WHAT IS TINNITUS?

Tinnitus is commonly described as a ringing in the ears, but it also can sound like roaring, clicking, hissing, or buzzing. It may be soft or loud, high pitched or low pitched. You might hear it in either one or both ears.

What causes tinnitus?

Tinnitus (pronounced tin-NY-tus or TIN-u-tus) is not a disease. It is a symptom that something is wrong in the auditory system, which includes the ear, the auditory nerve that connects the inner ear to the brain, and the parts of the brain that process sound. Something as simple as a piece of earwax blocking the ear canal can cause tinnitus. But it can also be the result of a number of health conditions, such as:

- Noise-induced hearing loss
- Ear and sinus infections
- Diseases of the heart or blood vessels
- Ménière’s disease
- Brain tumours
- Hormonal changes in women
- Thyroid abnormalities

Tinnitus is sometimes the first sign of hearing loss in older people. It also can be a side effect of medications.

People who work in noisy environments—such as factory or construction workers, road crews or musicians—can develop tinnitus over time when ongoing exposure to noise damages tiny sensory hair cells in the inner ear that help transmit sound to the brain. This is called noise-induced hearing loss.

Tinnitus is one of the most common service-related disabilities among veterans returning from war zones. Soldiers exposed to noise from weapons can develop tinnitus if the shock wave damages brain tissue in areas that help process sound.

Pulsatile tinnitus is a rare type of tinnitus that sounds like a rhythmic pulsing in the ear, usually in time with your heartbeat. A doctor may be able to hear it by pressing a stethoscope against your neck or by placing a tiny microphone inside the ear canal. This
kind of tinnitus is most often caused by problems with blood flow in the head or neck. Pulsatile tinnitus also may be caused by brain tumours or abnormalities in brain structure.

Even with all of these associated conditions and causes, some people develop tinnitus for no obvious reason. Most of the time, tinnitus isn't a sign of a serious health problem, but if it's loud or doesn't go away, it can cause fatigue, depression, anxiety, and problems with memory and concentration. For some, tinnitus can be a source of real mental and emotional anguish.

Why do I have this noise in my ears?

Although we hear tinnitus in our ears, its source is really in the networks of brain cells (what scientists call neural circuits) that make sense of the sounds our ears hear. A way to think about tinnitus is that it often begins in the ear, but it continues in the brain.

Scientists still haven't agreed upon what happens in the brain to create the illusion of sound when there is none. Some think that tinnitus is similar to chronic pain syndrome, in which the pain persists even after a wound or broken bone has healed.

Tinnitus could be the result of the brain’s neural circuits trying to adapt to the loss of sensory hair cells by turning up the sensitivity to sound. This would explain why some people with tinnitus are oversensitive to loud noise.

Tinnitus also could be the result of neural circuits thrown out of balance when damage in the inner ear changes signalling activity in the auditory cortex, the part of the brain that processes sound. Or it could be the result of abnormal interactions between neural circuits. The neural circuits involved in hearing aren't solely dedicated to processing sound. They also communicate with other parts of the brain, such as the limbic region, which regulates mood and emotion.

What should I do if I have tinnitus?

The first thing is to see your doctor, who will check if anything, such as ear wax, is blocking the ear canal. Your doctor will ask you about your current health, medical conditions, and medications to find out if an underlying condition is causing your tinnitus.

If your doctor cannot find any medical condition responsible for your tinnitus, you may be referred to an ear, nose, and throat doctor, or an ENT. The ENT will physically examine your head, neck, and ears and test your hearing to determine whether you have any hearing loss along with the tinnitus. You might also be referred to an audiologist who can also measure your hearing and evaluate your tinnitus.

What if the sounds in my ear do not go away?

Some people find their tinnitus doesn’t go away or it gets worse. In some cases it may become so severe that they find it difficult to hear, concentrate, or even sleep. Your doctor will work with you to help find ways to reduce the severity of the noise and its impact on your life.
Are there treatments that can help me?

Tinnitus does not have a cure yet, but treatments that help many people cope better with the condition are available. Most doctors will offer a combination of the treatments depending on the severity of your tinnitus and the areas of your life it affects the most.

Can I do anything to prevent tinnitus or keep it from getting worse?

Noise-induced hearing loss, the result of damage to the sensory hair cells of the inner ear, is one of the most common causes of tinnitus. Anything you can do to limit your exposure to loud noise—by moving away from the sound, turning down the volume, or wearing earplugs or earmuffs—will help prevent tinnitus or keep it from getting worse.