Ear Cleanse - I

Structure

The human ear is one of the more remarkable parts of the human body, not only because of the beauty and unlikelihood of its structure, but also because of its remarkable sensitivity to sounds. From an anatomical point of view, the ear is divided into three parts: the outer, the middle and the inner ears.

**The outer ear** consists of the pinna (auricle) that leads into the external auditory canal. It collects sound waves from a wide area and funnels the sound into the external ear passage. On the inside surface of the outer ear is the tympanic membrane (eardrum). It is stretched across the end of the auditory canal separating the outer ear from the middle.

**The middle ear** consists of small bones called ossicles. They are the malleus (hammer), the incus (anvil) and the stapes (stirrup). They transfer sound waves to the inner ear. Located covering an opening into the inner ear is called the oval window and below is another membrane called the round window that stretches across the opening and further adjoins the cochlea in the inner ear.

The inner ear comprises a coiled structure called the cochlea. The snail-like spiral coiled tube contains the receptors for sound and the vestibular apparatus that is associated with a sense of balance. The cochlear duct contains the organ of Corti, which contains auditory receptor cells. The auditory nerve transmits sound vibrations to the brain.

Functions

Sound waves are perceived by the brain through the firing of nerve cells in the auditory portion of the central nervous system. The ear changes sound pressure waves from the outside world into a signal of nerve impulses sent to the brain.

The ear also plays an important role in sensing balance and position. The semicircular canals are fluid filled tubes. When our head moves the fluid in these canals
stays still. Sensory cells which can be found in these canals sense the movement of fluid over them as the head moves. In this way the brain has an awareness of the position of the head.

**Ear Problems**

Loss of hearing is the main problem of the ear. Hearing loss may be partial or complete, temporary or permanent, depending on the cause. It can be sudden or gradual, occurring over a period of days, weeks or years. Infection, trauma, noise pollution changes in atmospheric pressure and earwax build up or impaction can cause a sudden loss of hearing.

Hearing loss is not technically the same thing as deafness or hearing deficit. Deafness is an inability to hear that most often occurs at or before birth or as a result of a major illness or infection.

Hearing loss is divided into three categories: conductive hearing loss, sensor neural hearing loss and central hearing loss.

- **Conductive hearing loss**
  This occurs when the passage of sound waves is impeded in the external or middle ear. It may result from factors such as earwax build up, middle ear infection and inflammation, arthritis or trauma to the eardrum.

- **Sensor neural hearing loss**
  This is a consequence of damage to the structures or pathways of the inner ear. It may result from damage to the acoustic nerve (the eighth cranial nerve, also known as the auditory nerve), which carries information from the inner ear to the brain or from damage to tiny cells called hair cells in the inner ear. It can be caused by certain prescription medications including certain antibiotics, non steroidal anti-inflammatory drugs (NSAIDs), aspirin taken over a long period of time in high doses, quinine and infection of the inner ear. This type of hearing loss affects both the acuity and clarity of hearing.

- **Central hearing loss**
  This is very rare and is usually due to severe brain damage as a result of a brain tumour or stroke.

**Causes of Ear Problems**

- Ear wax
- Acoustic neuroma (damage to the auditory nerve)
- Anaemia
- Otosclerosis, a condition in which the small bones of the middle ear become immobile
- High blood pressure
- Stress and depression
- Trauma or Arthritis to the eardrum
- Use of certain antibiotics, anti-inflammatory drugs, Aspirin etc.
- Stroke, Shock etc.

**Earwax**

There are small glands in the ear canal that produce wax. Earwax is a yellowish substance secreted in the ear canal. This wax entraps dust and foreign bodies, so as to leave a clear passage for the sound waves. It protects the skin of the ear canal, assists in cleaning and lubrication and also provides some protection from bacteria, fungi, insects and water etc.

Ear wax can cause irritation when there is a blockage or impaction due to its accumulation deep inside the ear canal. The wax gets pushed up deeper into the ear while inserting cotton swabs into it, hence, causing blockage and discomfort. Another most obvious reason is the use of any pointed object, such as bobby pins, inside the ear in order to remove the superficial wax, which pushes the earwax more inside into the ear. People, who use ear plugs or hearing aids, are more prone to ear wax blockage.

**Noise Pollution:**

Noise pollution is one of the major reasons behind the gradual hearing loss in today’s time. It is believed that in earlier times, people were quite comfortable with their hearing capacity till the end of their lives but with advancement came noise pollution which harms our ear drums in long run, thus gradual decreasing our hearing capacity. The human ear can generally hear sounds with frequencies between 20 Hz and 20 kHz (the audio range). If there is a sudden loud burst, it can rupture eardrum hampering the hearing capacity of the individual.

**Ear infection**

Ear infections are quite common and if left untreated they can impair the hearing capacity as well as other hear problems.
Symptoms
The warning signs of impacted ear wax are as follows:

- Itching of the ear canal
- Fullness or plugged sensation
- Dizziness
- Ringing in the ear
- Discharge from the ear canal
- Decreased hearing
- Fever
- Vomiting or diarrhoea
- Green or yellow drainage from the ears
- Persistent and severe ear pain etc.
Ear Cleanse - II

It is very much clear that very often cause of hearing loss is same other medical condition and in such cases cleanse cannot be much of benefit. However, earwax is very common to all of us and reason to various ear problems.

1. **Saline Solution**

   **Ingredients**
   Sodium Chloride (salt) and water

   **Procedure**
   Mix 1 teaspoon of salt in around $\frac{1}{2}$ cup of warm water until it dissolves completely. Now, soak a cotton ball in the solution and squeeze few drops of it into the ear by slightly tilting your head upwards. Be in this position for some time so that the salty water properly gets inside the ear. Now, tilt your head in the opposite direction in order to drain out the solution from the ear.

   You can also pour little warm water in the affected ear. Leave it for a few seconds. Then, drain it out.

2. **Hydrogen Peroxide**

   **Ingredients**
   Hydrogen peroxide and water

   **Procedure**
Mix equal parts of hydrogen peroxide and water. Make sure that the concentration of hydrogen peroxide is not above 3%; otherwise, it may be harmful. Pour a few drops of it into the ear by tilting your head sideways. Let it settle down in the ear for some time. Now, tilt your head towards the opposite side and let the extra solution drain out.

3. **Baby Oil**

**Ingredients**
Baby oil or mineral oil or Glycerine

**Procedure**
Soften the ear wax by putting a few drops of baby oil or mineral oil with the help of a dropper. Let the oil settle in for some time by placing a cotton ball at the ear opening. This prevents oil from oozing out before reaching the ear wax. Take out the cotton ball after some time in order to drain out the extra oil from the ear. Oil helps to soften the impacted ear wax while facilitating the removal of ear wax.

4. **Vinegar Solution**

**Ingredients**
Vinegar, rubbing alcohol
Procedure
Mix equal parts of white vinegar and rubbing alcohol in a bowl or mug. Pour few drops into the ear clogged with ear wax. This solution greatly helps in getting rid of the ear wax, which can be irritating sometimes.

5. Oil

Ingredients
Olive oil or mustard oil

Procedure
One of the best ways to remove the ear wax is olive oil as it softens the ear wax, thus making it easier to come out from the ear. Put two-three drops of olive oil into the ear, affected by excessive blockage, during bedtime. Repeat it continuously for 3-4 days.

Do’s and Don’ts for Ear cleanse:

- In order to prevent blockage of ear wax, try keeping it moist by frequently running water into your ear while taking a bath. This will prevent the ear wax from getting dried up so that it doesn’t get blocked in the ear canal. Make sure, you drain the water from the ear after running it for some time.

- Don’t use any pointed objects inside the ears as it can cause ear infection while pushing the wax deeper.
• Avoid inserting cotton swabs or ear buds into the ear canal. You can use them to remove exposed ear wax at the ear opening, but don’t push them deep inside the ear canal. It can push the excess ear wax inside the ear canal, thereby resulting into an impact. Don’t use candle ear wax remover. Ear candles are another method to remove ear wax, but it can be really dangerous as you need to hold the lighted candle very close to your ear. It can even burn your ear.
• Don’t use cold water or a strong jet to drain out the excess ear wax. Strong jet can lead to the damage of the ear drum while cold water may result into dizziness.

• Don’t use any type of acidic liquid in order to soften the ear wax.
• It is a common myth to put hot oil in the ears. But, it should be avoided as hot oil can burn the skin inside the ear or ear drum, thereby causing infection.
• Omega 3 fatty acids are good for mitigating the problem of ear wax. So, include walnuts, avocados, salmon, albacore and ground flax seed in your diet.

Note: Doing a mouth cleanse helps the ear cleanse from within.