

When Jonathan took a course of erythromycin prescribed by his doctor, the last thing on his mind was that this drug would cause him to lose his hearing in one ear, give him hyperacusis (some normal sounds seem very loud) and balance problems and result in horrific bilateral (in both ears) tinnitus.

Drugs and Tinnitus: Put Yourself in the Driver's Seat

By NEIL BAUMAN, PH.D.

No one warned Eunice that taking the anti-depressant drug amitriptyline (Elavil®) would result in *screaming tinnitus*, a condition much worse than her original depression. Without warning, the drugs prescribed for Jonathan (mentioned above) and Eunice to treat other health issues resulted in loud, intrusive tinnitus, making their lives almost unbearable. These stories are true, though I've changed the patients' names for this article.

about the side effects of any drug before you begin taking it. Be particularly cautious until you know that any given drug won't adversely affect your ears.

Which Drugs Can Cause Tinnitus?

There are more than 450 prescription and over-the-counter drugs from acebutolol (Sectral®) to zuclopenthixol (Clopixol®) that can trigger tinnitus, make existing tinnitus worse or cause another (new) tinnitus sound to appear.

Most of the drug classes have tinnitus-causing drugs sprinkled throughout. For example, antibiotics, painkillers, anti-anxiety and anti-depression drugs, anti-malarial medications, anti-cancer drugs and blood pressure controlling medications, to name a few, can all trigger tinnitus.

Is Drug-Induced Tinnitus Temporary or Permanent?

Tinnitus arising from taking ototoxic drugs may, or may not, be permanent. The good news is that tinnitus resulting from taking such drugs is often temporary and goes away in a few days to a few weeks after you stop taking the drug. For example, ototoxic anti-inflammatories such as acetylsalicylic acid (aspirin), ibuprofen (Advil®) and naproxen (Aleve®) generally cause temporary tinnitus. But there are no guarantees.

The bad news is that the resulting tinnitus may be permanent. For example, if you are taking an aminoglycoside antibiotic, you are lucky if the tinnitus stops within a couple of weeks after you finish the drug therapy. For a good number of people, this kind of tinnitus never goes away.

Some Drugs Produce Distinctive Tinnitus Sounds

Drug-induced tinnitus usually first appears as a continuous high-pitched sound in both ears. However,



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The author's comprehensive book, *Ototoxic Drugs Exposed*, describes the ototoxic (ear damaging) side effects of 447 drugs and 29 chemicals known to trigger tinnitus, about 300 drugs associated with hearing loss and the hundreds of drugs that affect balance and cause other ototoxic side effects. This book, as well as Dr. Bauman's *When Your Ears*

Ring (Cope with Your Tinnitus—Here's How), is available with member discount pricing in the online ATA Store at:

ATA.org/store/books/ototoxic-drugs

Ototoxic Drugs—What Are They?

Ototoxic (OH-toe-TOKS-ik) drugs are those medications that can cause ototoxic (ear damaging) side effects to your ears. Such drugs can cause hearing loss, hyperacusis, tinnitus and other phantom sounds and a whole host of balance problems. This does not happen to everyone who takes drugs, by any means, but it does happen to a significant number of unfortunate people.

Note this well. Even though a drug's description lists tinnitus as a side effect, this does not mean that you will develop tinnitus if you take it. Some people do. Many don't. The problem is that you don't know into which class you will fall. Therefore, you should learn

certain ototoxic drugs produce distinctive tinnitus sounds. For example, tinnitus caused by aspirin and quinine (and related drugs) is generally a high-pitched or hissing sound, and may sound like a continuous musical note. In contrast, tinnitus caused by erythromycin can produce what sounds like "blowing," while loop diuretics (such as furosemide [Lasix®]) may produce a middle-frequency sound.

How Soon Will the Tinnitus Occur After Taking a Drug?

Tinnitus may show up very quickly after you begin taking an ototoxic medication, or it may take several days for it to become obvious to you. For example, tinnitus from loop diuretics may start just minutes after you begin receiving them intravenously (directly into a vein). In contrast, tinnitus may not show up until two or three days after taking an aminoglycoside antibiotic. Strangely enough, with certain drugs, such as the benzodiazepines (a class of tranquilizers), tinnitus may only start after you have stopped taking the drug.

Tinnitus, Hearing Loss and Drugs

Hearing loss and tinnitus often go together. I have seen it reported that about 70 percent of people with hearing loss also have tinnitus. Therefore, if you preserve your hearing, you can help yourself avoid unnecessary tinnitus. To this end, you should be aware that there are around 300 drugs associated with hearing loss. Taking such drugs may result in both hearing loss and tinnitus.

Tinnitus often precedes or accompanies hearing loss. In fact, tinnitus is the number one indicator that you may be doing damage to your ears from an ototoxic drug. It also may be the only warning you'll ever get, so don't ignore it!

It's All About Choices— What You Can Do About Tinnitus

Knowledge is power. When you are aware of the many drugs that can damage your ears, and the many risk factors that can make you even more



Just because a drug label does not list tinnitus as a possible side effect, does not mean it will not cause tinnitus. For example, when Sarah's doctor doubled her dose of irbesartan (Avapro®), her existing tinnitus became noticeably louder. When she complained to her doctor, he reduced her dose and her tinnitus returned to its previous level. But still, irbesartan is not listed as causing tinnitus.

susceptible to ototoxic side effects, you are in a position to help protect your precious ears.

If your ears start to ring after you begin taking a new drug, or an increased dose of an existing drug, you should immediately report this to your doctor. Together, you should then decide what to do – whether to reduce the dose to a level below where it causes tinnitus, or stop taking the medication altogether and try another.

You need to decide for yourself about the trade offs to taking

any given medication. For example, Joan takes celecoxib (Celebrex®) for her arthritis. When she takes it, her tinnitus gets louder, but her arthritis pain improves. She chooses the increased tinnitus (which doesn't really bother her) over the arthritis pain (which she definitely doesn't like). That is her choice, and she is content to live with it.

Harold, on the other hand, began taking amitriptyline and soon noticed he had severe tinnitus. As he says, his tinnitus was driving him "buggy," so he contacted me for help. I suggested the amitriptyline might be causing his tinnitus. With his doctor's permission, he stopped taking the drug. Twelve days later, he joyfully reported that his tinnitus went away. That was his choice and he is glad he made it.

When it comes to your ears, don't let ototoxic drugs flip your world upside down! Remain in the driver's seat and take control by reading, asking questions and making the best choices you can. ☺☺☺

Neil Bauman, Ph.D. is the Executive Director of the Center for Hearing Loss Help. His mission is educating and helping people successfully live with their hearing losses, tinnitus and other ear conditions. Dr. Bauman is both a speaker and the author of ten books and hundreds of articles related to hearing loss.