Laboratory Noise

Being exposed to noise levels higher than 85 decibels (dB) for long periods can damage your hearing. Most lab noise is well below this level, but it can still be loud enough to be an issue. Noise can make it hard to hear others, can disturb concentration, or just be annoying.

Noise Exposure Assessment

Noise can be harmful to your hearing starting at 85 dB. 8 hours of exposure at that level can cause hearing damage. The louder the noise, the less time it takes to cause damage. Most tasks in the laboratory are going to fall well below 85 dB, but you need to be aware of what noise levels are harmful so you can protect your hearing.

Noise below 85 dB isn't dangerous to your hearing, but it can be irritating and disturb concentration. It could become a related safety issue if the noise interferes with communication. Even if the noise won't cause harm or safety concerns, reducing noise levels can make your lab a better place to get work done, and help prevent noise levels from ever getting to a level that could be harmful.

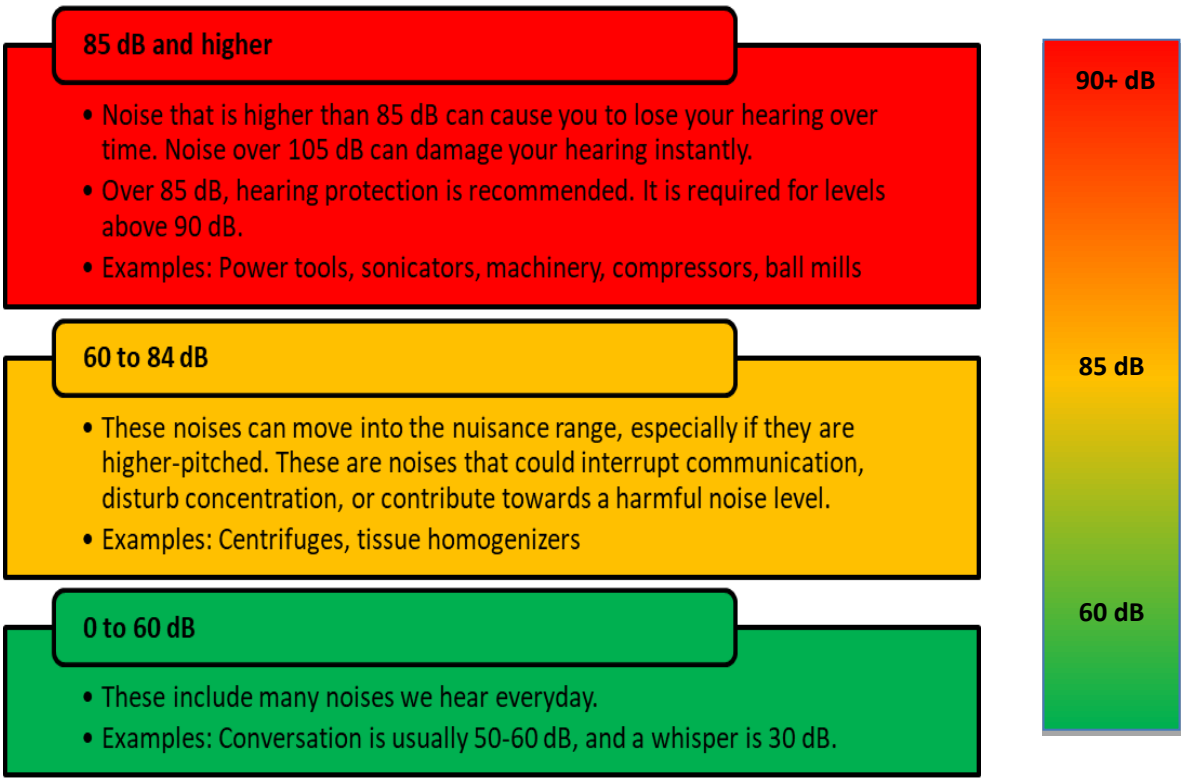

Figure 1: Chart of commonly found noise levels in work and everyday life.

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What You Can Do About Noise

Determine if the noise is too loud. A basic test of noise level is if you can hear yourself snapping your fingers at arm's length. If you can't hear it, it's more than likely above 85 dB. If you need to shout to be heard over the noise, that's another indication of a high noise level. If you are concerned about the noise levels in your work areas, you should contact your DEHS Research Safety Professional for assistance with measuring noise levels.

- When buying new equipment, try to buy quiet. Some equipment has a noise or decibel level listed as part of its specifications. Choose lower decibel levels if possible, and aim for as far below 85 dB as you can.
- Isolate louder equipment from areas where people are working. Examples would include putting freezers, refrigerators, or centrifuges in another nearby room, or even just moving them further away from the area where people work most often.
- Make sure all equipment is serviced regularly. Equipment that is cared for properly, in good repair, and oiled/lubricated regularly is often quieter.
- Consult with DEHS by contacting a Research Safety Professional about ways to reduce noise. We may be able to provide guidance on enclosing louder sources of noise, or on acoustically treating the ceiling and walls.
- Wear hearing protection if a noise is above 85 dB. Sometimes, hearing protection will only need to be worn for certain tasks, such as when you are operating a certain piece of machinery.

Hearing Protection Options

Hearing protection should be worn if you suspect a noise is above 85 dB. You can also wear hearing protection if the noise makes you uncomfortable or just feels too loud for you.

There are three major types of hearing protection:

1. *Ear plugs* – roll-up foam plugs that fit inside the ear canal. They provide the most protection, and are also lightweight and comfortable. However, they can be difficult to use, and must be inserted in the ear properly to provide the best protection.
2. *Ear caps* – foam caps that fit over the ear canal. They also offer a high level of protection, and are lightweight. Some people find them uncomfortable and they need to be replaced regularly.
3. *Ear muffs* – protectors that cover the entire ear and block noise. These are the fastest and easiest to put on, but also provide the least protection. They also can be heavy and bulky.
4. If you are considering wearing hearing protection, or are wearing it on a regular basis, contact your DEHS Research Safety Professional or call the DEHS main office at (612) 626-6002 to ask for assistance. We'll be able to help identify what your noise levels are and how you can reduce them, and guide you in how to properly wear hearing protection.