

PHARMACOLOGICAL and OTOTOXICITY

- Medication use consistently has been associated with falls.
- Polypharmacy (taking four or more medications and/or use of psychotropic medications) significantly increases fall risk about 70%.
- Patients undergoing treatment with ototoxic medications often do not realize that they have a balance problem until they get out of their hospital bed and try to ambulate.
- Reducing or modifying medication use is an important component in multifactorial, community-based studies related to the reduction of fall risk.
- Acquired bilateral vestibular impairment is frequently the result of aminoglycoside-induced toxicity.
- Patients with bilateral vestibular loss due to aminoglycoside antibiotics have demonstrated problems related to vestibulo-ocular and vestibulo-spinal dysfunction.
- Gentamicin and streptomycin are commonly used aminoglycoside antibiotics that are also vestibulotoxins.
- Clinical prevalence of gentamicin ototoxicity is estimated at 2-3%.
- In the diabetic population, resultant tissue and bone infections (such as osteomyelitis) are treated with aminoglycosides; overall incidence of ototoxicity is approximately 11%.
- In renal failure/dialysis patients receiving aminoglycosides for peritonitis, incidence of ototoxicity is estimated at 20%.