

EAR, NOSE, AND THROAT

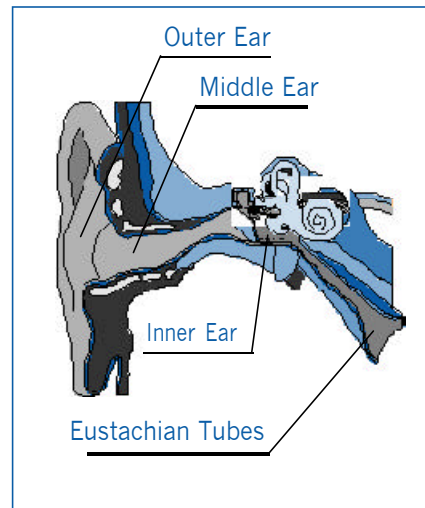


Hearing, smelling, and tasting are some of the sensations that link us with the outside world. These sensations also provide us with important information about our body. Taste and smell, along with hearing and balance, all respond differently at individual sites of the body. Although these organs can cause extremely pleasant sensations, they are also susceptible to infections and a wide variety of diseases. When diseases of the ears, nose, sinuses, or throat require specialized treatment, you may be referred to an ENT physician for care.



EARS

The ears are organs for both hearing and balance. The structure of the ear is divided into three sections: the outer ear, the middle ear, and the inner ear. The outer ear channels all sound and is lined with hairs and glands that secrete wax to protect the ear structure. The middle ear is like a mechanical device that passes the vibrations of sounds into the inner ear. The inner ear translates these vibrations into nerve messages (signals) that the brain can interpret. The middle and inner ear not only allow us to hear but help us keep our balance. The middle ears are connected to the throat through the eustachian tubes that equal the air pressure on each side of the eardrum. The ear is susceptible to infections, congenital disorders, and damage due to accidents and/or occupational exposure.



EAR DISORDERS

■ ACOUSTIC TRAUMA

Acoustic trauma is a common form of hearing loss. It is sometimes the result of a blow to the ear or an explosion that changes the air pressure drastically and suddenly. It also can be caused by long exposure to loud machinery or excessively loud music. Partial deafness after a nearby explosion or a blow to the ear is fairly common.

SIGNS AND SYMPTOMS

Hearing loss, tinnitus (ringing in ears).

TREATMENT

The only effective treatment for severe sensory hearing loss, caused by trauma, is a hearing aid. If you know you will be exposed to loud noise, protect yourself with specially designed earplugs.



■ ACUTE EAR INFECTION (OTITIS MEDIA)

Acute ear infection is also called otitis media and occurs in several forms. This is the result of a blockage of the eustachian tube or excessive production of fluid in the middle ear. When there is a sharp, continuous pain or pressure in the ear with hearing loss, the chances are good that an infection is present. In infants, the child is often restless and cries and pulls at his/her ear. Otitis media usually does not cause permanent hearing loss. If not properly treated, permanent hearing loss can result from damage to the eardrum, middle ear bones, or inner ear structures.

SIGNS AND SYMPTOMS Feeling of fullness in the ear; severe earache; possible fever and chills; hearing loss.

TREATMENT Until a physician is seen, you can relieve some of the pain by placing a warm (not hot) pack over the ear.

DRUG TREATMENT Aspirin or other analgesics may help.
Decongestants may improve eustachian tube function.
Antibiotics may be prescribed to fight the infection.

SURGICAL TREATMENT If there is great pressure on the eardrum, a myringotomy (a surgical incision in the eardrum) may be needed to relieve the pressure. In children, the myringotomy is likely to be performed under anesthesia in an ambulatory surgical facility. Hospitalization is no longer used for this procedure.

■ BAROTRAUMA (PLUGGED EARS)

Most of us have experienced “plugged ears” when changing altitudes. When you swallow or yawn, the eustachian tube opens and allows air to flow into or out of the middle ear. If the eustachian tube is blocked, differences in pressure can occur between the two sides of the eardrum. The symptoms usually disappear within a few hours after they begin. If the symptoms do not disappear within a few hours, see your physician.

SIGNS AND SYMPTOMS Moderate to severe pain in the ear(s); stuffy feeling in the ear; slight hearing loss; dizziness; tinnitus (ringing noise in the ears).

TREATMENT The muscle action from chewing gum or yawning may help to open the eustachian tube.

DRUG TREATMENT If you must fly while congested, try taking a decongestant or decongestant/antihistamine an hour before takeoff.

SURGICAL TREATMENT Myringotomy involves removal of any fluid through a surgical incision in the eardrum.



■ FOREIGN OBJECTS IN THE EAR

The objects that physicians remove from the ears range from marbles, tiny toys, and jewelry to insects, seeds, bits of paper and plastic, and even earplugs. Any small object in the ear can become lodged. An adult would be aware of something lodged in the ear, but in a small child, it may be more difficult to diagnose. If the child complains of ear pain and you see something in the ear, do not try to remove it — your efforts can damage the delicate tissues of the ear or force the object deeper into the ear. An object in the ear is not always an emergency situation and should be left untreated until seen by a physician.

Most foreign objects present no lasting problems. However, if the object is small enough and is pushed into the ear canal, the ear drum may be perforated or ruptured and the middle ear damaged, which is a potentially serious matter and can lead to a hearing defect.

SIGNS AND SYMPTOMS	Pain in the ear; hearing loss; sensation of something in the ear.
TREATMENT	In the case of a solid foreign object, do not use oil or water because this might force it to become further embedded in the ear. If the object is an insect, you might place a few drops of mineral oil in the ear to immobilize the insect. This may decrease the discomfort until you can see a physician who will remove the object by using small forceps, with or without gentle suction, as the ear is flooded with fluid.

■ MENIERE'S DISEASE

This disease is named after Prosper Menière who described the condition more than a century ago. The typical symptoms include episodes of vertigo with fluctuating hearing loss, a ringing, and a sensation of pressure in the affected ear. An excess of fluid in the inner ear causes pressure that produces severe disruption in the sense of balance and often in the sense of hearing. Some people have only rare attacks. For a few, however, Meniere's disease can cause complete deafness, and the vertigo and accompanying nausea can be frequent and debilitating.

SIGNS AND SYMPTOMS	Severe attacks of vertigo accompanied by nausea and vomiting; tinnitus (ear noise); muffled or distorted hearing; hearing loss.
TREATMENT	When the symptoms occur, lie very quietly and be as still as possible. A low salt diet, and restricting fluids may help. Cutting down on the use of caffeine, nicotine, and avoiding alcohol may also help.
DRUG TREATMENT	A physician may prescribe drugs to reduce the nausea and vomiting and combat the vertigo. Diuretics may also be prescribed.
SURGICAL TREATMENT	When the medical treatment fails to control the frequency and severity of attacks, surgery may be recommended.



■ OCCUPATIONAL HEARING LOSS (SEE ACOUSTIC TRAUMA)

The human ear can be damaged by prolonged exposure to noise. The intense vibration caused by loud sound waves damages the hair cells that line the inner ear. This kind of damage causes hearing loss that cannot be corrected. Some jobs carry the risk of hearing loss. The use of ear plugs is advised and can be purchased at any pharmacy. The more sophisticated ear muffs may be purchased at audio stores or through an audiologist.

SIGNS AND SYMPTOMS Progressive hearing loss.

TREATMENT If the hearing loss is the result of an occupational hazard, wear proper protective equipment to prevent further loss. If it causes problems in communicating, a hearing aid may be advised.

■ RUPTURED OR PERFORATED EARDRUM

One reason for the advice “never put anything into your ear canal” is the risk of perforating or breaking the eardrum. There are many ways besides direct contact that the eardrum can be broken or perforated, such as a blow to the head, a slap on the ear, a loud explosion, or water rushing forcefully into the ear. When the eardrum is perforated, there is a risk of infection developing in the middle ear. If you suspect you may have a perforated eardrum, see your physician as soon as possible.

SIGNS AND SYMPTOMS Earache; partial hearing loss; slight bleeding or discharge from the ear.

TREATMENT Placing a warm (not hot) pack over the ear should help ease the pain.

DRUG TREATMENT Aspirin or other analgesic drugs can relieve some pain. Antibiotics (oral and/or topical) to avoid infection may be prescribed.

SURGICAL TREATMENT A minor surgical procedure may be done to repair the tear if it does not heal within a few months.



■ SWIMMER'S EAR

Swimmer's ear, or external otitis, is due to constant moisture or persistent irritation and inflammation of the outer ear canal. Due to swimming, showering, and shampooing, our ears are constantly getting moisture in them. Because moisture in the ear canal could result in infection, dry your ears with a clean hankie or facial tissue every time you get them wet. Do not dry them with a cotton-tipped swab because that would remove the top layer of skin, along with protective bacteria and earwax — earwax serves many purposes and coats the ear canal to protect it from moisture. Always cover your ears while applying hair spray or hair color. If you are susceptible to ear infections, choose your swimming hole carefully — there is less chance of bacteria in a well-kept pool than in a pond. Swimmer's ear may also result from fungus or infection caused by attempting to remove wax with “tools” such as hairpins, or other sharp objects. Avoid using sharp objects to clean your ears as there is a risk of penetrating the eardrum.

SIGNS AND SYMPTOMS	Itching of the outer ear canal; pain in the ear, pain with moving the ear; oozing pus from the ear; hearing loss.
TREATMENT	Warmth seems to help (eg, a towel just out of the dryer, a covered hot-water bottle, or a heating pad set on low). A physician may irrigate and clean the canal, which should relieve irritation and pain.
DRUG TREATMENT (over the counter)	Aspirin or ibuprofen are suggested. Eardrops are available for killing germs and also drying the ear canal.
DRUG TREATMENT (prescriptions)	Antibiotics, antifungal, or pain medication is sometimes necessary.

■ TINNITUS

Tinnitus, the annoying sensation of noise in the ear when no sound is present, is a common complaint. It can be a symptom of almost any ear disorder or of other diseases (eg, cardiovascular disease and anemia). The mechanism that causes you to hear these sounds is not understood. Tinnitus is usually associated with hearing loss. Ear noise can be very annoying, but it is not a threat to your health. If you are experiencing tinnitus, you should avoid alcohol, caffeine, nicotine and loud noises — they all aggravate the condition.

SIGNS AND SYMPTOMS	Noise in the ear (eg, ringing, buzzing, roaring, whistling, or hissing); hearing loss.
TREATMENT	In some cases, the cause of the tinnitus can be treated and stopped, as with removal of built up wax or a foreign object.
DRUG TREATMENT	Antibiotics may be used to treat a mild middle ear infection when it is related to tinnitus.



■ WAX BLOCKAGE

The outer ear canal is lined with hair follicles and glands that produce wax. These hairs and wax trap dust and foreign particles to prevent them from entering the ear. Normally, the small amount of wax makes its way, over time, to the opening of the ear, where it falls out or is removed in the course of washing. New wax is produced in the canal as this happens. In some people, however, an excessive amount of wax is produced that hardens and blocks the ear canal. Wax blockage is one of the most common causes of hearing loss among people of all ages.

SIGNS AND SYMPTOMS

Partial hearing loss; ringing in an ear or ears; earache; sensation that ears are plugged.

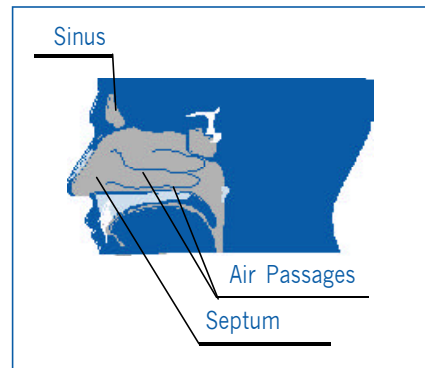
TREATMENT

DO NOT use any instrument such as cotton-tipped swabs, bobby pins, papers clips, or twisted pieces of paper. A few drops of baby oil, mineral oil, or glycerin placed in the ear with an eyedropper generally will soften the wax in a normal ear. Allow the excess to flow out of your ear. The liquid left inside will normally bubble away at the wax and soften it. Use a few drops twice a day for several days. Over the counter preparations are also available. Once the wax is softened, it can be removed. Fill a bowl with water that is body temperature. Fill a rubber bulb syringe with the water, then holding your head over the bowl, squirt the water gently into your ear canal. The stream of water should be under very little pressure. Turn your head to the side and let the water run out. Your physician uses a similar procedure or may scoop the wax out with an instrument called a curette; sometimes, a suction device is used.



NOSE AND SINUSES

The nose is the entrance to the respiratory system. The function of the nose is to filter, humidify, and warm the air as it moves from the nasal passage into the throat and lungs. Occasionally, the nose malfunctions, becomes the site of an inflammation (nosebleed, cold, hayfever, or a sinus infection). Fortunately, most of the problems with the nose are temporary. Even the loss of smell is temporary in most cases.



NOSE AND SINUS DISORDERS

■ NASAL OBSTRUCTION/CONGESTION

Nasal obstruction is a physical blockage of the flow of air in and out of the nose. Some of the causes are: a deviation of the nasal septum (the structure which divides the inside of the nose into two sides, nasal polyps, nasal tumors and enlarged adenoids. The nose can also become stuffy and congested where air does not flow freely due to swollen nasal tissues. Congestion can have many causes including hay fever, allergies, upper respiratory viruses, colds, flu, and inhalants. Both obstructions and congestion may vary in degrees of severity, ranging from mildly blocked, to near complete blockage.

SIGNS AND SYMPTOMS

Inability to breathe through the nose.

TREATMENT

There are many over the counter remedies to help control a stuffy or runny nose. One of the best temporary remedies for a stuffy nose is breathing steam that can loosen the mucus and clear your nasal passages. Use the products only for two to three days. When used for several weeks, more congestion is produced between applications. Your doctor may prescribe various medications to help relieve nasal obstruction.

SURGICAL TREATMENT

A deviated septum causes few problems and, ordinarily, no treatment is needed. However, for those with a blockage in an otherwise healthy person, surgery may be considered.



■ NOSEBLEED

Most people experience a nosebleed at one time or another. It may be caused by trauma from a sharp blow to the nose, but is most frequently caused by a cold, sinus infection, or dry air. Occasionally, there is no explanation and it is spontaneous. In younger people and children, the source of the bleeding is often from the septum, which separates the nostrils into two nasal chambers. To help prevent or decrease the frequency of nosebleeds, apply a softening ointment to the inside of your nose once or twice a day and use a humidifier or vaporizer. Don't pick at your nose.

SIGNS AND SYMPTOMS

Sudden bleeding from one or both nostrils.

TREATMENT

The following steps will stop the bleeding in a common nose bleed: Gently blow all clots out of the nose, then apply pressure with the thumb and forefinger to the fleshy front part of the nose for ten minutes.

After the nose bleed is stopped, avoid blowing. Blowing your nose can rupture damaged vessels and lead to another nose bleed.

Some people apply an ice bag to the nose in an effort to constrict the blood vessels. When the nosebleed becomes repetitive or is difficult to stop, it should be treated by a physician.



■ SINUSITIS

The sinuses are cavities in the bones around the nose. There are four sets of sinuses: the frontal (in the forehead), ethmoid (between the eyes), sphenoid (deeper in the head behind the eyes), and maxillary (in the cheek bones). They are connected to the nasal passage by small openings. Air passes in and out of the sinuses and mucus drains through these openings into the nose. Sinusitis is an infection of the lining of one or more of these cavities. When a sinus is infected, swelling may occur and close off the opening of the sinus preventing drainage of pus or mucus. Sinusitis is unpleasant but rarely is a threat to one's health. If left untreated, however, sinusitis can become chronic, making it more difficult to treat.

Pain in a sinus may develop from either an infection or pressure that results from the blockage of the sinus. There are two forms of sinusitis: acute – usually caused by allergies, inflammation from a virus (a cold), or inflammation from a bacterial infection; and chronic – most often the result of repeated or untreated acute infections. After several episodes of sinusitis, the sinus opening becomes narrowed or closed due to scarring from previous infections, reducing the ability of the sinus to drain. Over time, polyps or small growths may develop, aggravating the problem.

SIGNS AND SYMPTOMS

Pain around the eyes or cheeks; fever; difficulty breathing through the nose; toothache.

TREATMENT

There are a few things you can do to ease the symptoms. Stay indoors during extremely cold weather; avoid keeping your head down or moving quickly, as it aggravates pain; inhale steam from a kettle or vaporizer, but be cautious not to burn yourself; and drink lots of warm liquids to help dilute the secretions.

DRUG TREATMENT

If the infection is bacterial, your physician will prescribe a course of oral antibiotic therapy lasting 10 to 14 days.

Over the counter decongestants, in the form of drops, sprays, and tablets, may be helpful only for short intervals — continual use of a decongestant may overdry the mucosa of the nose and cause a nosebleed. Your doctor can advise the best course of treatment.

SURGICAL TREATMENT

Occasionally, sinusitis will persist despite medical treatment. If this happens, your physician may suggest a minor surgical procedure to improve the drainage.



THROAT

The throat is continually used to carry food to the digestive tract and air to the lungs, and is susceptible to infection — both bacterial and viral. The throat also is susceptible to abuse, such as heavy alcohol consumption, smoking, or improper use of the voice when singing or speaking. This can cause a range of problems from chronic laryngitis to growths on the vocal cords.

THROAT DISORDERS

■ CANCERS OF THE THROAT

Persistent hoarseness is an early symptom of vocal cord cancer. Most tumors occur on the vocal cords or in and around the larynx. People who smoke cigarettes, cigars, or pipes are at greater risk of developing throat cancers than those who do not. People who drink large quantities of alcohol are also at a greater risk. When hoarseness occurs, and lasts for more than two weeks, a physical examination with visualization of the vocal cords is indicated. Most cancers of the throat can be cured if discovered early. They must not be ignored because they can spread to other parts of the throat and ultimately, to other parts of the body.

SIGNS AND SYMPTOMS

Hoarseness; pain or difficulty swallowing; swelling in the neck (a late sign).

SURGICAL TREATMENT

Throat cancers detected early can be cured by radiation therapy or surgery when it is limited to only part of a vocal cord or the larynx. The localized tumors may not require removing the entire larynx (laryngectomy), but advanced forms do. If a laryngectomy is performed, the voice is lost. It may be replaced with a prosthesis, which would require retraining of speech.



■ LARYNGITIS

Laryngitis is an infection or irritation of the larynx (voice box) which is located at the top of the trachea (windpipe). When the vocal cords of the larynx become inflamed or irritated, they swell and this distorts sounds produced by the air passing over them. The voice then sounds hoarse or, in some cases, becomes soft and undetectable. There are two forms of laryngitis: acute and chronic, and the treatment options are often the same. Laryngitis is usually caused by a virus and it disappears with or without treatment over time. Laryngitis can occur in the course of another illness such as an ordinary cold, bronchitis, flu, or pneumonia. Irritations such as excessive talking or singing, allergies, and inhaling irritating substances can cause hoarseness and loss of the voice. Excessive drinking and smoking can also cause chronic irritation.

SIGNS AND SYMPTOMS Hoarseness; tickling and rawness of the throat; constant need to clear the throat.

TREATMENT Rest your voice as much as possible, inhale steam from a bowl of hot water or teakettle (avoid scalding), and drink warm, soothing liquids. This is useful in treating all forms of laryngitis. Chronic laryngitis must be treated by treating the underlying cause. If you smoke, stop; if alcoholism is the problem, it should be treated.

DRUG TREATMENT If it is caused by an allergy, it can be treated with antihistamines. If a bacterial infection is found, a course of antibiotics will be prescribed. If a viral infection is found, medication would not be helpful.

■ PHARYNGITIS

The pharynx is the segment between the tonsils and the voice box (larynx) called the throat. Acute pharyngitis is a sore throat most often caused by bacteria or a virus. A chronic form can be caused by a continuing infection of the sinuses, lungs, or mouth that spreads to the pharynx. Smoking, breathing in heavily polluted air, or consuming too much alcohol can contribute to chronic irritation and make the throat more vulnerable to infection.

SIGNS AND SYMPTOMS Sore throat; difficulty swallowing; fever.

TREATMENT If this is caused by a virus, antibiotics will not help. It is advisable to get plenty of rest, gargle with warm salt water (one-half teaspoon in a glass of warm water) several times a day, and lozenges may also help.

DRUG TREATMENT Aspirin or aspirin substitutes should relieve fever if the pharyngitis is caused by a virus. Virus symptom, however, may persist until the virus has run its course. If the sore throat is caused by bacteria, then antibiotic treatment is recommended. Certain strains of bacteria can cause not only pharyngitis, but also tonsillitis, nephritis, and rheumatic fever. If you take antibiotics for a bacterial infection, there are several very important reasons to keep taking the medication for the full 10 day course (don't stop taking them just because you feel better): it will protect you from getting more serious infections, and will reduce the spread of other bacteria which are resistant to treatment by an antibiotic.



■ TONSILLITIS

The tonsils are lymph nodes located at the back of the mouth, one on either side, which help filter out harmful microorganisms that could infect the body. Occasionally when they become overwhelmed by a bacterial infection, they swell and become inflamed. This is common, particularly in children.

SIGNS AND SYMPTOMS

Sore throat; fever; difficulty swallowing; hoarseness. Emergency symptom — difficulty breathing.

TREATMENT

If you or your child has symptoms of tonsillitis, get plenty of rest and drink plenty of soothing liquids. Gargling with warm salted water several times a day often helps lessen the pain.

DRUG TREATMENT

Aspirin or aspirin substitutes, such as acetaminophen for children, may be helpful to ease the symptoms.

If there is a bacterial infection, an oral antibiotic (usually for 10 days) is indicated. In the past, almost every child had their tonsils and adenoids (lymph tissue in the throat) removed. Now, with the use of antibiotics, surgery may not be necessary.

SURGICAL TREATMENT

In rare cases, the tonsils will become so enlarged that they may affect breathing and swallowing and removing the tonsils may be necessary.






ON THE HORIZON

Hearing loss from loud noises, drugs, or other irritants may not always be permanent with a new antioxidant preparation, either taken orally or squirted through a catheter, up to three weeks after injury. One drug, still under research, might work as a preventive for people who are routinely exposed to noxious noise.



WHAT TO DO

SEVERITY LEVEL	SYMPTOM	POSSIBLE DIAGNOSIS
 <p>Seek Medical Help Immediately!</p>	Tonsillitis symptoms accompanied with breathing difficulty	Tonsillitis
 <p>Make an appointment to see your doctor</p>	<p>Earache, partial hearing loss, slight bleeding or discharge from ear</p> <p>Pain in the ear, sensation of something in the ear</p> <p>Fullness in ear, severe earache, fever and chills, nausea and diarrhea, hearing loss</p> <p>Noise in ears, hearing loss</p> <p>Severe vertigo with nausea, ear noise, hearing loss or muffled hearing</p> <p>Pain around eyes or cheeks, fever, toothache, difficulty breathing through nose</p> <p>Inability to breathe through nose</p> <p>Hoarseness, pain or difficulty swallowing, swelling in neck (late sign)</p> <p>Sore throat, difficulty swallowing, fever.</p> <p>Sore throat, difficulty swallowing, fever, hoarseness</p> <p>Hoarseness</p>	<p>Ruptured or perforated eardrum</p> <p>Foreign object in ear</p> <p>Ear infection</p> <p>Tinnitus</p> <p>Meniere's disease</p> <p>Sinusitis</p> <p>Nasal obstruction</p> <p>Throat cancer</p> <p>Pharyngitis</p> <p>Tonsillitis</p> <p>Laryngitis</p>
 <p>Try the home treatment outlined in this chapter</p>	<p>Itching in outer ear canal, pain, or discharge</p> <p>Moderate to severe pain in ears, stuffy feeling (if associated with slight hearing loss, dizziness, or ringing in ears, call physician)</p> <p>Sudden bleeding from one or both nostrils</p>	<p>Swimmer's ear</p> <p>Barotrauma (plugged ears)</p> <p>Nosebleed</p>