

# Age related hearing loss

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Hearing loss is a natural process of ageing. Most of us start showing some signs of hearing loss after fifty. This is not usually related to any health problem, but is rather due to a natural deterioration of the hearing system. The ears, like the rest of our body, age with time. A hearing loss caused by the normal ageing process is medically known as "Presbycusis" (prez-bee-a-cue-sis). This type of hearing loss diminishes hearing sensitivity to high tones or high frequencies and is also known as a high frequency hearing loss.

**High Frequency Hearing Loss** is one of the most common hearing disorders. It is not only caused by ageing, but also by other factors such as exposure to high levels of noise and the intake of some antibiotics or other ototoxic drugs (ie. medication toxic to the ears).

The young and healthy human ear can normally hear sound frequencies (tones) varying from a very low pitch of 20Hertz (Hz) up to a very very high pitch of 20,000 Hz. As we grow older we tend to lose sensitivity to the higher pitched sounds due to the degeneration of the hair cells in the cochlea. "Cochlea" is the name of the snail-shaped organ situated in the internal part of the ear. There are approximately 20,000 hair cells inside the cochlea, and each one responds to different frequencies. As we grow older these hair cells begin to degenerate, starting with the cells that respond to the higher frequencies.

## What is it like to have a high frequency hearing loss?

To have a high frequency hearing loss means that one hears all the different sounds but the high pitched ones are not heard at their right volume. In practical terms it means that speech sounds like "s", "f", "th" and "ch" for instance, cannot be detected, making it difficult to distinguish between words such as "fix"/"six", "face"/"faith", "deaf"/"death", "chat"/"fat", amongst others. It is hardly surprising that misunderstandings result!

However, a high frequency hearing loss can easily go unnoticed and may be hard to accept,



as it does not create a problem in many situations. In a one to one conversation in a quiet environment, for instance, it may not cause any problems at all.

**Background noise** is another matter. When trying to follow a conversation at a social function, for example,

the background noise can appear very loud, yet the person speaking next to us may seem to be mumbling. If we know the topic of the conversation and do some lip-reading, we may be able to make up for what we don't hear, but if we arrive in the middle of an unfamiliar topic, we won't have much hope of understanding the conversation.

Hearing difficulties occur because background noise consists mainly of low frequency sounds which someone with a high frequency hearing loss can hear very well. In such situations good high frequency hearing is very important to allow discrimination of the different speech sounds from the background noise.

Isolation may be the consequence of a high frequency hearing loss due to withdrawal from social situations. It is certainly frustrating to go to social gatherings when you cannot take part in the conversation.

## Progressive Hearing Loss

As the hearing loss progresses the low tones are also affected. This is when it becomes difficult to converse even in quiet situations. The volume of the TV may need to be louder, and people may talk louder as they cannot monitor the volume of their own voices. At this stage very little communication takes place and the person may withdraw from social and family contact.

It is not uncommon for an elderly person with a simple hearing loss to be mistaken as vague, forgetful or even senile when in fact the brain is perfectly all right. The ageing hearing system may in such cases be the main reason for all the misunderstandings, confusion and apparent memory impairment!

Tinnitus is often associated with an age related hearing loss and it is commonly the first sign of an ageing ear. Some people are more affected by

the Tinnitus than others; it may sound like a hissing, ringing, humming or cicadas noises and it is equal in both ears.

**Recruitment** is another symptom present in hearing losses due to age. At the same time as soft sounds cannot be heard, sounds, which are not uncomfortably loud to the normal ear, are perceived as incredibly loud and even painful by the ageing ear. It is due to recruitment that many elderly people cannot tolerate loud music or even the sound of children's voices.

There are things, which can be done to relieve these problems. And the sooner they are attended to the easier it is to fix them. Don't wait until your hearing loss is well established to look for help.

Damaged hearing cells cannot yet be replaced in humans but high tech hearing aids can improve one's ability to hear; making conversation easier even in noisy situations. Hearing aids also act in reducing or even eliminating Tinnitus perception. **Hearing aids** are also effective in reducing intolerance to loud sounds (recruitment), as they limit the volume of the sound delivered to the ears by compression mechanisms.

It is important however, to have in mind that a hearing aid is not a fashion item but a medical device. Qualified audiologists are the best professionals to fit hearing aids, and will offer you unbiased advice to find the best solution to your need.