

Noise & YOUR HEARING



Your hearing is important

WHAT is Noise?

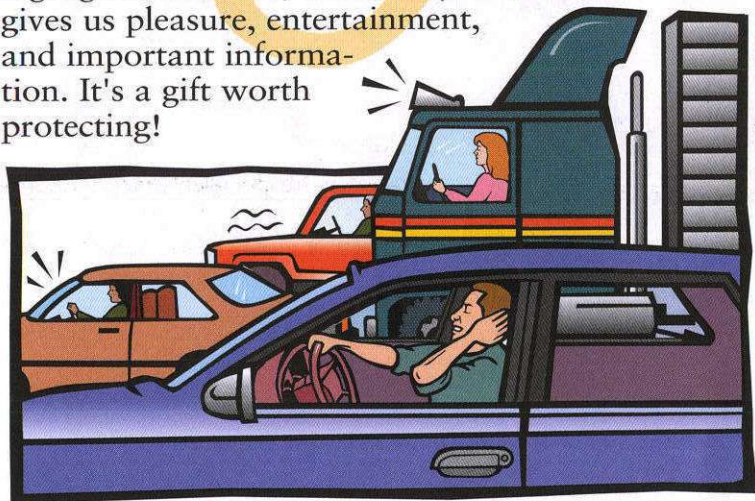
Noise and Your Hearing



Noise is an unwanted or unpleasant sound. It can get in the way of sounds we would rather hear.

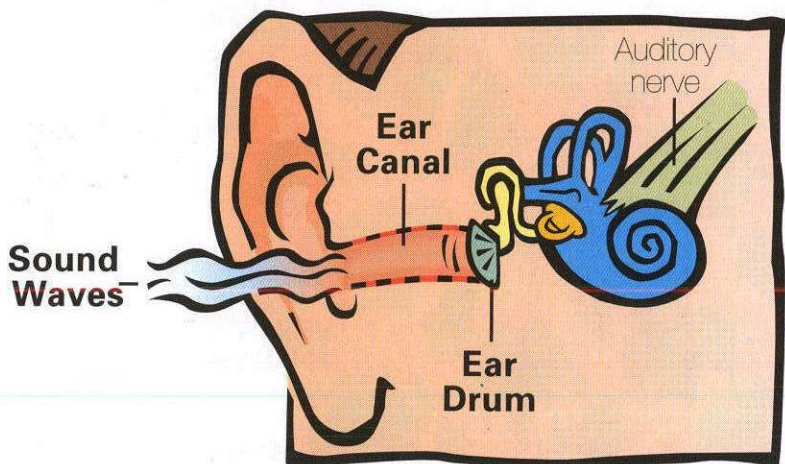
We're all exposed to noise every-day at home and at work. If the noise level gets high enough, it can cause problems, including hearing loss.

Hearing is one of life's most important gifts. Whether it's a baby's first sounds, your favourite music, conversation with an old friend, or warning signals at work, our ability to hear gives us pleasure, entertainment, and important information. It's a gift worth protecting!



How Do WE HEAR SOUNDS?

The process of hearing is amazingly complex and involves many delicate parts.



First, sound enters the outer part of the ear, the part we see. The sound waves travel down the ear canal to the middle ear, where they cause the eardrum to vibrate.

These vibrations are passed along through tiny bones to the inner ear. There, the vibrations move little hair-like cells that stimulate the auditory nerve.

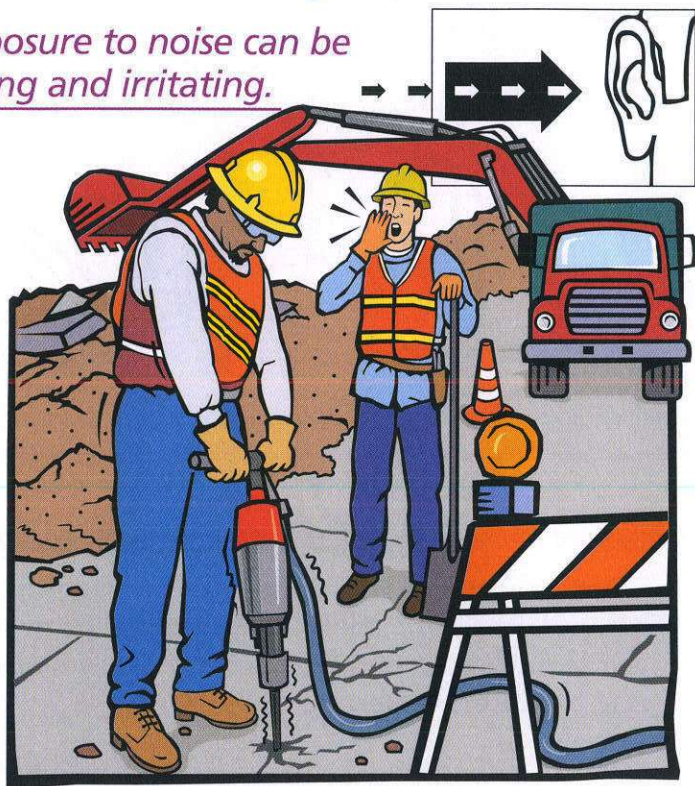
This nerve sends the sound signal to the brain where we “hear” the sound.



Your hearing is important

Too much Noise CAN CAUSE problems

Overexposure to noise can be distracting and irritating.



As many as *2.5 million Britains* are exposed to high **NOISE** levels at work.

- It can make you tired from the strain of listening or talking over loud background noise
- You might not hear important safety or work instructions
- It can cause physical and mental stress
- You could even lose your hearing—or part of it—without noticing.

How does NOISE damage HEARING?

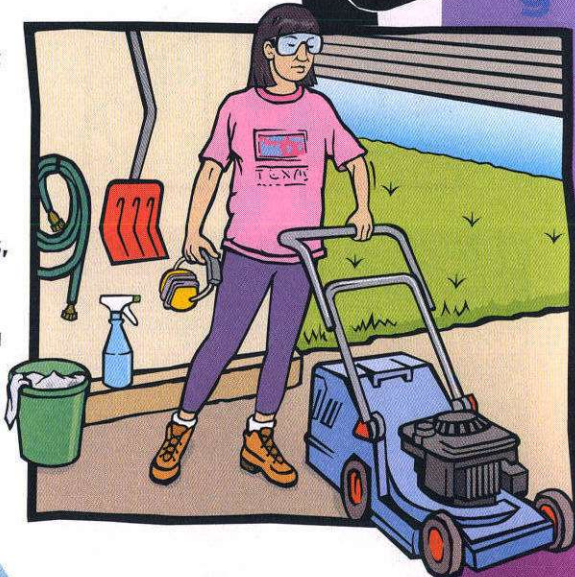
Noise above certain levels can damage some of the structures of the ear. The result: you stop hearing some kinds or levels of sound.

You can be overexposed to noise at work or at home. Fortunately, the Health and Safety Executive (HSE) requires your company to protect your hearing at work.



Controlling noise in your personal life is up to you. Use common sense.

- ☞ Don't listen to music at a loud volume
- ☞ Wear ear protection when operating equipment like loud vehicles, power tools, and lawn mowers.
- ☞ See your doctor if you experience problems with your ears or hearing



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How much Noise is TOO MUCH?

We measure noise two ways.



Loudness is measured in decibels (dBA). You run the risk of hearing loss if you are exposed to an average of more than 90 dBA over an 8-hour work day and do not wear hearing protection.

The second type of measurement is called **pitch or frequency**. High pitch noises like whistles are more likely to harm your hearing.

Noise that is both loud and high-pitched has the worst effect on hearing.

Here are some examples of decibel levels of common noises:

Whisper—	10 dB
Quiet house—	30 dB
Street sounds—	70 dB
Factory—	80 to 90 dB
Sander—	85 dB
Underground Railway—	90 dB
Pneumatic drill—	100 dB
Car horn—	120 dB
Artillery—	120 dB



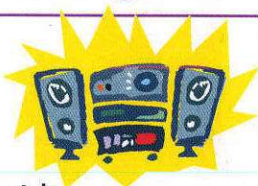
HEARING LOSS FROM NOISE CAN BE temporary or permanent

A one-time loud noise might cause limited hearing for a few hours. But long-term high noise exposure can lead to permanent damage.



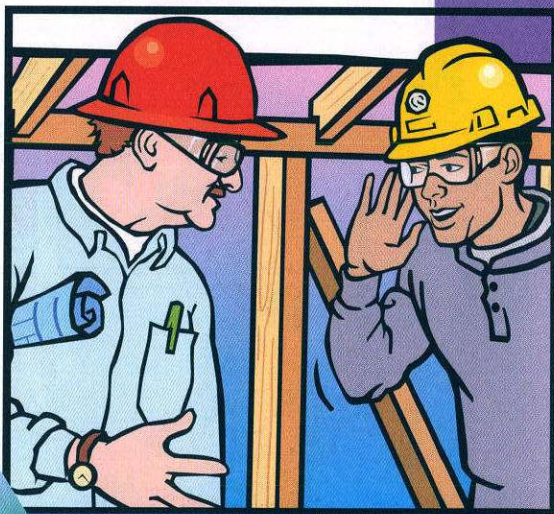
Some signs that noise could be hurting your hearing are:

- Noise or ringing in your ears
- Trouble hearing people speak
- Difficulty hearing certain high or soft sounds, like the ticking of a watch
- Raising the volume on the TV or radio more than usual.



If you notice any of these problems, have your hearing tested.

Hearing aids can provide some relief for many people. Unfortunately, though, there is no cure for loss of hearing. That's why prevention is so important.




Your hearing is important

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IT TAKES A TEAM EFFORT TO *protect your hearing*

HSE requires that your company follow a Hearing Conservation Programme if noise levels are 85 dBA or higher on an 8-hour Time Weighted Average basis.



- The first step in your company's hearing protection program is to measure noise levels to determine if any
- employees are exposed to noise levels greater than 85 dBA.

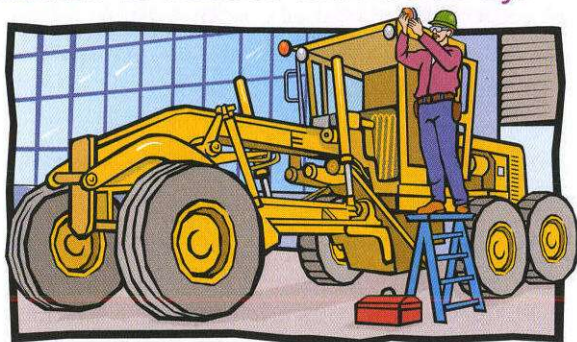
If so, your employer may need to provide noise controls and annual hearing tests.

Your employer may offer an audiometric service, but if not you are entitled to visit your GP and ask for an audiometric test under the National Health Service.



If the Noise Level is too high...

Your organisation may take action to reduce that noise by:



- **Placing noisy machinery or operations in a separate area**
- **Maintaining and lubricating equipment** so rattles and squeaks are eliminated
- **Replacing noisy materials** like metal with quieter substances like wood or plastic.
- **Placing heavy machinery** on rubber or spring mountings to reduce vibration
- **Using sound-absorbing acoustic tiles and blankets** on floors, ceilings, and walls
- **Arranging work schedules** to cut down on the time each worker spends in a high-noise area
- **Performing high-noise maintenance** operations during off hours.



Your hearing is important

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HEARING PROTECTION CAN SAVE YOUR HEARING



Regulations on noise at work mean that hearing protectors be made available if 8-hour noise exposure cannot be kept below 85 dBA.

Your company is required to issue this equipment as well as train you in how to care for it.

The law and your organisation also require you to wear this equipment. More than that, though, good sense says you'll want to wear it.

There are three basic types of hearing protectors. Each type has certain advantages and disadvantages. Your company will provide you with the right type for your specific situation.



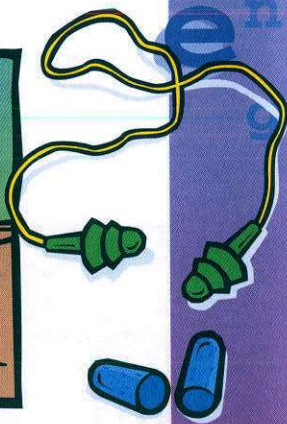
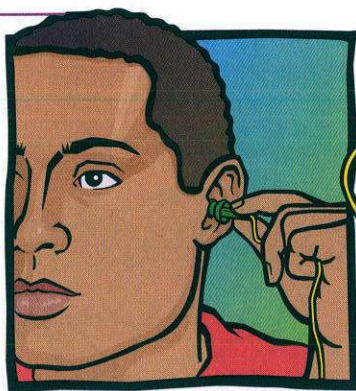
EAR plugs

Ear plugs seal the ear canal and prevent noise from reaching the middle ear. Some plugs come in standard sizes, some are individually moldable, while some are custom fitted to the exact shape of your ear.

For all types, it's important to keep ear plugs clean, and wash your hands before inserting them.

Ear plugs are:

- small
- inexpensive
- portable
- comfortable in hot weather
- an excellent form of hearing protection



Their disadvantages are they can be hard to fit; they can introduce dirt into the ear canal; and the level of protection can vary between individuals.



Your hearing is important

EAR muffs

Ear muffs have three basic parts

- headband
- ear cups
- ear cushions.



To be effective, the cups must fit snugly—one size usually fits everyone. Ear muffs provide excellent hearing protection. Disadvantages are their bulk and discomfort in hot weather.



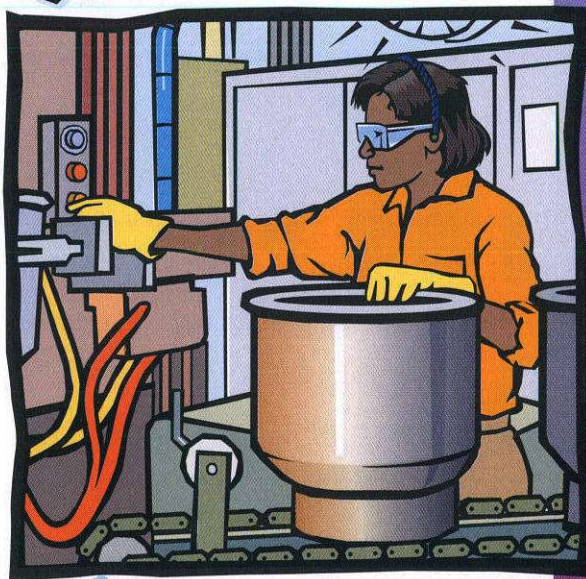
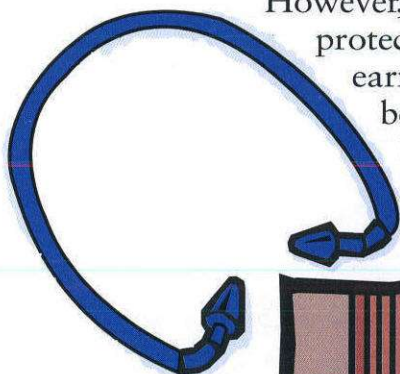
To reduce noise to safe levels, you might have to wear two types of hear-



EAR CAPS

Ear caps are soft pads on a headband. They seal the entrance to the ear canal without actually entering it. A snug fit is essential. Ear caps are comfortable, cool, and lightweight.

However, they provide less protection than earplugs and earmuffs. Certain models can be worn for long periods, but be sure to check with your supervisor.



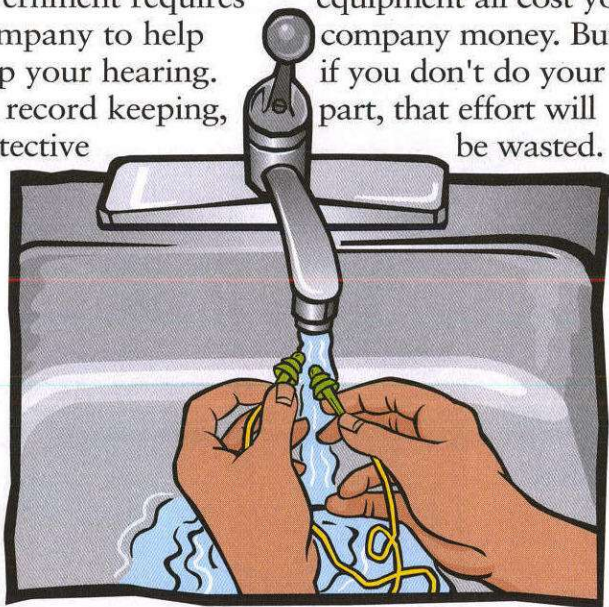
Your hearing is important

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THE BEST PERSON TO PROTECT YOUR *hearing* is you!

The government requires your company to help you keep your hearing. Testing, record keeping, and protective

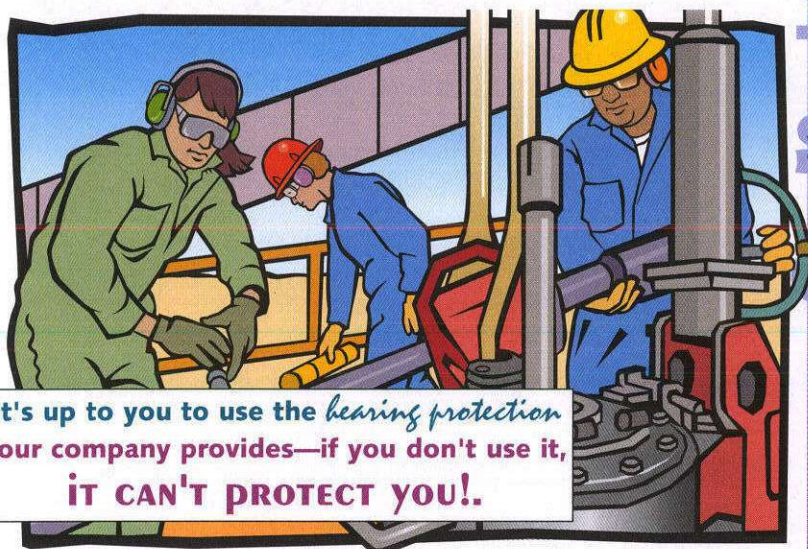
equipment all cost your company money. But if you don't do your part, that effort will be wasted.



- 1. WEAR YOUR HEARING PROTECTION EACH TIME YOU'RE SUPPOSED TO.** Remember—hearing loss is permanent—it can't be repaired or replaced.
- 2. HOMEMADE HEARING PROTECTORS DON'T WORK.** Cotton wool is no replacement for the real thing.
- 3. TAKE PROPER CARE OF YOUR HEARING PROTECTION.** Inspect it before each use. Keep it clean. And see your supervisor if it no longer fits or becomes damaged.

DON'T TAKE NOISE FOR GRANTED

*Try to limit your exposure to noise.
Remember—if you are exposed to noise:*



- Have your hearing tested regularly
- Help your company maintain equipment and take other steps that will make operations quieter
- Always wear properly fitted hearing protection in noisy work areas.
- Remember to protect your hearing at home, too.



Your hearing is important

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Test Your Hearing Protection Knowledge

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QUIZ

Directions: Circle **T** if the statement is true, or **F** if the statement is false.

- T F** 1. Noise is unwanted or unpleasant sound that can get in the way of sounds we would rather hear.
- T F** 2. Too much noise can cause you to lose your hearing.
- T F** 3. The only time you need to be concerned about too much noise is when you're at work.
- T F** 4. You run the risk of hearing loss if you're exposed to an average of more than 75 decibels over an 8-hour workday and do not wear hearing protection.
- T F** 5. Pitch, or frequency, has nothing to do with whether noise will harm your hearing.
- T F** 6. Your company must follow the regulations if noise levels reach 85 decibels on an 8-hour, Time Weighted Average basis.
- T F** 7. If you work in a high noise area, you may be required to take annual hearing tests to determine if your ability to hear has changed.
- T F** 8. If the noise level in your area is too high, your company will immediately move you to another area.
- T F** 9. Ear caps are the best form of hearing protection.
- T F** 10. Sometimes homemade hearing protection, such as cotton balls or cigarette filters, work just as well as what your organisation gives you.

For the correct answers, turn this page upside down.

1. T 2. T 3. F—you can be exposed to high levels of noise at home, too, such as loud music. 4. F—you risk hearing loss if you're exposed to an average of 90 decibels over an 8-hour work day and don't wear hearing protection. 5. F—high-pitched or high-frequency noises are more likely to cause hearing damage. 6. T 7. T 8. F—if noise levels cannot be reduced, your company will provide you with hearing protection. 9. F—all forms of hearing protection are helpful, but earmuffs and ear plugs usually give you better protection. 10. F—homemade hearing protection does not provide enough protection. Only use what your organisation provides.

TRAINING VERIFICATION

Employee's Name _____

Signature _____ Date _____

