

## **Doctor, Explain Nasal Congestion**

Nasal **congestion**, **stuffiness**, or **obstruction** to nasal breathing is one of man's oldest and most common complaints. While it may be a mere nuisance to some persons, to others it is a source of considerable discomfort, and it detracts from the quality of their lives.

Medical writers have classified the causes of nasal obstruction into four categories, recognizing that overlap exists between these categories and that it is not unusual for a patient to have more than one factor involved in his particular case.

### **Infection**

An average adult suffers a common "cold" two to three times per year, more often in childhood and less often the older he gets as he develops more immunity. The common "cold" is caused by any number of different viruses, some of which are transmitted through the air, but most are transmitted from hand-to-nose contact. Once the virus gets established in the nose, it causes release of the body chemical histamine, which dramatically increases the blood flow to the nose, causing swelling and congestion of nasal tissues, and stimulating the nasal membranes to produce excessive amounts of mucus. Antihistamines and decongestants help relieve the symptoms of a "cold," but time alone cures it.

During a virus infection, the nose has poor resistance against bacterial infections, which explains why bacterial infections of the nose and sinuses so often follow a "cold." When the nasal mucus turns from clear to yellow or green, it usually means that a bacterial infection has taken over and a physician should be consulted.

Acute sinus infections produce nasal congestion, thick discharge, and pain and tenderness in the 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 nasal obstruction and offensive nasal or postnasal discharge is often present. Some persons develop polyps (fleshy growths in the nose) from sinus infections, and the infection can spread down into the lower airways leading to chronic cough, bronchitis, and asthma. Acute sinus infection generally responds to antibiotic treatment; chronic sinusitis usually requires surgery.

### **Structural Causes**

Included in this category are deformities of the nose and the nasal septum, which is the thin, flat cartilage and bone that separates the nostrils and nose into its two sides. These deformities are usually due to an injury at some time in one's life. The injury may have been many years earlier and may even have been in childhood and long since forgotten. It is a fact that 7 percent of newborn babies suffer significant nasal injury just from the birth process; and, of course, it is almost impossible to go through life without getting hit on the nose at least once. Therefore, deformities of the nose and the deviated septum should be fairly common problems -- and they are. If they create obstruction to breathing, they can be corrected with surgery.

One of the most common causes for nasal obstruction in children is enlargement of the adenoids: tonsil-like tissues that fill the back of the nose up behind the palate. Children with this problem breathe noisily at night and even snore. They also are chronic mouth breathers, and they develop a "sad" long face and sometimes dental deformities. Surgery to remove the adenoids and sometimes the tonsils may be advisable.

Other causes in this category include nasal tumors and foreign bodies. Children are prone to inserting various objects such as peas, beans, cherry pits, beads, buttons, safety pins, and bits of plastic toys into their noses. Beware of one-sided foul smelling discharge, which can be caused by a foreign body. A physician should be consulted

## **Allergy**

Hay fever, rose fever, grass fever, and "summertime colds" are various names for allergic rhinitis. Allergy is an exaggerated inflammatory response to a foreign substance which, in the case of a stuffy nose, is usually a pollen, mold, animal dander, or some element in house dust. Foods sometime play a role. Pollens cause problems in spring (trees) and summer (grasses) or fall (weeds) whereas house dust allergies and mold may be a year-around problem. Ideally the best treatment is avoidance of these substances, but that is impractical in most cases.

In the allergic patient, the release of histamine and similar substances results in congestion and excess production of watery nasal mucus. Antihistamine help relieve the sneezing and runny nose of allergy. Many antihistamines are now available without a prescription. The most familiar brands include Chlor-Trimeton®, Benadryl®, Clarinex®, Claritin®, Allegra®, and Zyrtec® (although most are also available in generic forms). Decongestants, such as Sudafed® (also available in generic forms) shrink congested nasal tissues. Combinations of antihistamines with decongestants are also available; for example, Actifed®, Allegra D®, Chlortrimetron D®, Claritin D®. All these preparations have potential side effects, and patients must heed the warnings of the package or prescription insert. This is especially important if the patient suffers from high blood pressure, glaucoma, irregular heart beats, difficulty in urination, or is pregnant.

Allergy shots are the most specific treatment available, and they are highly successful in allergic patients. Skin tests or at times blood tests are used to make up treatment vials of substances to which the patient is allergic. The physician determines the best concentration for initiating the treatment. These treatments are given by injection. They work by forming blocking antibodies in the patient's blood stream, which then interfere with the allergic reaction. Many patients prefer allergy shots over drugs because of the side effects of the drugs.

Patients with allergies have an increased tendency to develop sinus infections and require treatment as discussed in the previous section.

## **Vasomotor Rhinitis**

"Rhinitis" means inflammation of the nose and nasal membranes. "Vasomotor" means blood vessel forces. The membranes of the nose have an abundant supply of arteries, veins, and capillaries, which have a great capacity for both expansion and

constriction. Normally these blood vessels are in a half-constricted, half-open state. But when a person exercises vigorously, his/her hormones of stimulation (i.e., adrenaline) increase. The adrenaline causes constriction or squeezing of the nasal membranes so that the air passages open up and the person breathes more freely.

The opposite takes place when an allergic attack or a "cold" develops: The blood vessels expand, the membranes become congested (full of excess blood), and the nose becomes stuffy, or blocked.

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

In the early stages of each of these disorders, the nasal stuffiness is temporary and reversible. That is, it will improve if the primary cause is corrected. However, if the condition persists for a long enough period, the blood vessels lose their capacity to constrict. They become somewhat like varicose veins. They fill up when the patient lies down and when he/she lies on one side, the lower side becomes congested. The congestion often interferes with sleep. So it is helpful for stuffy patients to sleep with the head of the bed elevated two to four inches accomplish this by placing a brick or two under each castor of the bedposts at the head of the bed. Surgery may offer dramatic and long time relief.

## **Summary**

Stuffy nose is one symptom caused by a remarkable array of different disorders, and the physician with special interest in nasal disorders will offer treatments based on the specific causes. Additional information and suggestions can be found in the AAO-HNS pamphlets "**Hayfever, Summer Colds and Allergies**" and "**Antihistamines.**"