itching eyes. Colds usually last 5–10 days and do not occur regularly with a particular season.

## Allergic responses

Allergies are caused by the body's reaction to outside proteins or particles (allergens). The immune system releases chemicals called histamines from certain blood cells and tissues, causing a reaction to the allergens. Generally, the mucus membranes near the site where the allergen reaches the body react by swelling and leaking clear fluid. The tissue also is irritated, causing itching.

Tests for allergies include skin tests, such as patch testing, intradermal testing, and scratch/prick testing. Blood testing is used to look for evidence of allergies in the body.

If the sinus passages are constantly swollen and filled with fluid, an excellent environment for bacteria is created. Sinusitis, ear blocks, and sinus blocks may result, particularly with repeated changes in atmospheric

pressure. In severe cases, the histamines and other chemicals released by the body may act not only on the local site of exposure, but on the entire body. The result may be an asthma flare as the airways swell, leak fluid, and close down. Allergies also can cause itching.

## Avoidance

Allergic reactions may be prevented or treated. The most effective prevention is to avoid the allergen—often not practical for pilots. Many pilots find their allergic symptoms improve when they are flying because cabin air at altitude usually is relatively free of allergens. An allergy to animals, such as cat dander and dried saliva, may require giving away a pet. Many allergy sufferers are unable to avoid or even identify the cause of their symptoms.

## Nasal steroids

Nasal steroid sprays can relieve nasal stuffiness by stabilizing cells in the body exposed to allergens so they do not release histamines. Nasal steroids may take several days to weeks to reach full effect. If you can anticipate the onset of the allergy season, you can begin using nasal steroids several weeks before the season starts to block most symptoms. Steroid nasal sprays should not be confused with anabolic steroids, often illegally used by bodybuilders and athletes.

Nasal steroids (e.g., Beconase, Vancenase, Flonase,

**Medical Center**  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Date \_\_\_\_\_  
**Rx**  
FAA-Approved Meds:  
Nasal sprays:  
Steroid—Beconase, Vancenase, Flonase, Nasalide, Nasacort, Nasonex, Nasarel, and Rhinocort  
Nonsteroid—Cromolyn, Atrovent  
Nonsedating antihistamines: Allegra, Clarinex, and Claritin  
Allergy desensitization injections

Nasalide, Nasacort, Nasonex, Nasarel, and Rhinocort) usually are well tolerated and relatively safe for long-term use. The FAA will approve using them if they are effective. You may wait to report using them until your next FAA physical exam. Nasal steroids are preferred over antihistamine treatment for allergic rhinitis.

## Nonsteroidal nasal sprays

Nasal nonsteroidal sprays should not be confused with nasal decongestant sprays such as Afrin and Dristan, which cannot be used safely for more than several days and which the FAA does not permit pilots to use except as an emergency “get me down” temporary treatment for inflight sinus and ear blocks.

Cromolyn is an example of an FAA-approved nonsteroidal medication for control of allergic symptoms. It is most effective for relieving itchy eyes when used as eye drops or as a nasal spray.

Atrovent nasal spray

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itching eyes. These symptoms may be seasonal when certain grasses, flowers, trees, or other plants release pollen, or molds release spores (seasonal allergic rhinitis, or SAR). Some people suffer these symptoms nearly continu-



decreases nasal secretions in both allergic and nonallergic rhinitis. The FAA will authorize its use when flying after an appropriate observation period has elapsed without side effects.

### OTC antihistamines

Antihistamines block the body's allergic response, too, but work by a mechanism different from that of nasal steroids. Antihistamines are available over the counter (OTC) or by prescription.

The FAA authorizes very few OTC antihistamines for use while flying. The pilot must have tested the medication while not flying and have found that doing so did not create any side effects. The OTC antihistamines allowed by the FAA for use while flying are loratadine (Claritin), desloratadine (Clarinex), and fexofenadine (Allegra and others).

The OTC products such as chlorpheniramine (Chlor-Trimeton, CTM), hydroxazine (Atarax, Vistaril), brompheniramine (Dimetane), and diphenhydramine (Benadryl) cause drowsiness. The FAA does *not* permit pilots to fly while using these medications, and a pilot should wait at least five times as long as the dosing recommendation after the last dose before resuming flight duties. For example, if the directions read "take every six hours," the pilot should wait at least 30 hours after the last dose before flying. A recent change in FAA policy increased the observation period after use of the medications from two dosing intervals to either five dosing intervals or five half-lives of the medication. These medications may have subtle adverse effects for much longer in some individuals.

### Prescription antihistamines

Nonsedating antihistamines are also available by prescription. As noted, the FAA will allow pilots to use some of these medications and fly if they tolerate them without any side effects after a ground testing period of several days. The currently approved medications are Allegra, Clarinex, and Claritin.

Prescription antihistamines touted as nonsedating, Zyrtec (cetirizine), Xyzal (levocetirizine), and Astelin nasal spray (azelastine), may cause drowsiness. The FAA does not approve pilots' use of Zyrtec, Xyzal, or Astelin nasal spray while flying. A pilot must wait at least 48 hours after the last dose of Zyrtec or Xyzal before flying. Astelin has a very long half-life, and the FAA suggests waiting at least five days before flying after Astelin use.

Like the nasal steroids, use of the approved medications may be reported at the airman's next FAA physical exam. Those approved medications that are combined with pseudoephedrine, the active ingredient in Sudafed, are also approved by the FAA; they include Claritin-D, Clarinex-D, and Allegra-D.

Some pilots who have listed Claritin, Clarinex, or Allegra as medications they are using to control allergic symptoms have received letters from the FAA saying that use of these medications is prohibited less than 48 hours before flight. The agency sent these letters because the pilot or aeromedical examiner did not explain on the FAA Form 8500 (Application for Airman Medical Certificate) that the medication was tolerated without side effects. A comment on the application regarding the absence of side effects would not

result in receiving such a letter. Pilots who do not have any side effects from using Allegra, Clarinex, or Claritin and whose condition is well controlled may continue to fly while using the medications but should note the absence of side effects during their next FAA physical exam.

### Decongestants

Decongestants often are used to treat allergic symptoms. They constrict blood vessels in the nose and relieve the running nose. Pseudoephedrine, found in Sudafed, is approved for use while flying. This medication acts throughout the entire body by constricting blood vessels. Side effects may include an increased heart rate, elevated blood pressure, and difficulty urinating in men with prostate problems. Because it frequently keeps people awake, pseudoephedrine often is combined with nonapproved antihistamines sold over the counter. Taking one of these combinations of decongestants and non-approved OTC antihistamines is not approved less than 48 hours before flight.

As noted, nasal decongestants such as Afrin and Dristan should not be used before a flight to clear congestion. However, if used during flight to treat an ear block or sinus block in an emergency, pilots should ground themselves for at least 24 hours after the last use and be certain they are free of symptoms and can easily clear their ears before resuming flying.

Severe cases of allergies may cause asthma or other symptoms that require treatment with oral steroids such as Prednisone or Medrol, or steroid injections. Pilots having symptoms severe enough to require this type of treat-

ment should not fly until the condition is resolved.

### Desensitization: Allergy shots

The FAA will approve pilots to fly when undergoing treatment with allergy desensitiza-



tion injections. Pilots should be cautious about flying immediately after receiving higher-strength serums in case they have a delayed allergic reaction. The FAA requires a minimum of a four-hour observation period after an allergy injection before resuming flight duties.

### Desensitization: Sublingual immunotherapy (SLIT)

Similar to desensitization in mechanism of action, SLIT is administered as a liquid or tablet under the tongue. Formulations are usually made specifically for each individual. The preparations, once established as safe, can be taken at home, making this much more convenient than traditional desensitization therapy. Unfortunately, the FAA does not currently allow pilots to fly while using SLIT.

### Reporting requirements

Reporting SAR or other allergies controlled with approved medications should be done on the FAA Form 8500. In block 17, medications, list the medication used and dose. In the physician visit section, list the name of the physician with date or range of dates of visits. For reason for visit, write, "Allergic rhinitis—treated and controlled, no side effects," assuming that is true. 