

NOISE POLLUTION

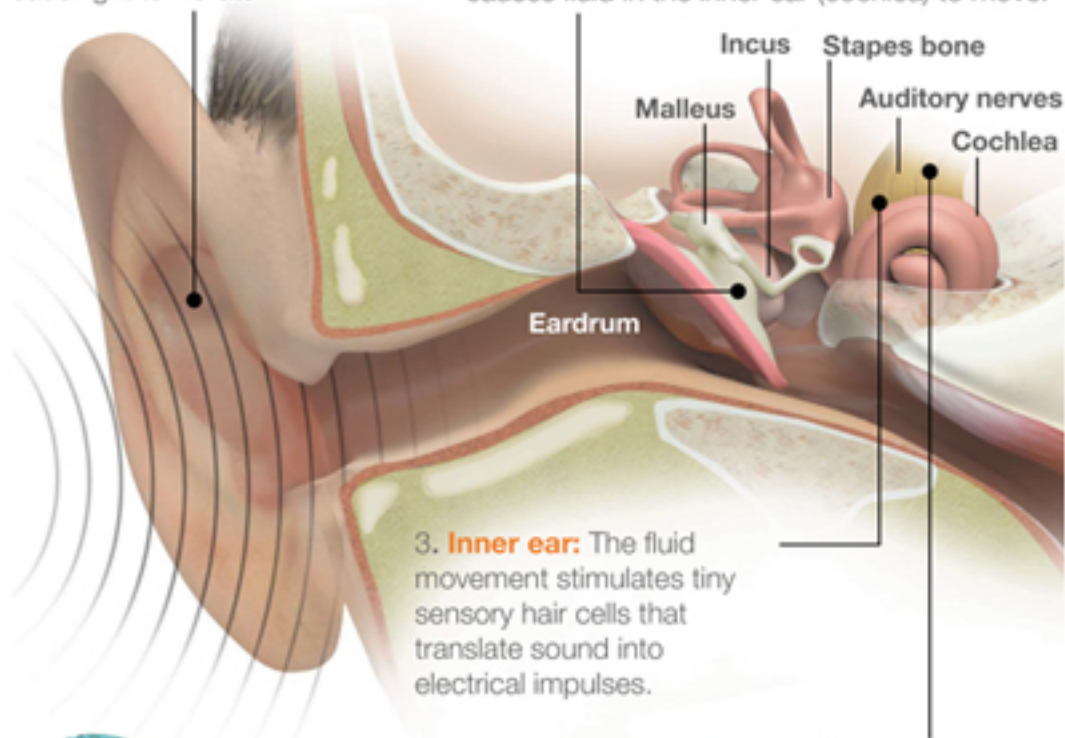
Learn how to protect your ears!

Excessive exposure to loud noise is one of the main causes of hearing loss for more than 28 million people. It can also cause health problems including stress, illness, high blood pressure, and sleep disruption.

HOW THE EAR WORKS

1. **Outer ear:** Sound waves travel into the ear canal to the eardrum (tympanic membrane) causing it to vibrate.

2. **Middle ear:** Vibration of the eardrum causes the tiny bones in the middle ear (the malleus, incus, and stapes) to vibrate which causes fluid in the inner ear (cochlea) to move.



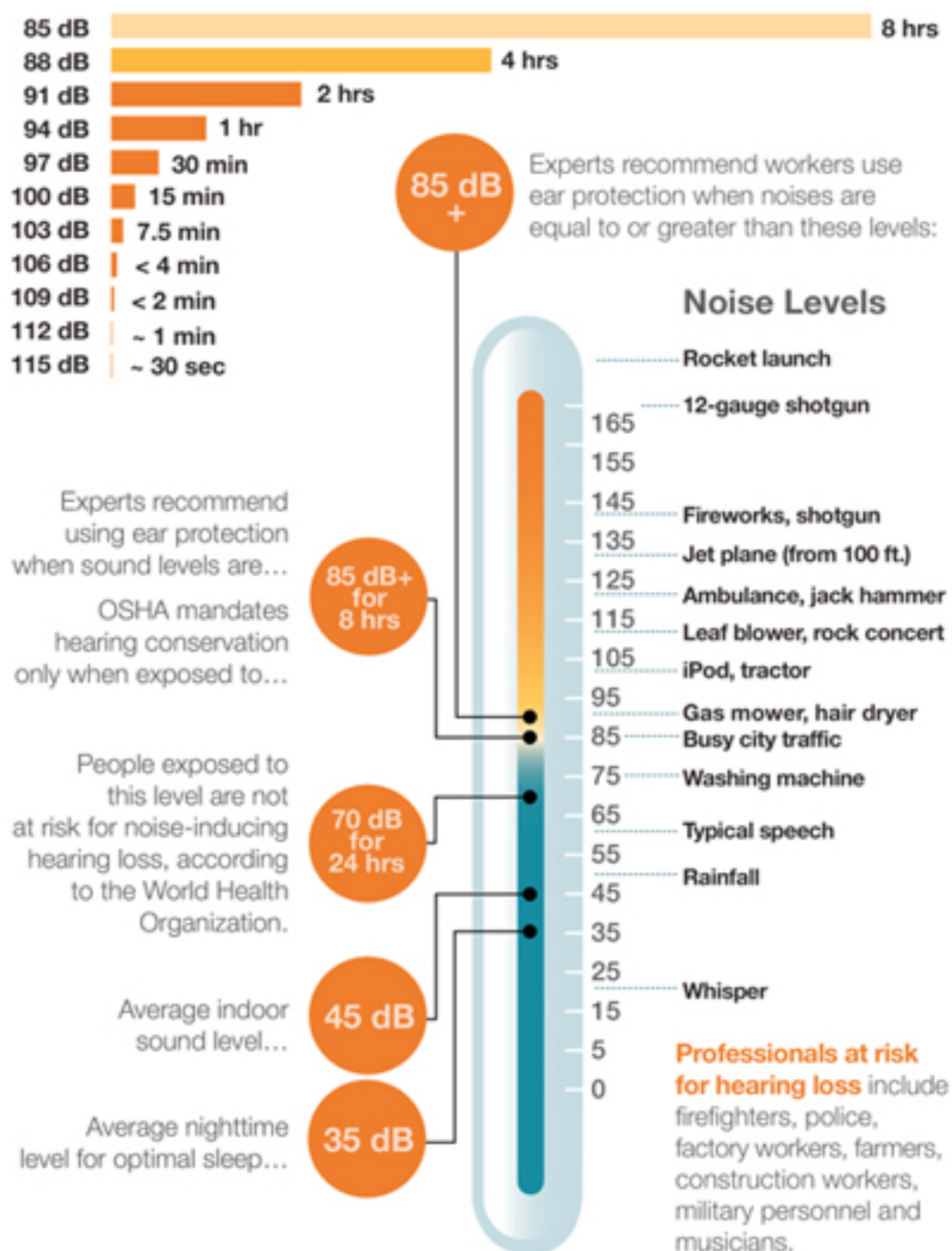
Noise-induced hearing loss is caused when the hair cells are damaged after long exposure to loud noises.

4. **The auditory nerve** carries the impulses to the brain where they are interpreted and we "hear."

WHAT NOISES ARE TOO LOUD?

Experts measure loud sounds by their decibel range to determine the intensity and frequency of sound waves. Sound level and time of exposure can be harmful to the ears.

Continuous Decibel Range and Permissible Exposure Time



HOW NOISE AFFECTS YOUR HEALTH

LONG-TERM HEALTH EFFECTS: Include sleep disruption, high blood pressure, stress-related illness, headaches, heart problems, mental health and behavioral issues, and difficulty concentrating.

Above 60 decibels, a study shows the risk of high blood pressure rises by more than 25%.



Above 64 decibels, a study shows the risk for high blood pressure rises by more than 90%.



Chronically ill or elderly people are more sensitive to noise.



Children are more sensitive to loud noises. Their ears register sound up to 20 decibels louder than adults' ears.



WARNING SIGNS

Seek hearing related health care if you are suffering from one or more of the following:



Tinnitus, or a ringing or buzzing noise, after exposure to noise



Slight muffling of sound that makes it hard to understand people



Difficulty understanding speech despite hearing sound



Not being sure what direction a particular sound is coming from

TIPS TO PROTECT YOUR HEARING

- Use the 60/60 rule when listening to iPods and other devices (volume not more than 60% of maximum and listen for no longer than 60 minutes at a time at this volume).
- Use hearing protection, such as ear plugs or noise-blocking earmuffs, when necessary. They can reduce noise by up to 30 decibels each. Using them together can reduce noise even more.
- Avoid loud noises in your environment.
- Limit time on noisy activities for children.
- Lower the volume on electronic devices.
- Create a quiet sleep environment.
- Look for noise ratings to purchase quieter appliances, power tools, vehicles, and small electric devices such as hair dryers.

Disclaimer: You should always check with your doctor or professional health care provider before starting or changing any medical treatment. This infographic is for general informational purposes only and is not a substitute for professional medical advice.

Sources:

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