

**Sensorineural Hearing Changes After Myelogram**  
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**Problem:** While hearing loss is a well-known phenomenon little consistent information exists about hearing loss after certain medical or surgical procedures. This topic is pertinent to an array of professionals and patients.

**Evidence:** Scant information reports hearing loss following cardiac surgical procedures and general anesthesia. More accessible yet little known studies report myelogram, spinal anesthesia, lumbar punctures and spinal manipulation can result in hearing loss. This physiologic cascade occurs due to a disturbance in the balance of fluid pressures in the neurological system.

**Strategy:** This study questioned the incidence of post myelogram hearing by asking: To what extent did patients experience changes in hearing within 24 hours following a myelogram? If hearing changes were detected, as measured by audiogram, what was the intensity of the differences and which of the six assessed hearing frequencies was most affected?

**Practice Change:** There is virtually no nursing literature that hearing loss is possible during or after dural puncture. Advanced practice nurses can educate nurses about this relatively unknown complication. Nurses who care for patients before and after dural puncture procedures may be instrumental in prompt assessment of any post dural problems, including hearing loss.

**Evaluation:** This comparative study examined 27 outpatients. Pre and post-procedure hearing tests were measured by audiogram. Decibel differences, between pre and post myelogram were evaluated in six hearing frequencies.

**Results:** Findings did not support low frequency hearing loss as a significant adverse outcome 24 hours after dural puncture. One subject reported aural fullness and perceived hearing loss 53 hours post myelogram.

**Recommendations:** Nursing researchers should study other subject samples before and after dural puncture procedure. Providers must find this information pertinent when scheduling patients for dural puncture procedures. Accurate history and physical examination should include any pre-existing otological problems. Informed consent should include the potential for hearing loss.