

Keeping your Ears Safe from Noise

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Too much noise can really change your hearing. Find out how, and what you can do to prevent it.

What too much noise does to your hearing

- You may feel like you're hearing through cotton wool.
- You have to try really hard to understand what people are saying.
- You might feel like your ears need to 'pop'.
- You may hear ringing or high whistling sounds in your ears.

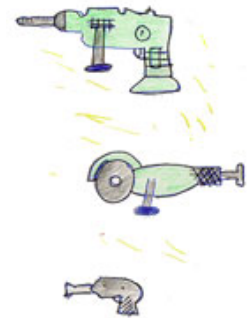


These effects may last for a few hours or even a few days after the loud noise has stopped, **but some damage will last forever if you listen to loud noise for too long or too often.**

What noise can damage your hearing?

Any noise which is very loud and lasts for a long time can damage hearing.

- If you are in a noisy place and you can't talk with your friend because you can't hear each other, then that is not a good place for your ears to be!
- If you can 'feel' the music you are listening to, then it's too loud and may damage your hearing.
- If someone can hear the music coming through the earphones you are wearing, then the music is too loud and may be damaging your ears.
- If you are near power tools, chainsaws or other noisy machinery and you are not wearing earmuffs, then you could be damaging your ears.
- Firing guns or fireworks can cause damage to hearing.
- Loud music, using amplifiers to make the sound louder, can damage your ears if you are playing or listening to it.
- People who work with noisy engines like tractors, farm and factory machinery should wear earmuffs to protect their hearing - so you need to stay away from them to protect yours.



- Any noise that leaves your ears ringing or feeling dull is not good.



How you can protect your ears from noise

- Stay away from noisy places, or don't stay long.
- Wear earmuffs or ear plugs if you have to be somewhere noisy (like a car race or using noisy power tools).
- Wear earplugs as well as ear muffs if you have to be in a noisy place fairly often, or ever go anywhere near firing guns.
- Turn the volume down and get used to listening to quieter sounds.

Remember that damage to your hearing might last forever.



How is sound measured?

Sound travels in waves. These waves are **vibrations** in the air.

The number of vibrations in a second is called **frequency**.

The fewer vibrations, the lower the sound or **pitch**.

Humans can hear across the range of 20 to 20 thousand **Hertz** (vibrations per second).

The vibrations vary in **intensity** (this means that sound waves can be strong or weak). The stronger they are, the louder they sound.

Sound intensity is measured in decibels (dB)

- Whispering would probably be measured at below 35dB
- Talking with friends - around 50-60dB
- Music in a disco - around 110-120 dB

This kind of measurement is not like going up a ladder one step at a time, it's more like taking bigger and bigger steps as the sound gets more intense. For example, 90dB is ten times louder than 80dB.



So the noise from a disco is **not three times** the intensity of whispering, but **more like several thousand times greater**. Ears start to hurt from noise at around 90dB.

So be kind to your ears and protect them from too much noise, and they will work hard for you all your life.

Dr Kate says

Think about your ears when you are listening to TV or music, and don't have the sound louder than you need to be able to hear comfortably.

Many years ago people who worked in factories with heavy machinery, such as textile mills and printing presses, got very good at lip reading while they were at work. In those days workers were not given ear muffs to protect their ears from the noise and many of them suffered hearing loss. Nowadays there are rules for everyone when they are at work.



We've provided this information to help you to understand important things about staying healthy and happy. However, if you feel sick or unhappy, it is important to tell your mom or dad, a teacher or another grown-up.