



## Stuffy Noses

### Insight into the many causes of nasal congestion

- What are the causes of nasal congestion?
- Are there any risks when treating congestion?
- Where can I find out more?

Nasal congestion, stuffiness, or obstruction to nasal breathing is one of the oldest and most common human complaints. For some, it may only be a nuisance; for others, nasal congestion can be a source of considerable discomfort.

Medical writers have established four main causes of nasal obstruction: infection, structural abnormalities, allergic, and nonallergic (vasomotor) rhinitis. Patients often have a combination of these factors which vary from person to person.

### *What are the causes of nasal congestion?*

#### **Infection**

An average adult suffers a “common cold” two to three times per year. These viral infections occur more often in childhood because immunity strengthens with age. A cold is caused by one of many different viruses, some of which are airborne, but most are transmitted by hand-to-nose contact. Once the virus is absorbed by the nose, it causes the body to release histamine, a chemical which dramatically increases blood flow to the nose and causes nasal tissue to swell. This inflames the nasal membranes which become congested with blood and produce excessive amounts of mucus that “stuffs up” the nasal airway. Antihistamines and decongestants help relieve the symptoms of a cold, but no medication can cure it. Ultimately, time is what is needed to get rid of the infection.

During a viral infection, the nose has poor resistance to bacteria, which is why infections of the nose and sinuses often follow a “cold.” When the nasal mucus turns from clear to yellow or green, it usually means that a bacterial infection has set in. In this case, a physician should be consulted.

Acute sinus infections produce nasal congestion and thick discharge. Pain may occur in cheeks and upper teeth, between and behind the eyes, or above the eyes and in the forehead, depending on which sinuses are involved.

Chronic sinus infections may or may not cause pain, but usually involve nasal obstruction and offensive nasal or postnasal discharge. Some people develop polyps (fleshy growths in the nose)

from sinus infections, and the infection can spread to the lower airways, leading to a chronic cough, bronchitis, or asthma. Acute sinus infections generally respond to antibiotic treatment; chronic sinusitis may require surgery.

### **Structural abnormalities**

These include deformities of the nose and nasal septum; the thin, flat cartilage and bone that divides the two sides of the nose and nostrils. These deformities are usually the result of an injury, sometimes having occurred in childhood. Seven percent of newborn babies suffer significant nasal injury in the birth process. Nasal injuries are common in both children and adults. If they obstruct breathing, surgical correction may be helpful.

One of the most common causes of nasal obstruction in children is enlargement of the adenoids. These are a tonsil-like tissue located in the back of the nose, behind the palate. Children with this problem may experience noisy breathing at night and may snore. Children who are chronic mouth breathers may develop a sagging face and dental deformities. In this case, surgery to remove the adenoids and/or tonsils may be advisable.

Other causes in this category include nasal tumors and foreign bodies. Children are often known to insert small objects into their noses. If a foul-smelling discharge is observed draining from one nostril, a physician should be consulted.

### **Allergies**

Hay fever, rose fever, grass fever, and summertime colds are various names for allergic rhinitis. Allergy is an exaggerated inflammatory response to a substance which, in the case of a stuffy nose, is usually pollen, mold, animal dander, or some element in house dust. Pollen may cause problems during spring, summer, and fall, whereas house dust allergies are often most evident in the winter. Molds may cause symptoms year-round. In the allergic patient, the release of histamine and similar substances results in congestion and excess production of watery nasal mucus. Antihistamines help relieve the sneezing and runny nose of allergy. Typical antihistamines include Benadryl<sup>®</sup>, Chlortrimetron<sup>®</sup>, Claritin<sup>®</sup>, Teldrin<sup>®</sup>, Dimetane<sup>®</sup>, Hismanal<sup>®</sup>, Nolahist<sup>®</sup>, PBZ<sup>®</sup>, Polaramine<sup>®</sup>, Seldane<sup>®</sup>, Tavist<sup>®</sup>, Zyrtec<sup>®</sup>, Allegra<sup>®</sup>, and Alavert<sup>®</sup>, which are often available without a prescription and are available in several generic forms. Combinations of antihistamines with decongestants are also available.

Allergy shots are a specific and successful treatment method. SLIT skin tests and sometimes blood tests are used to make up vials of allergy-inducing substances specific to an individual patient's profile. The physician determines the best concentration for the first treatment. Once injected, these treatments form blocking antibodies in the patient's blood stream that interfere with the allergic reaction. Injections are typically given for a period of three to five years. Patients with allergies are more likely to need treatment for sinus infections.

### **Vasomotor Rhinitis**

“Rhinitis” means inflammation of the nose and nasal membranes. “Vasomotor” means pertaining to the nerves that control the blood vessels. Membranes in the nose have an abundant supply of



arteries, veins, and capillaries, which have the ability to expand and constrict. Normally these blood vessels are in a half-constricted or half-open state. But when a person exercises vigorously, hormone (adrenaline) levels increase. Adrenaline causes constriction of the nasal membranes so that the air passages open up and the person breathes freely.

The opposite takes place when an allergic attack or a cold develops. During a cold, blood vessels expand, membranes become congested, and the nose becomes stuffy, or blocked.

In addition to allergies and infections, certain circumstances can cause nasal blood vessels to expand, leading to vasomotor rhinitis. These include psychological stress, inadequate thyroid function, pregnancy, certain anti-high blood pressure drugs, prolonged overuse of decongesting nasal sprays, and exposure to irritants such as perfumes and tobacco smoke.

In the early stages of these disorders, nasal stuffiness is temporary and reversible. It usually improves when the primary cause is corrected. However, if the condition persists, the blood vessels lose their capacity to constrict, much like varicose veins. When the patient lies down on one side, the lower side becomes congested, which interferes with sleep. It is helpful to sleep with the head of the bed elevated two to four inches. Surgery is another option that can provide dramatic and long-time relief.

### ***Are there any risks when treating congestion?***

Patients who get sleepy from antihistamines should not drive an automobile or operate dangerous equipment after taking them. Decongestants increase pulse rate and elevate blood pressure and therefore should be avoided by those with high blood pressure, irregular heartbeat, glaucoma, or difficulty urinating.

Pregnant patients should consult their obstetricians before taking any medicine.

Cortisone-like drugs (corticosteroids) are powerful decongestants, administered as nasal sprays to minimize the risk of serious side effects associated with other dosage forms. Patients using steroid nasal sprays should follow instructions carefully, and consult a physician immediately if they develop nasal bleeding, crusting, pain, or vision changes.

### ***Where can I find out more?***

Additional information and suggestions can be found in the AAO-HNS pamphlets, “Doctor, Please Explain Antihistamines, Decongestants, and Cold Remedies,” “Doctor, Please Explain Allergies & Hay Fever,” and “Doctor, Please Explain Sinusitis.”

