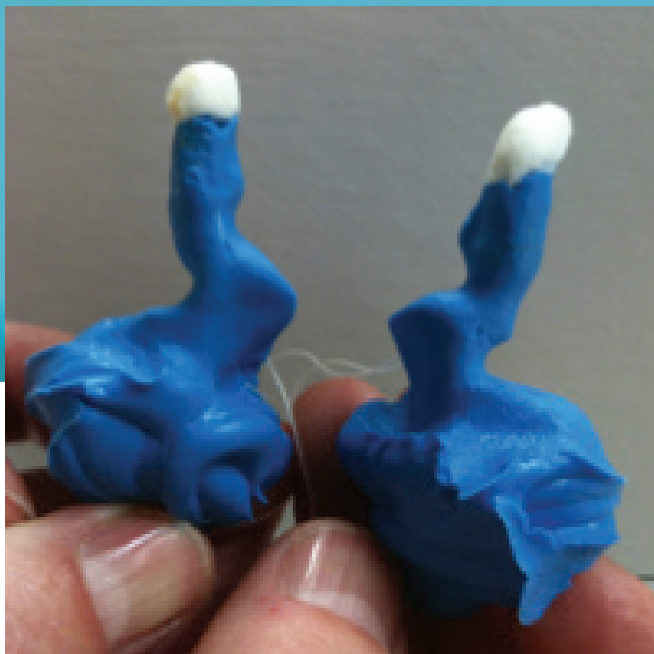
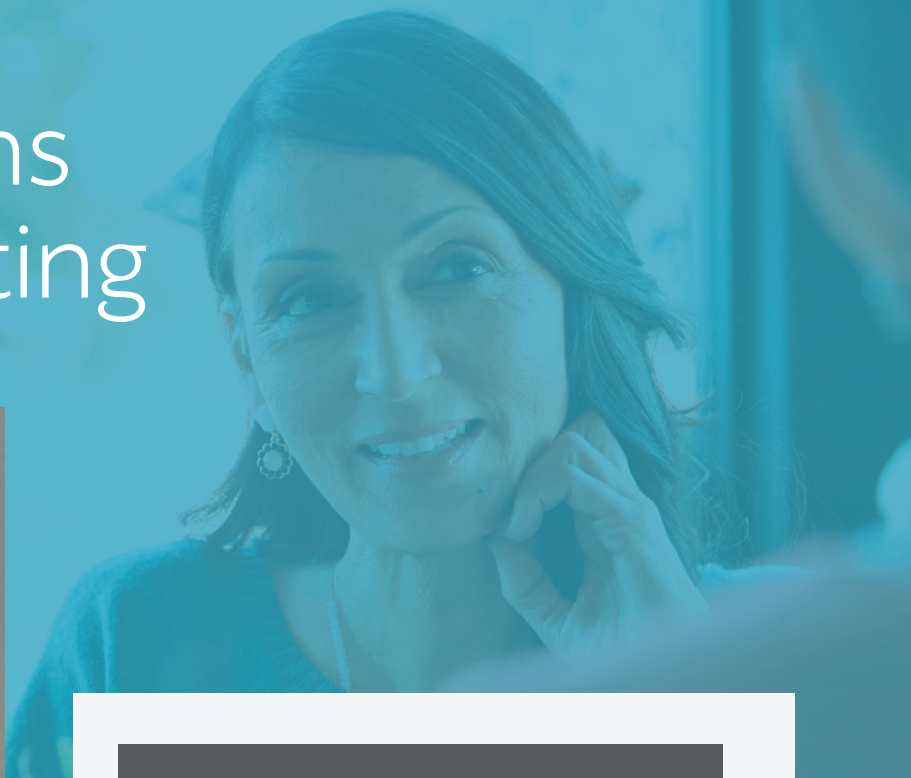


Ear impressions for custom fitting



PURPOSE

Create a three dimensional image of the ear canal for the fabrication of:

- Custom shaped molds for hearing aids
- Coupling earmolds for hearing aids
- Ear protection
- Special purpose monitors and molds

YOUR APPROACH

Do no harm. Impressions are arguably the most invasive thing we do in our profession. Appropriate preparation and good technique are requirements.

Provide the lab with an accurate representation of the ear canal and information necessary for fabrication of the mold or shell. "Good enough" rarely is.

CHECKLIST

PREPARING

- Record ear history
- Prepare tools & supplies
- Infection control
- Perform otoscopy

CREATING

- Instruct the patient
- Place the otoplast
- Prepare & inject material
- Wait while it cures
- Remove impression

FINAL STEPS

- Perform otoscopy
- Patient discussion
- Inspect impressions
- Organize impressions

PREPARING

1 RECORD EAR HISTORY

- ✓ Infection risk: diabetes, immunocompromised
- ✓ Bleeding risk: therapeutic blood thinning
- ✓ Coughing reflex: vagus nerve stimulation
- ✓ Surgery: mastoidectomy, fenestration, tubes
- ✓ Active infection: bacterial or fungal
- ✓ Hearing levels
- ✓ Congenital or other malformation

IIC CANDIDACY

- ✓ Physical size and configuration of canal
- ✓ Hearing loss must be appropriate for fitting range
- ✓ User must have ability to manage insertion, removal and maintenance of small device
- ✓ User must accept responsibility for keeping the aid clean and maintained

MEDICAL CONTRAINDICATIONS

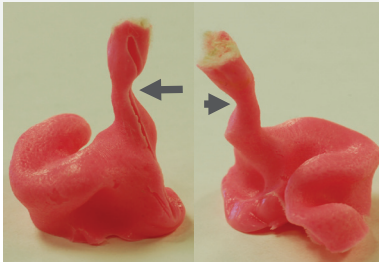
1. Exostoses
2. Osteoma
3. Hematoma / Lesion
4. Surgical defect
5. Active infection



Avoid having impression material come in contact with these sensitive areas

NOT A GOOD CANDIDATE

Narrow passage with large opening deeper in canal



2 PREPARE TOOLS & SUPPLIES

- ✓ Proper seating, canal at eye level
- ✓ Lighting and magnification
- ✓ Good quality optical or video otoscope
- ✓ *Macro view otoscope provides better visibility
- ✓ Bright, narrow earlight
- ✓ Forceps
- ✓ Curettes
- ✓ Soft silicone material
- ✓ Disinfecting wipes
- ✓ Cotton (preferred) or foam dams
- ✓ Syringes or gun
- ✓ Impression material
 - ✓ Cartridges and cannulas
 - ✓ Fresh two part silicone mix
- ✓ Well-identified boxes

3 INFECTION CONTROL

- ✓ Establish and adhere to consistent hygiene procedures and an infection control policy for your practice.

4 PERFORM OTOSCOPY

- ✓ Look for abnormalities along full length of ear canal and tympanic membrane
- ✓ Remove cerumen or foreign objects within your locally recognized scope of practice or refer for treatment
- ✓ Drainage, or other suggestion of inflammation or infection? Refer as appropriate
- ✓ Proceed only if you feel it is safe to do so



Best practice calls for bracing the hand with the otoscope against the head of the patient to fend off movement that may drive the otoscope tip too far in the canal.

CREATING THE IMPRESSION

5 INSTRUCT THE PATIENT

- ✓ Prepare the patient for the experience: expected sensations, curing time
- ✓ Give any special instructions: open or closed jaw, bite block, etc.
- ✓ Patients are more comfortable when they know what to expect

6 PLACE THE OTOBLOCK

- ✓ In all cases strive to place dam deep enough to allow lab to understand the path of the ear canal beyond the second bend
- ✓ For typical custom products and earmolds, the dam must be snug enough to prevent the impression material from flowing around the dam, or "blowing by"
- ✓ Flatten the dam before placement
- ✓ Verify security of the block with visual and tactile approaches

7 PREPARE & INJECT IMPRESSION MATERIAL

- ✓ Mix syringe materials per manufacturer instructions or
- ✓ Prepare cartridge and mixing cannula per instructions
- ✓ Bleed small amount of material from syringe or cannula, express any bubbles in the material
- ✓ Position syringe or cannula tip aimed at block and steadily inject material into canal, concha and helix
- ✓ Use safe technique, brace hand against head



SAFE TECHNIQUE: Hand Syringe

A full stop brace is preferred (as on left). Here on the right, the friction of the thumb on the barrel of the syringe may not be sufficient to hold it back if the patient moves suddenly.



SAFE TECHNIQUE: Impression Gun

Gripping the cannula and bracing, or bracing the end of the cartridge against a well-braced hand are acceptable techniques

8 WAIT WHILE IT CURES

- ✓ Allow the material to cure properly

9 REMOVE IMPRESSION

- ✓ Break the seal and slowly remove the impression from the ear

FINAL STEPS

10 PERFORM OTOSCOPY

- ✓ Look for abnormalities along full length of ear canal and tympanic membrane
- ✓ Follow best practice guidelines shown in Step 4

11 PATIENT DISCUSSION

- ✓ Verify the patient condition and comfort – rule out any injury or abnormal sensation
- ✓ Ask the patient for a response about the experience

12 INSPECT IMPRESSIONS

- ✓ Inspect the impression for any defects
- ✓ Repeat if necessary

13 ORGANIZE IMPRESSIONS

- ✓ Place the impressions in a box that is properly marked with the patient the identification