

Science You Can Use

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Dear Science: My son claims I need hearing aids. He says I have no excuse not to get them because they can now be purchased at a store (also called “over-the-counter”, or “OTC” purchasing) or online, without a professional hearing test, and OTC hearing aids cost only a few hundred dollars. Is this true? -- Buck R.

Dear Buck: Until very recently in the US, in order to buy a set of hearing aids you needed to see a doctor, an audiologist, or a licensed hearing aid specialist. Exams and hearing aids were almost always sold as a package. The package price: often \$3000 - \$5000. Many health-insurance policies don't cover the cost of hearing aids.

Starting October 17, 2022, adults with mild to moderate hearing loss can buy hearing aids at a store or online without having to see a doctor, an audiologist, or a licensed hearing aid specialist. Proponents claim this change could save people with mild to moderate hearing loss up to \$3000 per pair. This all sounds great, but there is more to the story.

So what's the catch? There is no guarantee that OTC hearing aids will address the specific hearing problems you may have. Here's why.

First, no OTC hearing aid vendor can legally claim to solve your hearing loss problem.

Second, OTC hearing aids are designed for users who have *mild to moderate hearing loss*. If you buy OTC hearing aids, it is your responsibility to determine whether you have mild or moderate hearing loss. You can make a preliminary determination (but only that) yourself. Here's how.

The US Food and Drug Administration (FDA) requires that OTC hearing aids be labeled with some of the common signs of mild to moderate hearing loss. These include:

1. Having trouble hearing speech in noisy places or in group settings
2. Having a hard time hearing when talking on the phone
3. Having to turn up the TV volume hear it, and other people tell you it's too loud

The FDA also provides information about signs your hearing loss *cannot* be helped by OTC hearing aids. These include

- a. Not being able to hear speech even in quiet room.
- b. Not being able to hear loud sounds well (e.g., power tools or loud music)

Should you get a hearing test before buying OTC hearing aids? Yes, by a licensed hearing-care specialist. If you don't do this, you're just guessing what your hearing problem is, and what, if anything, can be done about it.

The most common hearing exams include *pure-tone audiometry*. In pure-tone audiometry, pure audio tones are played at various volumes to help evaluate your specific hearing performance at those tones (frequencies). In order to ensure this kind of exam works as intended, the equipment producing the tones must be properly adjusted (calibrated), and the tests must be performed with the listener located in a specially constructed booth that strongly dampens outside noise. Pure-tone audiometry equipment used by licensed hearing-care professionals is performed in such a booth and is calibrated frequently. The record of a pure-tone audiometry test is called an audiogram.

Professional hearing exams also include speech-hearing tests.

There are some “free” computer- and cell-phone based apps that might suggest they can generate professional-quality audiograms or perform speech-hearing tests. On close inspection, you will find that these apps are accompanied by a statement that specifically denies that they can produce anything that is suitable for any particular use. You are on your own if you use these self-test apps.

Some changes in hearing can be caused by medical problems such as infections, earwax accumulation, or injuries. Only a doctor can adequately determine whether one of these conditions is the cause of your hearing problem, and no hearing aids can treat these problems. As a result, it’s wise to see a doctor who specializes in hearing loss problems *before* considering whether to buy OTC hearing aids.

Warranties, repairs, and maintenance. Some OTC hearing aids come with warranties and support plans. The best purchase warranties are ones that allow you to return the product for a full refund, no-questions-asked, for at least 30 days after purchase.

All hearing aids require maintenance. Most hearing aids have a soft rubber tip (called a “dome”) that covers the portion of the device that goes into your ear canal. These often wear out within 60 days in use and have to be replaced. Similarly, most hearing aids contain replaceable guards that keep earwax from plugging the tiny speaker end of your hearing aids. These guards may have to be replaced once a week or so if you are prone to earwax problems. Check prices and availability of domes and wax guards before you buy OTC hearing aids.

Before you decide to buy OTC hearing aids, it’s a good idea to consult reviews of these products performed by reliable independent testing organizations such as *Consumer Reports*.

For further information, see Catherine Roberts, “How to tell if over-the-counter hearing aids are right for you”, *Consumer Reports*, 16 October 2022.

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