

Your Guide to Ear Wax

Ear wax (or the medical term, cerumen) plays an important role in the proper functioning of the ear canals. For some people it can be soft and sticky, while for others it can be drier and flaky. For most people, ear wax causes no problems and requires no treatment, however, for others it can cause a range of symptoms and may require professional removal. Below, we will examine the function of ear wax, symptoms of excessive wax, along with various management techniques which can be employed.

What is ear wax?

Ear wax is the product of gland secretions mixed with exfoliated skin cells. It forms a protective film, provides lubrication, and has antibacterial properties to protect the ear canal. Working as the ear's self-cleaning mechanism, it traps dust and dirt which are then excreted from the ear canal, aided by the natural "conveyer-belt" migration of dead skin cells within the ear canal. The normal movement of the jaw also assists with this migration.

Key points

- The ear has a natural self-cleaning mechanism and for most people wax removal is not required.
- When necessary, softening solution can be used in the first instance to facilitate self-cleaning.
- Professional removal should be performed by an appropriately-trained health care provider if softening solution alone is insufficient.
- Microsuction and manual removal are the gold standard techniques.
- Ear candles and cotton buds are not effective and have the potential to cause harm.

Why does ear wax accumulate?

When the ear's natural self-cleaning mechanism is disrupted, wax can "back-up" and lead to impaction. Irritation from foreign objects placed in the ear (e.g. cotton buds, ear plugs, hearing aids, etc) can often impair normal wax migration. Cotton buds in particular tend to push wax deeper into the ear canal and this is something we see very commonly in our clinic.

Narrow ear canals can have a higher chance of troublesome wax. Narrow canals tend to occur more frequently with age as the skin and cartilaginous components of the outer ear can sag and partially close off the ear canals (known as a "collapsed canals"). In addition, a decrease in the functioning of wax glands tends to occur with age and results in a drier wax that therefore migrates more slowly. A study from 2007 suggested that wax impaction is present in up to 57% of older adults, compared with 5% of younger, healthy adults.

How much wax is too much?

It is important to note that everybody produces different amounts of ear wax. Unless you are experiencing ill effects as a result of your ear wax, there is generally no cause for concern.

Symptoms of excessive ear wax

Common symptoms you may experience can include the following:

- hearing loss
- pain
- itching
- ear pressure or fullness
- dizziness
- tinnitus (ringing in the ears)
- persistent cough

When ear wax becomes impacted, it will usually not clear spontaneously. Proper removal of impacted ear wax will often resolve symptoms immediately or within a couple of days. Removal will also be required to facilitate viewing of the ear drum and before having a hearing assessment.

Removal techniques

Softening agents (Available at Hello Hearing)

The first-line treatment option for wax is softening drops or sprays. These help to lubricate the ear canal to promote migration of the wax. In many cases, this method alone is not successful in achieving adequate removal, and an active removal technique will need to be employed. In these cases, the use of softening agents is still often beneficial and will generally lead to easier removal.

Contraindications: perforated ear drum.



Irrigation/syringing (Not performed at Hello Hearing)

Irrigation, or ear syringing, is predominantly used by GPs and nurses and is the technique of directing water under pressure down the ear canal to flush out ear wax. Traditionally, this was performed using a large syringe to manually flush the ear canal. More commonly today, an electric water pump is used with a regulated flow pressure. The pressure needs to be strong enough to shift the



wax (which is why softening agents are important), but not too strong due to the risk of damage to the ear drum. In addition, there is also an increased risk of ear infection post-procedure given the introduction of water to the canal, especially if there is no effort made to dry the ears following. This procedure is not performed at Hello Hearing due to the inherent higher risks compared with alternative treatments. One study reported approximately 1 in 1000 patients experiencing major complications

following syringing (e.g. perforated ear drum). People can also experience tinnitus or vertigo, however, usually these are short-lasting.

Contraindications: perforated ear drum, current ear infection, history of ear surgery, single-sided deafness, compromised immune system.

Manual removal (Available at Hello Hearing)

This technique is more commonly performed by Ear, Nose and Throat (ENT) specialists, and a minority of Audiologists and GPs and Nurses. It involves use of instruments such as a curette or hook to scoop wax from the ear canal under visualisation from either an ENT microscope or microscopic glasses (eg. loupes). For wax that is not completely obstructing the ear canal, and particularly when it is located in the outer region of the canal, this is often the quickest, most comfortable and effective method.

Contraindications: very deep wax, very soft wax.



Microsuction (Available at Hello Hearing)

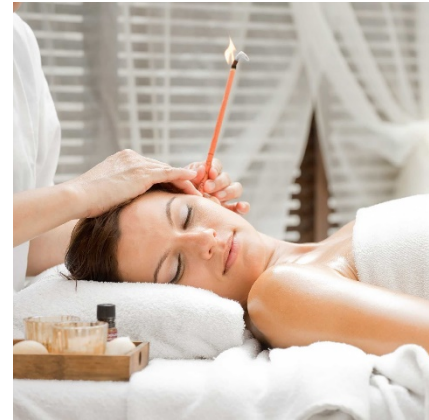
Again, this technique is most popular with ENT specialists, with only a small number of Audiologists, GPs and Nurses also practicing it. Microsuction involves the use of a very small suction tube to lift or vacuum wax out of the canal, whilst being visualised under a microscope; hence the name “micro-suction”. In situations where manual removal can't be employed, microsuction is generally the most safe and efficacious method. It is usually very well tolerated by patients, with noise discomfort being the most common complaint. This technique also has the advantage of not exposing the ear to moisture and therefore has a much lower risk of infection. In view of all this, microsuction is generally regarded as the gold standard in wax removal.



Clinical Audiologist, Matthew Le Dilly, setting up the microscope to perform wax removal using microsuction, one of the specialty services offered at Hello Hearing

What about Ear Candles?

Ear candles are hugely popular and are marketed to be a natural, safe and effective way to remove excess ear wax, along with being purported to provide a raft of other health benefits, such as treatment for ear ache, sinus problems, tinnitus, hearing loss and vertigo. Whilst lying on your side, the candle tip is placed in the ear canal and the top end is lit and begins to burn. The claim is that the heat of the flame creates a vacuum which draws wax and other impurities from the ear canal and into the hollow candle. Once the procedure is finished, the candle is cut open vertically to reveal the wax that was drawn out of the ear. But is that really what the dark coloured matter is?



A comparative test was performed whereby an ear candle was used in the normal way (in an ear canal), while another ear candle was also used, not in an ear canal, but placed over an empty cup. At the end of the test, both candles were cut open and both revealed the very same dark, waxy material. Viewing of the ear canal before and after the procedure showed no change at all in the amount of wax.

The matter inside the candles was found to be simply ash and candle wax – definitely not ear wax! The reality is that the extremely low-pressure vacuum created by an ear candle is nowhere near strong enough to draw out ear wax, even in its softest form.

Further to this, ear candles are not just ineffective, they are associated with a number of potential complications or injuries such as facial burns, burns to the ear canal or ear drum, ear canal blockages, ear drum perforations, ear infections, and hearing loss. The use of ear candles is therefore not recommended in any situation.

What about Cotton Buds?

Cotton buds are frequently used by individuals to “clean” their own ears. It can be very tempting to use them in the ear due to their size, easy availability, and the satisfaction of seeing the “evidence” on the end of the cotton bud making them appear effective.



While it is true you can remove some ear wax with a cotton bud, the reality is that in many cases it pushes a greater amount of wax further down the ear canal. This can then lead to the opposite desired effect, increasing the risk of wax impaction. In addition, when digging blindly into the ear canal, there is a greater risk to the delicate skin of the ear canal, ear drum, and of causing secondary ear infection. We commonly see problems in our clinic as a direct result of cotton bud use. Cotton buds are therefore not recommended for use in the ear.



*Impacted ear wax
within the ear canal*