

# HEARING LINK

## TASMANIA

screening • assessment • prevention

## Musician Ear Plugs

Recent studies have shown an increased incidence of hearing loss among school students and musicians. At work and home we can be subject to levels of noise that threaten our hearing. Power tools, factory noises, fireworks, and of course loud music, are all potential sources of noise that can cause irreversible inner ear damage.

### Safe Sound

Many people don't think twice about getting their eyes examined on a regular basis, readily purchasing glasses or contact lenses if necessary, and yet neglecting to take care of their ears. While hearing loss might not be as noticeable as sight degeneration in the earliest stages, the long-term damage can be more severe if left unchecked. What's more, many people don't realize that their increasing communication problems are caused by their own inability to clearly understand others, leading to misdirected irritability, anger and frustration.

One way to reduce hearing damage is by paying attention to noise levels and realising when they are too high. Industrial standards require that workers are not exposed to more than 85 dB over a period of eight hours. Most audiologists would like to see that standard modified to 80 dB.

If you work or are exposed to a noisy environment:

- Check out the decibel level you are being exposed to and take the proper precautions.
- Have your hearing evaluated at least once a year by a hearing health professional.
- Turn down the volume, or remove yourself from the noise area when possible
- Give your ears a rest for 24 hours after exposure to dangerous levels of noise
- Get yourself some hearing protection

A variety of ear protection devices are available today. Over-the-counter earplugs can be purchased. They range from foam variety to rubber, silicone, and wax. They're all affordable, comfortable, disposable, and provide important help in reducing the dangers of exposure to excessive levels of noise. ([See fact sheet for Hearing Protection](#))

***At first, the hearing loss may only be temporary, with hearing returning to normal after several hours or days. But, if exposure occurs repeatedly the ears will eventually lose their ability to bounce back, resulting in permanent hearing degeneration.***

***Finally, cotton and tissue are useless. They only reduce sound by less than 7 dB.***

## **Why Musician Ear Plugs?**

### **The problem with conventional earplugs is that:**

1. Conventional earplugs attenuate too much in the frequency range most important for speech and necessary for high fidelity sound
2. Regardless of their exact construction, existing earplugs produce 10 to 20 dB of high frequency attenuation and the result is that people often reject them because they can't hear speech clearly.
3. Conventional earplugs make the wearer's own voice sound hollow (known as the occlusion effect).
4. Many people risk their hearing by either wearing earplugs loosely or wearing no protection at all so they will be able to hear voices or music more clearly.

An appropriate attenuation must have a frequency response that follows the shape of the natural frequency response of the open ear, but at a reduced level. To reduce the occlusion effect, a deep seal of the plug in the second bend of the ear canal is necessary.

## **Musician's Plugs--Who Needs Them?**

There are two types of people who could benefit from musician ear plugs. The first group are those exposed to 90-120 dB sound levels for various time periods and who need to hear accurately. This group includes musicians, their sound crews, recording engineers, nightclub employees, and other music industry professionals. The second group consists of people outside the music industry, including loud-music listeners, persons with tinnitus or hyperacusis, spectators at sporting events, some construction workers, motorcycle drivers, and regular airline or auto travelers. These people often have high-frequency hearing loss but refuse to wear conventional hearing protection because they need to hear more clearly.

Many musicians and industrial workers can be adequately protected with as little as 10 dB of sound reduction. Other earplugs provide too much sound reduction for many environments.

## **Custom Fit Ear Plugs**

Custom fit earplugs, worn by many musicians, are made from an impression of the ear canal taken by an audiologist or other hearing health professionals. The impression is then sent to a lab where the final earmold is made. Custom earplugs are comfortable, easy to insert correctly, and filter sound better than disposable plugs. Instead of cutting out the high frequencies, musician's plugs attenuate all the frequencies evenly in relation to your hearing. Musician's earplugs are not intended for maximum attenuation.

There's some type of ear protection for everyone. Just decide what you want, what's best for you, and go get it. No more problems, no more worries. Just good music.

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