



What is ototoxicity?

Some medications damage the ear. This can cause hearing loss, ringing in the ear, or balance problems. These medications are considered ototoxic. Doctors know that the medications may be a risk and prescribe them based on a treatment protocol for a medical condition.

Sometimes, hearing and balance problems get better when you stop taking the medication. However, the damage doesn't always go away and can be permanent.

Your health care team will consider your hearing and balance system if you need an ototoxic medication to treat a serious illness or medical condition. The team will discuss with you how these side effects will affect your quality of life.

What are the effects I may notice from ototoxic medications?

You may have ringing in the ears (tinnitus). You may lose hearing. Hearing loss is hard to notice. Many people notice only when the hearing loss affects their ability to understand speech. Early changes often go unnoticed. At times, your loved ones or peers may be the first to ask if you can hear them.

Balance problems can also begin. You may feel like you are spinning and unsteady on your feet. You may also have trouble seeing clearly while moving. Sometimes, these problems are temporary. Your body can learn to adapt to changes in balance.

The effects of ototoxic medications can affect your quality of life. It may feel too hard to participate in conversations if you can't understand spoken words. Feeling dizzy may make you unable to move around as much or think clearly.

What is happening inside my ear to cause these effects?

Ototoxic medications cause damage to the sensory organs used in hearing and balance. These organs are made of specialized neural tissue and are located in the inner ear.

Which medications are ototoxic?

More than 200 known ototoxic medications (prescription and over-the-counter) are on the market today. These include medicines used to treat serious infections, cancer, and heart disease.

Ototoxic medications known to cause permanent damage include

- certain aminoglycoside antibiotics, such as gentamicin, tobramycin, amikacin, and streptomycin and
- cancer chemotherapy medications, such as cisplatin and carboplatin.

Medications known to cause temporary damage include

- salicylate pain relievers (aspirin, to treat pain relief and heart conditions),
- quinine (to treat malaria), and
- certain diuretics (to treat certain heart and kidney conditions).

Your chance of damage increases by

- taking more than one ototoxic medication,
- having a family history of sensitivity to these medications, and
- exposure to loud noise while taking ototoxic medications.

Discuss with your doctor the potential for hearing or balance damage from your medications. Sometimes, there are few other choices. Treatment with a particular medication may provide the best hope for curing a life-threatening disease or stopping a life-threatening infection.

Can I protect myself from ototoxicity?

Researchers are developing ways of preventing ototoxicity treatment. Before starting the treatment, see an audiologist to get a baseline record of your hearing and balance.

When possible, the baseline record should include (1) an audiologic hearing test focused on your ability to hear very high-pitched sounds; (2) word recognition tests; and (3) other tests. This information can help you and your doctor make any important decisions to stop or change the medication therapy before your hearing is affected.

If the medications cannot be stopped or changed, the patient and the audiologist will manage the effects.

During the course of your medication treatment, get periodic hearing tests as part of the monitoring process. This will help you to identify any hearing changes, ringing in the ears, or balance problems.



Ototoxic Medications



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Notes:

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