

## SOME COMMONLY USED MEDICINAL SUBSTANCES REPORTED TO CAUSE HEARING LOSS

The following is a list of generic names of commonly used medications that have been associated with hearing loss. It is not by any means a comprehensive list, as more than 100 classes of drugs have been associated with ototoxicity.

This list is more fully explained in the slide show presented by Dr. Leslie McCament-Mann, Associate Director of the New Mexico Poison and Drug Information Center, at the January 21, 2017 meeting of the Hearing Loss Association of America—Albuquerque Chapter. Please refer to the slides for additional information.

Always inquire about whether ototoxic side effects or drug interactions have been reported for a newly prescribed drug or over-the-counter (including herbal) medication. Express concerns to your doctor or pharmacist about your risk for drug-related hearing loss, and inquire about alternative agents that might carry less risk of ototoxicity.

Consult one of the recommended online resources, the drug package information leaflet, your doctor or pharmacist, and the New Mexico Poison and Drug Information Center for the most current information regarding potentially ototoxic substances.

CATEGORY OR DRUG NAME	SYMPTOMS	REPORTED FREQUENCY
<b>Antibiotics:</b>		
<ul style="list-style-type: none"> <li>Aminoglycosides (gentamicin, tobramycin, amikacin, neomycin)</li> </ul>	Possibly permanent high-frequency hearing loss, tinnitus	7.5%
<ul style="list-style-type: none"> <li>Macrolides (erythromycin, azithromycin, clarithromycin)</li> </ul>	Reversible hearing loss, tinnitus	<1%
<ul style="list-style-type: none"> <li>Sulfonamides (sulfamethoxazole-trimethoprim or SMZ-TMP)</li> </ul>	Tinnitus	unknown
<ul style="list-style-type: none"> <li>Tetracyclines (doxycycline, minocycline, tetracycline)</li> </ul>	Tinnitus	<1-2%
<ul style="list-style-type: none"> <li>Vancomycin, daptomycin</li> </ul>	Hearing loss, tinnitus Tinnitus	unknown but thought to be low <1%

<u>CATEGORY OR DRUG NAME</u>	<u>SYMPTOMS</u>	<u>REPORTED FREQUENCY</u>
<b>Chemotherapy drugs:</b>		
<ul style="list-style-type: none"> <li>Cisplatin</li> </ul>	Irreversible high-frequency hearing loss, tinnitus	20-30% adults, 40-60% children
<ul style="list-style-type: none"> <li>Vincristine, vinblastine</li> </ul>	Partial or total hearing loss	unknown
<ul style="list-style-type: none"> <li>Methotrexate</li> </ul>	Tinnitus	unknown
<b>Analgesics:</b>		
<ul style="list-style-type: none"> <li>Non-steroidal anti-inflammatory or NSAID's (ibuprofen, naproxen, indomethacin, celecoxib)</li> </ul>	Tinnitus	3-9% ibuprofen, naproxen <3% indomethacin <2% celecoxib
<ul style="list-style-type: none"> <li>Salicylates (aspirin)</li> </ul>	Reversible hearing loss, tinnitus	unknown
<ul style="list-style-type: none"> <li>Opioids (hydrocodone, oxycodone, tramadol, hydromorphone)</li> </ul>	Tinnitus	2% hydrocodone <1% oxycodone, tramadol unknown for hydromorphone
<b>Diuretics:</b>		
<ul style="list-style-type: none"> <li>Loop diuretics (furosemide, ethacrynic acid)</li> </ul>	Reversible hearing loss, tinnitus	"rare"
<ul style="list-style-type: none"> <li>Acetazolamide</li> </ul>	Tinnitus	unknown
<b>Cardiovascular drugs:</b>		
ACE inhibitors (lisinopril, enalapril, fosinopril, ramipril)	Tinnitus	≤1%
ARB's (losartan only)	Tinnitus	<2%
Beta-blockers (carvedilol, metoprolol, timolol)	Tinnitus	≤1%
Calcium channel blockers (amlodipine, diltiazem, nifedipine, verapamil)	Tinnitus	<2%
Statins (atorvastatin only)	Tinnitus	<2%
<b>Antidepressants:</b>		
<ul style="list-style-type: none"> <li>Cyclic antidepressants (amitriptyline, amoxapine, clomipramine, desipramine, doxepin, imipramine, nortriptyline, trazodone)</li> </ul>	Tinnitus	unknown

<b>CATEGORY OR DRUG NAME</b>	<b>SYMPTOMS</b>	<b>REPORTED FREQUENCY</b>
<ul style="list-style-type: none"> <li>SSRI's (citalopram, escitalopram, fluoxetine, paroxetine, sertraline)</li> </ul>	Tinnitus	≤1%
<ul style="list-style-type: none"> <li>SNRI's (desvenlafaxine, duloxetine, venlafaxine)</li> </ul>	Tinnitus	<2%
<ul style="list-style-type: none"> <li>Bupropion</li> </ul>	Tinnitus Auditory disturbance	1-6% 5%
<b>Drugs for ED and BPH:</b>		
<ul style="list-style-type: none"> <li>PDE-5 inhibitors (sildenafil, tadalafil, vardenafil)</li> </ul>	Hearing loss (likely reversible), tinnitus	<2%
<b>Cold and allergy medications:</b>		
<ul style="list-style-type: none"> <li>Antihistamines (diphenhydramine, loratadine, fexofenadine, cetirizine)</li> </ul>	Tinnitus	"low"
<ul style="list-style-type: none"> <li>Decongestant (pseudoephedrine)</li> </ul>	Tinnitus	"low"
<b>Quinine, quinidine</b>	Reversible high-frequency hearing loss, tinnitus	unknown
<b>Recreational substances:</b>		
Alcohol	Tinnitus	unknown
Caffeine	Tinnitus	unknown
Nicotine	Tinnitus	unknown
Cocaine	Tinnitus	unknown
Marijuana (THC)	Tinnitus	unknown
<b>Herbals:</b>		
<ul style="list-style-type: none"> <li>Chenopodium oil, Coenzyme Q10, Ephedra</li> </ul>	Hearing loss	unknown
<ul style="list-style-type: none"> <li>Devil's claw, Gingko, Hibiscus, Lithium, Meadowsweet, Oleander, Pipsissewa, Pyrethrum, Tin, Trailing arbutus, Uva ursi, Wintergreen</li> </ul>	Tinnitus	unknown

