

A Do-It-Yourself Guide: Changing the Tubing in Your Hearing Aids © 2003

It's easier to do than you realize, you don't need to make an appointment and it's inexpensive. Consumers who want to change the tubing in their hearing aids often don't know what size tubing is needed, and that is the important first step. Short of using a micrometer, the person who may be able to tell you the tubing size you need is the hearing health professional that made the impression for your hearing aid mold.

Another possibility is to contact the manufacturer that made the earmold. The hearing health professional that takes the impression sends that out to another facility where it is made into the earmold that is fitted to our hearing aids. The earmold is returned to the facility with the tubing already in place. There may be a record at that facility of your tubing size information. If neither tells you the size it could be that they don't know or may want to discourage you from taking matters into your own hands.

Now that you have decided to do your own tube change, we have the information to help you choose the proper tubing size and what tools, if necessary, to help you do the job. Our research information is from advice given by several earmold manufacturers and Volta Voice Nov/Dec 1999., and others. We have changed hearing aid tubing with great success and know that you can too! It is nice to do this quick tube change yourself, allowing you to start the day with clear, flexible tubing on your hearing aids.

To replace the tubing doesn't require any special knowledge. You need to have a desire to learn and to be comfortable using small tools: perfect if you are a do-it-yourself type of person with an interest in acquiring a new skill. You may find that specialized tools or cement are NOT a major requirement for this task. Read on to learn about the various tube sizes that are available. Don't let the list discourage you. For the most part the majority of these tubing sizes are not necessary. They are listed to better educate you should you before asking questions about your hearing aid tubing size.

Tools needed:

Hard (Lucite) earmolds: Straight Tubing or Preformed tubing. Earmold bore reamer, tubing inserter tool. cement.,

Optional: tube-lock removal/inserter tool.;

Soft (silicone) or semi-soft (vinyl) earmolds: Straight tubing with or without tube lock, or preformed tubing with or without tube lock, earmold bore reamer. Tubing inserter tool.

Optional: tube-lock removal/inserter tool.

Tubing Diameter Sizes:

#12 Standard (.085 x .125): most often used for children (smaller earmolds)

#13 Standard (.076 x .116): generally used

#13 Medium (.076 x .122): more often used

#13 Thick (.076 x .130): most often used

#13 Extra Thick (.076 x .142): used with aids for severe to profound hearing losses

#14 Standard (.066 x .166): rarely used; not always in stock

15 Standard (.059 x .116): rarely used; not always in stock

16 Thin (.053 x .085): rarely used; not always in stock

In most cases the tubing does nothing more than connect the earmold to the hearing aid. This means when you are done replacing the tubing, the aid fits comfortably, doesn't move around, or dangle from your ear: you are successful! One exception to the purpose of the tubing is the LIBBY Horn, which is a smooth tapered one-piece sound tube of internal stepped bore construction. Appropriate dampers used with this tubing can result in a smooth wideband frequency response. If you have LIBBY Horn style tubing, stay with this type.

To start, if you are an adult, you will need #13 extra thick, # 13 Thick or # 13 Medium size diameter tubing to replace the old tubing. These three sizes prevent crimping, stretching and most importantly: sound feedback from the aids. Thicker tubing contains sound better and reduces feedback commonly caused by powerful hearing aids. You also need to know what your earmold is fabricated from. If it is soft silicone, or soft vinyl material you may need to use a ring (or lock) with the tubing, often called TUBE-LOCK or RING-LOCK. This lock keeps the tubing in place. Without it the hearing aid could detach itself from the earmold particularly if you lead an active lifestyle.

If you have Lucite (hard) earmolds, you would use cement for ease of tube insertion. Cement also acts as a fastener to keep the tube in place. Cement does not dry as quickly as Super Glue thus it gives you lubricant/holding quality while placing the tubing.

If your hard earmolds have had the tubing replaced frequently, you may see that the bore has been gouged out. Also, if the tubing goes in without any resistance at all, a filler-type cement may have to be used. If you notice any of these things, perhaps it is time to consider having new earmolds made up.

Your hearing loss: if it is moderate to profound, use the #13 Extra Thick tubing to aid in feedback reduction. This tubing can be a bit difficult to push onto the plastic curve shaped connector that is attached to the hearing aid. A stretching tool (Tube Expander) or a solvent (Expando) can help overcome this. The stretching tool looks like needle-nosed pliers. Its points are inserted in to the opening of the tube to stretch open the tube. The EXPANDO solvent is a liquid that, when applied on the end of the tube, softens it to allow you to more easily push the tube onto the hearing aid connector. Both the expander and solvent can be found online at WWW.Hearing-Loss-Help-Co.com

Another type of tubing that is available is called Stay-Dry; as its name implies it helps reduce moisture build-up problems in the tubing and ultimately, your hearing aid. This is available in #13 sizes, it is more expensive but offers more benefit. This does not absolve you of using dry aids kits for your hearing aids each night.

A bit more on the function of the Ring Lock (Tube Lock). This is a plastic ring that works as a lock to attach tubing to the hearing aid mold. (Generally the latest design means no more tools necessary.) The ring has a couple of ridges on its outside diameter. The tubing is pushed through the ring, and then the tubing is pushed into the earmold until the ring is touching the mold. Another push and it is latched onto the earmold. The ridges on the outside of the ring bites into the earmold, holding the tubing in place.

If you decide to use the tube lock, you can purchase the tubing and rings separately

for self-assembly, but it is easier to purchase the tubing with the lock in place. The old style Metal ring locks require a Tube-Lock tool, which is used to push the old ring out and push the new ring into position in the earmold. You can purchase this tool or you can get creative and try to devise one from what you might already have at home! Perhaps use a knitting needle or miniature screwdriver. But nothing with sharp edges. The tube-lock removal tool has blunt edges. HINT: If the tube lock is secured deep within the earmold, looks brassy in color it most likely is the old metal type.

The newer rings are made of plastic and are not as secure as metal rings. However, the plastic rings do not require a special tool, they are much easier to remove and insert. As long as you don't pull directly on the tubing it will never come out by itself. These plastic rings are the preferred way to go because we can do this job without the tube-lock tool. Once you have purchased a tubing replacement kit, for future tube replacement all you need to do is buy tubing with tube lock rings. You may get this at www.hearing-loss-help.co.com Not to mention that you can probably get four tubing replacements done for the price that might be charged for one tube change by hearing aid professionals.

Are you ready to replace your tubing? Here are the simple steps needed to complete this successfully.

- (1) Remove the old tubing.
- (2) Clean the bore of any old glue and debris using the reaming tool.
- (3) Cut a length of tubing a wee bit longer than what was removed. (If you bought tubing with tube lock installed, the tubing is already pre-formed and cut).
- (4) Insert one end into the earmold and push it through until it pokes through the ear canal end of the mold. (*This is where the Tubing Inserter tool comes in real handy*) Pull back on the tube until it is recessed inside the earmold. (If you are using the pre-formed tubing just pull the tubing through until the tube lock connects with the earmold and then trim it up against the mold. Don't leave any sticking out or it will irritate your ear.)
- (5) Push the other end of the tubing onto the earhook.
(Plastic half-moon shape extending from the hearing aid)
- (6) Now place your aid into your ear, insert the earmold while you look into a mirror for proper adjustment and tube angle. Be sure it is not crimping. Your aid should rest on your ear comfortably without any tension. If necessary, remove for trimming and adjust it again after trimming.

The Hearing Loss Help Co has put together a Tubing kit for your convenience.

I am hoping that you will become a more informed and confident hearing aid consumer after reading the information presented in this article. Remember: knowledge is power.

Happy Hearing!

Curtis Dickinson
Hearing Loss Help Co
Email: Hearmeco@Hearing-Loss-Help-Co.com