Poynton Ear Care

Ear Care Policy

Purpose

Poynton Ear Care protocol covers the procedure for safe and effective Otoscopic Examination, Ear Wax Softening, Aural Microsuction, Ear Irrigation and Instrumentation.

This protocol outlines how to perform safe, effective ear care for earwax (cerumen) removal for clients accessing Poynton Ear Care services in line with Practice Guidance in Aural Care (Ear Wax Removal) written by the British Society of Audiology and guidelines written by The Rotherham Primary Ear Care Centre and The Hearing Lab.

This protocol aims to ensure all clients who require ear care receive minimum risk and limited adverse effects during and after ear wax removal in order to maximise their quality of life.

This protocol is written for all Audiologists at Poynton Ear Care that have undergone theoretical training and practical mentoring in Ear Irrigation and Instrumentation (provided by The Rotherham Primary Ear Care Centre) and Aural Microsuction Training (provided by The Hearing Lab).

Introduction to Ear Care

Earwax (cerumen) build-up can be the cause of various difficulties, including contribution of hearing loss and ear discomfort. Wax can also contribute to outer ear infections. The presence of cerumen is a normal secretion of the ceruminous glands in the outer meatus. It is slightly acidic, and can be seen in two most common forms; wet and sticky form or dry and flaky. Epithelial migration and jaw movements assist the movement of wax to the entrance of the External Auditory Meatus (EAM) where it emerges onto the skin. Small amounts of wax are normally found in the EAM. Excessive cleaning, ear infection or dry skin conditions can be indicated if wax is absent.

Accumulation of wax can result in partial or total occlusion of the EAM. Excessive wax should be removed before it becomes impacted close to the Tympanic Membrane (TM), as it can give rise to tinnitus, hearing loss, vertigo, pain and discharge.

A build-up of wax is more likely in the following cases; older people, those with learning difficulties, hearing aid users, people who insert implements into the ear or people who present with narrow ear canals. A build-up of wax may also occur as a result of anxiety, stress and dietary or hereditary factors.

Benefits, Contra-indications, Precautions and Risks of Ear Care

Benefits of wax removal include:

- improving conduction of sound to the TM when wax is cleared
- facilitating the production of hearing aid mould impressions
- removing foreign bodies and discharge, keratin or debris, allowing more accurate examination of the EAM and TM membrane and other test methods, e.g., tympanometry, hearing aid probe microphone measurements
- improve the blocked/occluded feeling in the EAM
- remove the likelihood of whistling/feedback during hearing aid insertion

Contraindications to wax removal (determined during the Audiological history – see Appendix 1) include:

- previously experienced complications following this procedure in the past
- middle ear infection in the last six weeks
- any form of ear surgery (apart from grommets that have extruded at least 18 months previously and it is documented subsequently that the TM membrane is intact)
- a known or visible perforation
- a mucous discharge in the past twelve months
- evidence of acute otitis externa with pain and tenderness of the pinna
- history of cleft palate, repaired or not

Precautions to wax removal include:

- known problems with tinnitus
- a recently healed perforation
- known problems with dizziness/imbalance
- client on anti-coagulants or high dose steroids, is immunocompromised or has had radiotherapy of the head or neck

Risks to wax removal include:

- direct trauma from the manual instruments, e.g., loops/curettes or abrasions/bleeding from the suction head nicking the EAM
- pain and discomfort depending on client's pain thresholds
- pressure trauma from the irrigation or suction device on the TM
- infection from *Pseudomonas* or other microbial agents following water irrigation or ear abrasions with active skin conditions
- infection risks due to skin-to-skin contact, bodily fluid transmission by airborne aerosol droplets, e.g., Hepatitis B virus in ear wax
- vertigo after ear irrigation due to temperature changes in the EAM near the TM
- noise exposure particularly during Aural Microsuction where levels can exceed 85dB A or more and exacerbate tinnitus if present prior to procedure
- overcleaning of the EAM causing dryness and irritation causing otitis externa
- confusion, agitation, or inability of client to cooperate during procedure – adaptations and considerations need to be made for clients with cognitive decline or learning difficulties.

Pre-Ear Care preparations

Infection control measures should be implemented prior to any session as per the Poynton Ear Care Infection Control procedure. The Audiologist at Poynton should start the session by introducing themselves, sharing their name, ID and check the client's details and who is also attending with them. Before careful physical examination of the ear a discussion with client/family/carers about all the available treatment options, the procedures involved. The client/family/carer will then be informed of the Ear Care consent form (appendix 2), risk factors and contra-indications to the procedure checked using the history form. The consent is then signed (see Appendix 2). An explaining about the privacy policy and confidentiality should be give if requested.

During the ear care session, each step of the procedure should be explained so they understand the implications of any movements or behavioural issues during the ear removal. Clinical judgement is taken to stop the procedure at any point where safety of the client is compromised, to avoid unnecessary trauma to the ear canal or associated anatomy and to prevent future infection risk. This procedure should be carried out with both client and Audiologist seated (ideally on a swivel stool) and under direct vision, using a headlight and external light source for illumination. Otherwise the use of binocular head loupes with its own source would be recommended as it allows a 3D view which enables good depth perception which is important to assist in the accordance of the ear canal.

Care must be taken for some clients who find it hard to support their own head steadily in an upright position, e.g., Parkinson's disease. The Audiologist needs to then assess if the head can be supported in any other way to minimise movement and allow safe completion of the procedure. Personal Protective Equipment (PPE) must be used throughout the session and consist of disposable gloves, disposable face mask, clinical disposable gown/apron and a reusable clear visor. Infection control measures will be adhered to in line with the Poynton Ear Care Infection Control Procedure.

Otoscopic Examination

Otoscopy should be carried out prior to any ear procedure. Single use speculae must be used for each observation for each ear and disposed of in the clinical single use bin.

Initially examine the pinna, outer meatus and adjacent scalp, checking for any previous surgery scars. Note any signs of infection, discharge, swelling or skin lesions/defects. Identify the largest suitable speculum that will fit comfortably into the ear and place it on the otoscope. Touch the tragus to check if the client presents with any discomfort. If there is a localised infection or inflammation, then the procedure should be stopped as the examination may be difficult and cause distress.

Gently pull the pinna upwards and outwards to straighten the EAM (directly down and back in children). Holding the otoscope like a pen, resting the small digit on the client's cheek for stabilisation, insert the speculum gentry into the meatus to pass through the hairs at the entrance to visualise the EAM and TM membrane. The Audiologist should be familiar with anatomy of the TM membrane – the light reflex, handle of malleus, pars flaccida, pars tensa and anterior recess. If the ability to view all of the TM membrane is hampered by the presence of wax, then wax removal via is recommended. From observation of the following, it is not recommended to proceed if these is visual evidence of;

- otitis externa

- a foreign body
- middle ear fluid/suspected glue ear as a result of no light reflex and retraction of the TM
- perforation of the TM
- evidence of incision scar or mastoid cavity

The Audiologist at Poynton Ear Care will be a video otoscope when possible, to create of digital record of the appearance of the ear prior to and post wax removal procedure which can assist the process of onward referral.

A referral to the client's GP and/or ENT specialist is then recommended based upon the origin of the problem.

Once observation is complete, carefully check the condition of the skin in the EAM for colour and appearance when withdrawing the otoscope. Document on the Poynton Ear Care Ear Examination Chart any visual observations of both ears in terms of condition and appearance of the TM and EAM (see Appendix 2)

Ear Care Procedures

Experienced Audiologists must use their clinical judgement on the best method for wax management and removal.

Use of softening agents

Following otoscopic examination, if impacted hard wax is present in the EAM, softening agents might be needed prior to any further procedures being performed.

Visit Audiologist for Ear Examination

↓

Evidence of impacted hard wax in ear canal

↓

Olive oil (stored at room temperature) – 2 drops in ear canal twice a day for a week

Use dropper whilst head tilted at 45 degrees, stay in position for a few minutes

Do not use cotton wool in the ear after drops as it will absorb the olive oil

↓

Revisit Audiologist - consider further interventions like Aural Microsuction and Ear Irrigation

Alternatively trial another softening agent, e.g., Earol olive oil spray or sodium bicarbinate drops, Earex or Otex contact hydrogen peroxide so are more caustic (some products contain nut oils)

N.B. There is no evidence to confirm one wax softening agent to superior to another. Olive oil is often chosen as it known to be less of an irritant to some client's so is often the first choice of product.

It is also known that over softening can make Aural Microsuction difficult and result in Ear Irrigation procedure being the next preferred method of wax removal.

Aural Microsuction

Aural Microsuction is considered a gentle, non-invasive, effective way of clearing ear wax with low infection rate. The client must be informed

A CE marked medical device must be used for Aural Microsuction as it has met a legal requirement for safety, quality, and performance when it is used as described by the manufacturer. Suction unit manufacturers state that the device is to be used to remove fluids from the airway or respiratory system and infections materials from wounds. The Medicines and Healthcare Products Regulatory Agency (MHRA) is responsible for ensuring that medical devices work and are acceptably safe. "Off table use of medical devise"

During Aural Microsuction the client is best informed with a dialogue similar to as follows*:*

"Micro Suction is just as it sounds; micro because I'll be wearing/using a microscope which will allow me to see everything I'm doing as I do it and suction because I'll be using a small medical vacuum to remove the wax. It has very low suction power and is extremely gentle and the most you should feel is a gentle pulling sensation. The one downside to micro suction is that is can be a little noisy - you will hear the air from the suction process rushing in your ear, wax shooting up the tube and you may get some whistling too. If this or anything else ever becomes uncomfortable, please let me know and I will stop. I have some water on the side. This is not going into your ear and is just for me to clean through my equipment. You may have noticed some other instruments around. If I need to use any other methods other than micro suction, I will stop and explain things first. The procedure will not take any longer than 15 minutes per ear if routine. If it requires any further treatment, we will allow the ear to rest and make another appointment"

<u>Method for Aural Microsuction</u>

A new suction tube is placed onto the suction hose attached to the suction machine with the plastic handle fitted into the tube so that the metal tube is naturally bending back horizontally. An appropriately sized speculum (4,5 or 6mm) is securely held around the serrated edge (thumb at bottom and forefinger on top), held in the hand closest to the client's face. Suction recommended with the suction tube in the dominant hand, e.g., right if right-handed. The pinna should be pulled backwards and upwards to open and straighten the ear canal and improve line of sight. Before placing the speculum into the ear canal, the little finger of the hand holding the speculum must be braced against the client's cheek to avoid injuring the ear if a sudden movement may occur.

Using normal vision, finger placed on the client's head behind their ear/on their cheek and rest suction tube along the inside edge of the speculum. Looking through the loupes/microphone allows suctioning to begin. Both hands to remain braced against the client's head whilst the suction tube is in the specula or client's ear. The suction instrument is then directly applied to the ear wax avoiding contact with skin and the ear drum.

Immediately following the procedure, the client may feel unsteady and advised to avoid fast movements such as sitting up or standing up abruptly.

Ear Irrigation and Instrumentation

The Propulse ear irrigator is the system used by the Audiologist at Poynton Ear Care. It has a pressure variable control, allowing the flow of water to be easily controlled by commencing irrigation on the minimum setting. For client safety, the manufacturers have limited the maximum pressure available: this limit is stated in the user instructions. The Propulse also has specific disinfecting guidelines issued (see guidelines for cleaning the ear irrigator below). The ear irrigator uses tap water at 38-40 degrees Celsius as it is a comfortable temperature for the client and avoids being too cool.

Method for Ear Irrigation

- Consent (appendix 2) should be obtained and documented prior to proceeding by client/family/carer
- Examine the ear using an otoscope (see above)
- Check whether the client has had their ears irrigated previously, or if there are any contraindications why irrigation should not be performed.
- Place the disposable trough/receiver and a paper towel on the client's shoulder and under the ear to be irrigated. Ask the client/family/carer for assistance in holding the trough.
- Fill the reservoir of the irrigator; check the temperature of the water in the tank is approximately 38 – 40 degrees Celsius. Set the pressure at minimum.
- Connect a new tip applicator to the tubing of the machine with a firm 'push/twist' action. Push until a "click" is felt.
- Direct the irrigator tip into the trough/receiver and switch on the machine for 10-20 seconds to circulate the water through the system and eliminate any trapped air or cold water. This allows the client to be accustomed to the noise of the machine.
- Check the temperature of the water again.
- Twist the tip so that the water can be aimed along the posterior wall of the external auditory meatus (towards the back of the client's head).
- Gently pull the pinna upwards and outwards to straighten the EAM (directly backwards in children).
- Ensure that the torch light is directed down the EAM. Place the tip of the nozzle into the EAM entrance and, using the foot control, direct a stream of water along the roof of the EAM and towards the posterior wall (direct towards the back of the client's head).
- Increase the pressure control gradually if there is difficulty removing the wax. It is advisable that a maximum of one reservoir of water per ear is used in any one irrigation procedure.
- Periodically do otoscopic examination and inspect the solution running into the receiver.
- If the client shows any adverse behavioural reactions during the session, stop immediately.
- After removal of wax or debris, dry mop excess water from the meatus under direct vision using the Jobson Horne probe/carbon curette/ear mop and cotton wool (removing the water with the cotton wool tipped probe reduces the risk of infection.
- Perform otoscopic examination as before as per section above.

Documentation to be completed on the Poynton Ear Examination chart found in Appendix 3.

Method for Ear Instrumentation

Dry removal tools are excellent for loosening stubborn wax before using Microsuction to gently continue the extraction.

Hold the instruments (loops, curettes and forceps) by bracing a finger on the client's cheek to steady the hand whilst using the other hand to pull the pinna backwards and upwards to open and straighten the ear canal for the best line of sight. Use the working end of the instrument to scoop out the wax onto a cleaning wipe,

avoiding the skin at all possible. Hard, crusty wax can often be manoeuvred out of the EAM with a Jobson Horne probe or forceps.

The procedure will be abandoned if the client's reports any pain or if the wax is too sold to move, too deeply positioned in the ear canal or if the usual procedure time has been significantly prolonged. An alternative method for removal or wax softening would then be advise.

Otoscopic examination should be performed routinely during this procedure.

Post Ear Care Procedure

Infection control measures should be implemented after to any session as per the Poynton Ear Care Infection Control procedure. After all procedures client/family/ carers must be informed to report any physical reactions. This might include discomfort, pain, swelling, discharge or odour or disruption to the hearing post procedure. If any of these reactions arise, they are to seek advice from their GP and advise the Audiologist at Poynton Ear Care.

Otoscopic examination (with video otoscopy if possible) to be re-performed to show and explain to the client the final condition. Discuss future was management if necessary. Any photos taken to be stored for future reference and notes recorded on the Ear Examination form (Appendix 3) regarding post Ear Care condition. All instruments used in any procedures are cleaned as per the manufacturer's guidelines for that item of equipment and in line with the Poynton Ear Care Infection Control Procedure.

Professional Scope

Poynton Ear Care is responsible for annually updating the Audiology Ear Care protocol annually.

All Audiologist participating in Ear Care must have completed the Ear Irrigation and Instrumentation Study Day at Rotherham Primary Ear Care Centre and have undergone mentoring for signing off practical competencies alongside Aural Microsuction training at the Hearing Lab. The Audiologist is also responsible for maintaining their statutory clinical registration (Health and Care Professionals Council) and ongoing Clinical Professional Development (CPD).

The Audiologists at Poynton Ear Care also must have the relevant training and requirements including knowledge of the anatomy and physiology of the ear, management of infection control and other health and safety procedures, correct use of equipment, good communication skills with clients/families and carers alongside understanding of medico-legal issues, indemnity insurance, recording accurate information, referral processes, consents, and contra-indications to Ear Care.

Fitness to Practice

To complete Ear Care services for Poynton Ear Care, the Audiologist must display sufficient visual ability and manual dexterity to perform procedures safely. This extends to ensuring that the equipment used meets the correct quality and safety specifications to allow you to examine the ear confidently, and that it is set up correctly for the Audiologist's vision. Microscope and head loupes should have clean lenses and good light source set up to meet the Audiologist's visual requirements.

Appendices

Appendix 1

Poynton Ear Care

History taking form - adults

Hearing

- onset
- gradual/sudden
- L/R/both
- symmetrical/unilateral
-

Further information _____

Tinnitus

- onset
- L/R/both (in head)
- constant/intermittent

Further information _____

Balance

- onset
- duration
- veer L/R

Further information _____

Otalgia/discharge

- L/R/both
- problems with wax
- any contra-indications before impression taking

Ear pathology

- Surgery including cleft palate
- L/R/both
- when?
- what?
- ENT issues – nasal/chest infections/allergies

Noise exposure _____

Family history _____

Medication history (use of anticoagulants, .e.g., Warfarin)_____

Vision, Dexterity/Coordination and Memory _____

Referral back to GP if asymmetry between ears of 20dB + at 2 or more frequencies, unilateral tinnitus, frequent imbalance (if not already monitored by GP), discharge/earache, eardrum perforation, unusual eardrum appearance, sign of infection/redness

Any communication/behavioural issues during session _____

Paediatrics only (in addition to the adult form)

Behavioural issues _____

Educational issues _____

(dyslexia, spelling, ESL)

Concerns – family, friends, teacher _____

Environmental issues _____

Pre, peri or post natal problems – risk factors, e.g., prematurity, antibiotics, jaundice

Speech and language acquisition – milesones achieved in both production and reception

General development – seen by child development for disease, e.g., Sticklers, known syndrome, visual problems

Family history of childhood deafness _____

Noise factors, e.g. iPod use, loudness discomfort, tinnitus _____

Appendix 2

Poynton Ear Care

Consent for Ear Irrigation and Instrumentation

In order to check that it is safe to procedure with wax removal you will need to answer some questions about the health of your ears and general health (Poynton Ear Care history form). After a visual inspection of your ears and wax, it is recommended that Ear Irrigation and Instrumentation is the best way to try and remove your wax.

I am a HCPC registered Hearing Aid Dispenser and Clinical Scientist trained in the procedure of Ear Irrigation and Instrumentation. I will be following guidelines written by the British Society of Audiology (2021).

What is Ear Irrigation and Instrumentation?

Ear Irrigation is a procedure which uses a fine jet of water to gently circulate around the ear canal to loosen and remove the wax. This procedure can be a little noisy. Ear Instrumentation is the removal of wax using manual hand-held instruments that are inserted carefully into your ear to gently extract wax from the ear canal.

The risk/contra-indications to these procedures include:

- Damage to the skin of the ear canal during the procedure
- Infection of the ear canal or other ear structures following the procedure
- Temporary/more permanent reduction in hearing
- Temporary dizziness and possible sickness/fainting
- Trigger of a new or existing tinnitus episode
- Temporary irritation to the throat if particularly sensitive, dry or tickly

Depending on the consistency and amount of wax, sometimes it may not be possible to remove all in one visit so advise will be given by the Audiologist if you need to return for further treatment or wax softening.

A referral might be required if medical conditions on the history form suggest further medical advice prior to any treatment due to:

- Evidence of a recent infection or recent/previous damage to the ear/drum
- If you feel unwell during the wax removal procedure
- If the wax is too difficult to remove due to discomfort
- If a foreign object has been discovered in the ear

I have read and understood the information above and understand the risks involved. I consent to allow Poynton Ear Care Audiologist to remove wax from my ear.

Name: .....

Client/Guardian Signature: .....

Date: .....

Poynton Ear Care

Consent for Aural Microsuction

Ear wax removal via micro suction is considered safer than other methods such as ear irrigation.

The purpose of micro suction is to safely remove any wax or foreign bodies present within the ear canal. To ensure this process is safely carried out it is important that the clinician is made aware of anything which may have a bearing on the procedure.

I am a HCPC registered Hearing Aid Dispenser and Clinical Scientist trained in the procedure of Aural Microsuction. I will be following guidelines written by The Hearing Lab & Aural Care Practice Guidelines for Ear Wax Removal written by the British Society of Audiology (2021).

What is Aural Microsuction?

Microsuction is a gentle, dry procedure with a low risk of infection using single use equipment.

Any complications of ear wax removal with micro suction are uncommon; however possible complications, side-effects and material risks inherent in the procedure include but are not limited to:

- incomplete removal of ear wax requiring a return visit (for severely impacted wax)
- minor bleeding
- discomfort
- ringing in the ear (tinnitus)
- perforation of the ear drum
- hearing loss.

To ensure the risk of complication is minimal, it is essential that accurate past medical history is supplied to the Audiologist to check for any contra-indications to the procedure.

Contra-indications include:

- past complications following the procedure in the past
- history of middle ear infection in the last 6 weeks
- any ear surgery apart from grommets which have extruded at least 18 months previously
- a perforation or history of mucous discharge in the last 12 months
- an acute otitis external with pain and tenderness of the pinna
- a discharging ear where the discharge contains blood matter
- outer or middle ear pathology, e.g., otitis externa, otitis media, cholesteatoma
- experienced balance problems, Meniere's disease, or vertigo within the last 30 days
- fluctuating hearing loss within the last 30 days (not related to wax)

- hard impacted wax or deep inserted wax – need for softening prior to microsuction
- foreign bodies which have been hard to remove after a few attempts, e.g., insects
- you do not think you can keep your head still for a period of 5 minutes at a time

It is important that you remain relatively still during the procedure as sudden movement may significantly increase the risk of ear drum perforation, permanent hearing loss and/or bleeding. The microsuction machine has very low suction power and is extremely gentle. You might feel a gentle pulling sensation.

Microsuction pump and vacuum can be a little noisy - you will hear the air from the suction process rushing in your ear, wax shooting up the tube and you may get some whistling too. If this or anything else ever becomes uncomfortable, please let me know by saying "Stop" and I will halt the procedure. I will have some water on the side and some other instruments around. I am not going to use water in your ear - it is just for me to clean through my equipment. Also used is a funnel and hoover and additional instruments might be used to tease out any difficult to remove earwax in addition to microsuction. If I use any, I will stop and explain things first.

The CE marked suction unit is to remove fluids from the airway or respiratory support system and infectious materials from wounds and has been adapted for aural micro suction. Currently there are no CE marked machines for aural microsuction. The suction units used in the procedure are "off label" medical device which is risk assessed to follow the Medicines and Healthcare Regulatory Agency (MHRA) guidelines.

A photo of your ear pre and post observation will be taken (if possible) for visual reference/interest. All consent, contra-indications, audiogram, and ear examination forms (with ear photos) are stored securely in a locked filing cabinet.

By agreeing to these terms and conditions you accept that you have read and understand the possible complications that may occur and agree that the clinical ear care specialists carrying out today's procedure cannot not be held responsible for them.

I have read and understood the terms and conditions above and am willing to be bound by them.

Name: .....

Client/Guardian Signature: .....

Date: .....

Appendix 3

Poynton Ear Care

Ear Examination Chart

Name_____

Date: _____

Physical assessment	Right Ear	Left Ear
Pre examination observations • Colour/appearance of pinna • Evidence of swelling • Evidence of skin legions • Evidence of mastoid tenderness		
Otoscopic examination • Tympanic membrane visible • Light reflex visible • Evidence of dry skin • Evidence of discharge – colour/amount • Evidence of wax – colour/amount • Evidence of oedema • Evidence of pain		
Post procedure • Tympanic membrane visible (pars tensa, cone of light, handle of malleus) • Evidence of wax – colour/amount • Evidence of change in ear canal – colour (condition of epithelium) • Evidence of post procedure pain/lesions		

Related Documents

BSA Recommended Procedures for Ear Examination, Aural Care (Ear Wax Removal), Audiometry and Aural Impression taken are located at: www.thebsa.org.uk

Protocols and Cleaning guidelines/datasheets from The Rotherham Ear Care Centre located at: http://www.earcarecentre.com/uploadedFiles/Pages/Health_Professionals/Protocols/