Tinnitus – Living with the Ringing

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Tinnitus, or ringing in the ears, is a problem that most people have experienced for a few moments in their lives. The sound originates from within the ears themselves and not from any external source, and usually takes the form of hissing or ringing. Short term tinnitus may follow the occurrence of a loud bang or noise or from a change in altitude. For most people the experience passes very quickly, perhaps in a few seconds or minutes and is forgotten. For an unfortunate 5% however, it may persist for life and can be extremely distressing since only rarely can a cure be found. Most people who develop tinnitus have no choice but to learn to live with it.

Tinnitus is a problem with many different causes. Long periods of loud noise, including excessive use of the “walkman”, damage the ear, and catarrh or inflammation of the inner and middle ear may also lead to the onset of the ringing. Several drugs are known to produce tinnitus as a side effect. These include quinine and even large doses of aspirin and several types of antibiotic in susceptible people. Very often there may be no known cause and the ringing just starts and never stops.

Surprisingly, public awareness of the problem is very low, possibly because no great medical advances have been made in curing the ailment, and there are no signs that a medical solution will be found soon. Whilst certain drugs are known to eliminate the noises, they have many undesirable side effects, and surgery helps in only an extremely small number of cases. Tinnitus is rarely related to any life-threatening form of illness, and those who suffer from it bear no physical pain. The noises however affect the ability to think and to communicate. In particular the sounds may strongly influence the ability to sleep, since they are most pronounced when other sounds are reduced to a bare minimum.

People react to tinnitus in many different ways, and this may depend on the psychological makeup of the individual or indeed the type and loudness of the sound itself. Some people are debilitated by the problem, and may even contemplate suicide, whilst a few actually enjoy the sounds. Others simply learn to live with it, and rarely give it a second thought – it becomes as much a part of their lives as the sound of their own breathing. For most people there is a gradual change from distress to tolerance and then to acceptance. This process, especially the achievement of the state of tolerance and acceptance, is often hard won after a very troubled period. The development of tolerance often takes from between 3 to 18 months.

The noises most present a problem when a person pays attention to them because they are not distracted in other ways. Two people who suffer from tinnitus may talk to each other for a long period without noticing the sounds, that is until one of them mentions the problem in conversation. Then both become aware of the noises — immediately. As the conversation continues, the noises fade away from the conscious mind, but they are still there — unnoticed. Usually the sounds we hear as part of our normal routine, the sound of traffic, other people speaking, sounds within the workplace, house and garden etc., may divert the attention of the tinnitus sufferer, so that he may pass much of the day without being aware of the noises. Because the elderly are more prone to tinnitus, and also suffer increasingly from poor hearing, they may develop a double handicap, since the “masking” effect of environmental sounds is diminished and the effect of the internal noise is accentuated. Such developments can be very intrusive, and may warrant the use of a hearing aid to accentuate natural sound.

The sound and loudness of tinnitus varies considerably from one person to another, and also varies during the day and from day to day. A quiet tinnitus may be tolerated for years, or even unnoticed until it starts to get louder, when it can cause trouble. In fact some people placed in a sound proof booth and asked to comment may actually notice sounds from their ears that they had never heard before. The loudness seems to vary from the equivalent of a small whisper to the sound of a low flying jet and is usually just below that of normal conversation. The apparent
Loud tinnitus may also be affected by a person’s mood. People who are annoyed or distressed may report a loud tinnitus; certainly tinnitus is capable of producing the most extreme state of despair.

Loud tinnitus is obviously more noticeable than quiet tinnitus and remains more dominant even during normal day to day activities. In such cases it may be difficult for speech to be understood, especially in busy places. Listening, as opposed to hearing, is a mental activity, which becomes less efficient when a person’s attention is distracted by irrelevant noises. The ability to think whilst reading or performing other mental tasks may be interrupted by attention to the noises. The overall effect is that the person with tinnitus may often appear to be distant.

The sound itself varies from a hiss, ringing, squeal, or whistle in the higher range, to drones, rumbles and hums in the lower range. Some tinnitus is a mixture of the two. The hiss of a badly tuned radio station is the sound that many people may hear. As the non-tinnitus sufferer can imagine, this can be extremely annoying!

**Insomnia**

For most people the ringing in the ears is most distressing during the times of sleep when there are few if any distracting sounds and other activities to divert attention. Tinnitus can delay the onset of sleep and can also induce early waking. Such effects reduce the length of healthy sleep with the consequent effects on overall daytime activity and general health.

**Living with the problem**

Since there may be no known cure, most people who develop tinnitus have no alternative but to adjust and live with their problem. Very fortunately most people go through several stages of tolerance which can actually be documented. Stage one is typified by a persistent awareness of the noises except during sleep and by masking by louder and distracting noises. Worry and depression set in and concentration on mental tasks is difficult. Insomnia may be severe. Stage two is reached when moments occur when the noises are not noticed and other activities and sounds divert attention from the tinnitus more easily. The beginnings of emotional acceptance begin, and there is a gradual return to normal sleep. Stage three is reached when awareness is reduced even further to periods of quiet, stress and tiredness. The noises become less distressing. Finally stage four is reached when attention is paid to the noises only when they are louder than normal or during periods of quiet when they may attract attention. The noises no longer intrude into normal activities and a state of emotional acceptance has been achieved. These stages may take up to 18 months to achieve.

**Masking the sound of Tinnitus**

Many externally generated environmental sounds mask the internal ringing in the ears and thus divert attention away from the tinnitus. On days of loud tinnitus, environmental noises may provide only partial masking, whilst on days of quiet tinnitus the same external noises may provide complete masking. It is easy to visualise how a louder sound covers up the quieter internal sound simply because of its volume. However there is a far more interesting and subtle effect when the external sound successfully masks the tinnitus without being louder. Thus the type of sound is also important as well as its loudness.

The masking effect has led to the development of a range of portable masking devises which look like hearing aids and are fitted to the ear. Most produce a meaningless shushing or hissing sound, or specially prepared music which retain more of the higher pitched sounds. Sea sounds are also used.

**Personal Experiences**

My own interest in tinnitus began over two and a half years ago when a high pitched ringing sound started in my right ear. Since that time, the ringing has been continuous. I can confirm the initial state of despair, followed by the slow acceptance of the problem, as outlined earlier in this article. Sleep was almost impossible for several weeks, but the accidental discovery of a very effective masking technique has provided considerable comfort, especially at night.

I noted that certain natural sounds appeared to mask the internal ringing sound quite effectively. These sounds included the rustling of palm leaves, running water and also the shrill chirp of crickets at night. Walking from the house into the garden at night apparently made the tinnitus go away. Of course the sounds continued, but they were effectively masked by the sounds of the crickets. Listening to music was quite ineffective at masking. Since I had no intention of sleeping for the rest of my life in the garden, the sounds had to be copied and replayed in the bedroom. I found the sounds of crickets could best be mimicked by recording the sounds on tape, and replaying them on a walkman.
Using through volume up, and few metres away but the recordings reproduced. The greatest comfort was achieved, not by playing such recordings directly into the ears, but in the setting the earpieces a few metres away and playing the recording as if the crickets were actually in the bedroom. The degree of masking could be adjusted by varying the volume of the recording. Complete masking could be achieved by turning the volume up, and partial masking by turning the volume down. This simple device, powered through a time clock and transformer to power an auto reverse walkman has worked almost continuously (6.5 hours per night) for nearly two and a half years, and has provided considerable comfort to me during that time.

Explanations

Why should the sounds of crickets appear to mask the annoying ringing within the ears? There are several explanations. The first is known as habituation of attention. In this case the brain finds it easier to ignore sounds that are constant and meaningless compared to more complex and variable sounds or sounds which are useful. For instance we tend to ignore sounds of a ticking clock, breathing and even the kitchen refrigerator because these are constant, and concentrate on other sounds that are either useful to us or catch the attention for other reasons. During the day many sounds we hear may attract our attention and a certain proportion of these are vital to our daily routine. During the silence of the night the brain has almost nothing on which to concentrate apart from the tinnitus. Under these conditions the shrill and pointed cricket sound appears not only to disguise (mask) the constant hiss of tinnitus, but also to attract the brain's attention more. I am sure that as the mind begins to focus on other things, conscious attention to the tinnitus is lost first followed by conscious attention to the cricket sound. I have found the sound of crickets far more acceptable to the hissing of tinnitus, partly because they originate from a natural source of sound and partly because they can be explained and controlled. Indeed the background sound they offer is comforting compared to the hissing of tinnitus – something I would not have imagined years ago.

I also think it is important that the sound which masks the tinnitus originates outside the body, as this in itself draws attention away from the internal sound and the sense of confinement which this produces. However the masking effect of crickets also occurs through wearing a pair of headphones, but of course the sound appears to come once again from within the brain itself and not from some other place. Under these conditions the body only senses a partial relief.

Residual inhibition

In a very small proportion of people the effects of masking persists after the masking sound has been turned off. Complete disappearance of tinnitus is rare (7% of users in one study), but a partial quieting of the noise is more common, but sadly only lasts for a short time. However this appears to be a promising field of work for the future.

Since the concept of masking is so important it is vital that the ears are allowed to function at their best. This may mean clearing blocked wax which produces partial deafness by reducing the amount of ambient sound that can be heard, and thus allows the noises to dominate. The general condition of the ears may reflect the general condition of the body itself. Turning to a fresh wholefood diet, exercising a little and finding time for sufficient rest and relaxation has been known to help. Homeopathic remedies such as pulsatilla (the pasque flower) can relieve fluid in the inner ear, and acupuncture is also known to improve the condition in some cases – although not mine!

References