Microsuction: The Gold Standard in Safe Ear Wax Removal

By ProRehab Audiology | June 2026

Earwax — or cerumen, to give it its clinical name — is one of the body's most elegant self-cleaning mechanisms. Produced by specialised glands in the outer ear canal, it traps dust, debris, and microorganisms, then gradually migrates outward through jaw movement and epithelial migration (Bhargava & Roland, 2004). For most people, this process works silently and efficiently. But for a significant minority, cerumen accumulates faster than it can be cleared, leading to blockage, hearing loss, and discomfort — and a need for professional intervention.

Among the available methods for cerumen removal, **microsuction** has emerged as the procedure of choice for audiologists and ENT surgeons alike. This article explores the evidence base for microsuction, how it compares to traditional alternatives, who benefits from it, and what patients should expect.

What Is Microsuction?

Microsuction is a dry procedure in which a trained clinician uses a fine, low-pressure suction device — typically attached to a speculum — to remove earwax directly from the ear canal under direct visualisation. This is most often performed using either a binocular operating microscope or, increasingly, an endoscope that projects a magnified image onto a screen in real time (Doshi et al., 2015).

The key clinical advantage of microsuction lies in precisely that: direct visualisation throughout. At no point is the clinician working "blind." This stands in fundamental contrast to ear syringing, where water is directed into the canal without sight of the wax or canal walls.

The Evidence: How Does Microsuction Compare?

Microsuction and Irrigation: Complementary Methods

Electronic irrigation — the modernised successor to traditional ear syringing — remains a well-established and clinically appropriate method of cerumen removal, and continues to be widely used in primary care and specialist audiology settings alike. For patients with an intact tympanic membrane, no history of ear surgery, and soft or moderate wax accumulation, irrigation is an effective and comfortable option that many patients tolerate very well. NICE CKS (2023) acknowledges irrigation as an acceptable intervention in suitable candidates, and a systematic review by Burton and Doree (2009), published in the *Cochrane Database of Systematic Reviews*, confirmed that both irrigation and suction-based methods can achieve good clinical outcomes when applied appropriately.

The key principle in choosing between the two methods is thorough clinical assessment. A careful patient history and otoscopic examination before any procedure allows the clinician to select the most suitable approach on an individual basis. Where irrigation is appropriate, it is offered; where clinical factors indicate otherwise, microsuction is the method of choice.

There are, however, specific contraindications to irrigation that must be observed. In line with NICE CKS (2023) guidance, irrigation is contraindicated in patients with a current or previous tympanic membrane perforation, ventilation (grommet) tubes in situ, a history of mastoid surgery or mastoid cavity, cleft palate repair, or recurrent otitis externa. In these groups, microsuction — as a dry procedure performed under direct visualisation — is the safe and recommended alternative (NICE CKS, 2023; Harkin & Vaz, 2007). A thorough pre-procedure assessment ensures that every patient receives the most appropriate method for their individual clinical circumstances.

Versus Manual Instrumentation (Curette)

Wax curettes — small hooked or looped instruments used to mechanically dislodge and extract wax — are also used in clinical practice, often in combination with microsuction. Used alone without visualisation, however, they carry the risk of canal wall trauma and, in inexperienced hands, tympanic membrane damage. When used under direct endoscopic or microscopic view, curettes are a valuable adjunct — particularly for hard, impacted wax that suction cannot dislodge alone (Guest et al., 2004).

Versus Ear Drops (Cerumenolytics)

Softening drops — containing olive oil, sodium bicarbonate, or proprietary agents such as docusate sodium — are often recommended as a first-line self-care measure and can facilitate subsequent mechanical removal. A Cochrane review by Loveman et al. (2004) found that while drops may reduce the number of irrigation attempts needed, there is insufficient evidence that any single cerumenolytic is superior, and drops alone are unlikely to resolve significant impaction. In the microsuction setting, pre-treatment with olive oil

drops for three to five days prior to the appointment is widely recommended by practitioners to soften wax and improve procedural ease (NICE CKS, 2023).

Who Is Microsuction Suitable For?

Microsuction is appropriate for the vast majority of patients presenting with symptomatic cerumen impaction, including:

- **Hearing aid users**, whose devices occlude the canal and impede natural wax migration, leading to accelerated accumulation (Barker et al., 2014)
- **Patients with perforated or previously repaired tympanic membranes**, for whom water-based methods are contraindicated
- **Those who have undergone mastoid surgery or have a mastoid cavity**, where irrigation carries a high risk of complications
- **Patients with recurrent otitis externa**, where water introduction may precipitate further infection
- **Individuals with narrow, hairy, or anatomically challenging ear canals**, where microsuction's precision under magnification offers a clear advantage
- **Patients with tinnitus**, where prompt wax removal may provide immediate symptomatic relief if occlusion is contributory (Hoare et al., 2014)

It is worth noting that microsuction is not suitable for every case. Patients who are particularly sensitive to sound may find the suction noise (a high-pitched tone during the procedure) uncomfortable, and in very rare cases, stimulation of the vagal branch of the auricular nerve can trigger a vasovagal response (Kennedy & Sherlock, 2011). These risks, though uncommon, underscore the importance of obtaining a thorough clinical history and performing otoscopy before any intervention.

The Procedure: What Patients Can Expect

A typical microsuction appointment at a specialist audiology clinic runs between 20 and 45 minutes. The clinician will begin with a detailed history — including previous ear surgery, tinnitus, dizziness, and current hearing aid use — followed by otoscopic examination of both ears.

Using a speculum and either a microscope or an endoscope, the clinician then introduces the suction probe into the canal under direct view, carefully removing wax section by

section. Most patients describe the sensation as mild pressure and a high-pitched suction noise rather than discomfort; for the majority, it is well-tolerated without topical anaesthesia.

Post-procedure, the clinician will re-examine the canal and tympanic membrane, document findings, and advise on maintenance — typically recommending olive oil drops two to three times weekly as a prophylactic measure (Aung & Mulley, 2002).

The Case for Specialist-Led Earwax Removal Services

As NHS primary care capacity has contracted, the demand for community-based, specialist-delivered earwax removal has grown considerably. Audiology services offering both microsuction and irrigation provide patients with access to a full range of clinically appropriate options in a single appointment, guided by expert assessment rather than a one-size-fits-all approach.

This model reflects broader trends in NHS service transformation. Allied Health Professional-led community services are now explicitly encouraged by NHS England's Long Term Plan (NHS England, 2019), with the expectation that specialist practitioners will increasingly manage conditions previously routed through GP and secondary care pathways — delivering better access and outcomes for patients.

Conclusion

Microsuction and irrigation are both well-established, evidence-based methods of cerumen removal, each with its place in clinical practice. The most important factor is not which method is used, but that the choice is made following thorough assessment — ensuring the right procedure is delivered safely to the right patient. For those with contraindications to irrigation, microsuction provides a proven, precise, and comfortable alternative. For suitable candidates, both methods offer effective relief from the discomfort and hearing loss that cerumen impaction can cause. Expert clinical assessment, delivered by a trained audiologist, remains the foundation of safe and effective earwax management.

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