DON'T FOREGET TO HAVE REGULAR HEARING TESTS!

The following may help you understand more about the reasons why you need to have regular hearing tests.

1. Hearing **loss** with MD; and
2. Hearing **aids** with Meniere's Disease
3. Dementia and hearing loss

1. Hearing Loss in Meniere's Disease

The characteristics of the hearing loss vary according to the stage of the disease as it progresses.

In the first stage of MD the hearing loss affects only the low tones (bass) when the levels of endolymph are high in the cochlea. The hearing returns to normal after an attack of dizziness.

In the second stage, the hearing continues to fluctuate but it never returns to its normal levels. Over a period of days or even several times in a single day, the hearing may have different degrees of acuity.

In the third stage (burn out) the hearing is very impaired and distorted but more stable – it may still fluctuate slightly but with a more linear pattern – the tinnitus and recruitment are very troublesome.

The inability to hear at a consistent level as it happens in MD makes it difficult to accept and understand the hearing loss. Some attribute the hearing difficulties to external factors such as background noise, "mumbling speakers", poor environmental acoustics, and bad reception of telephone, TV or radio amongst other things. Many also believe that the tinnitus is responsible for their hearing difficulties. The reality is that the excessive levels of endolymph fluid damage the cochlea, causing a hearing loss. The hearing handicap is worse if both ears are affected but even one impaired ear can be very disruptive.

Hearing loss is a major source of stress, anxiety and depression. Most people do not realize the impact of a hearing loss on family, social and work life.

2. Hearing Aids & Meniere's Disease

Hearing aids can definitely help patients with Meniere's disease. Dr Celene McNeill's PhD thesis investigated the benefits and developed a special protocol to fit hearing aids to patients with hearing fluctuation due to Meniere's disease.

Hearing loss caused by MD are certainly very difficult to deal with but not impossible as some may believe. With the advent of digital sound processing incorporated into hearing aid technology, the possibilities of enhancing hearing in MD have also significantly improved. Modern hearing aids amplify the sounds to match the hearing loss very precisely and also reduce loud sounds to a comfortable levels.

When successfully fitted an individual with MD can expect that the hearing aid will minimize the impact of the hearing loss making every-day sounds clearer, reduce the discomfort of recruitment by compressing uncomfortably loud sounds to a more tolerable volume, and reduce the tinnitus perception to a less distressing level.

Prior to selecting the most suitable hearing aid, the existence of a fluctuating hearing loss needs to be established based on a series of hearing tests performed at different times of the day over a period of time. All hearing aids need to be fine-tuned for an individual's hearing loss and even more so in MD. Successfully fitting a hearing aid to someone with MD is an ongoing process requiring several sessions with the audiologist.

A hearing aid may sound perfect when it is first tuned for someone with MD but by the next day the hearing may drop or improve and the hearing aid will sound too weak or too loud or simply distorted. Hearing fluctuation means that sometimes the hearing may be better for the treble and other times it may be better for the bass sounds. The hearing aid needs to be selected based on the pattern of the hearing fluctuation. A hearing aid with a volume control may be sufficient if there is very little or no fluctuation. A multiple memory hearing aid may be selected only if the pattern of fluctuation can be established and predicted; which is rarely the case. When the hearing fluctuation is non-linear and unpredictable, as it usually is in the second stage of MD, only a "self- programmable" hearing aid system will be of help.

https://www.healthyhearing.com.au/menieres-disease

3. Dementia and Hearing Loss

The prevalence of dementia is projected to affect 1 in 85 people by the year 2050, more than 100 million people worldwide. Dementia is a general decline in cognitive abilities such as thinking, memory and language.

Different disease processes can cause dementia:

- Alzheimer's disease
- Lewy Bodies disease
- Alcoholism
- Parkinson's disease
- Vascular diseases
- HIV – AIDS
- Extra-pyramidal syndromes
- Fronto-temporal lesions
- Hearing Loss

Hearing Loss and Dementia

Current research indicates that sensory loss, especially hearing loss, are risk factors for the development of dementia. There is an overlap between the symptoms of hearing loss and dementia. Both cause vagueness, misunderstandings, memory loss and social withdrawal.

Hearing loss reduces stimuli input to the brain and hampers social interaction contributing to the development of dementia.

There is a hypothesis that hearing loss and progressive cognitive impairment are caused by a common neuro-pathological process which may be the same that leads to Alzheimer's disease. Indeed, the primary area of the brain affected by Alzheimer's disease is the mid temporal lobe which is the area where the nerve pathways converge from the ear to the brain.

There is also the likelihood of another neuro-biological process such as vascular disease and factors like smoking and family history of diabetes and hypertension causing both hearing loss and dementia.

Diagnosis of Dementia

There may be an over diagnosis of dementia in individuals affected by hearing loss.

An untreated hearing loss can interfere with the diagnosis of dementia. This is because most diagnostic tests to assess cognitive function rely on verbal communication between the examiner and the patient.

Prior to diagnostic assessment of dementia, it is important to rule out sensory impairment such as vision and hearing loss. Treatment of the sensory impairment should always precede an assessment of cognitive function.

In the case of vision impairment appropriate glasses or surgical intervention when applicable should be undertaken.

In the case of hearing loss the appropriate fitting of hearing aids or an implantable device such as cochlear implants should be considered.

Prevention of Dementia

Hearing loss affects cognitive reserve. When auditory perception is difficult greater cognitive resources are dedicated to auditory processing to the detriment of other functions such as working memory. This reallocation of neural resources to auditory processing depletes the cognitive reserve available to other processes leading to the earlier clinical expression of dementia.

Studies suggest that environmental enrichment with access to auditory and environmental stimuli, and engagement in leisure activities, lower the risk of dementia.

The effects of hearing loss in older adults may be preventable and can be practically addressed with current technology (eg, customised hearing aids and cochlear implants) and with other rehabilitative interventions focused on optimizing social and environmental conditions for hearing. *(Reference: Frank R. Lin et al Arch Neurol. 2011; 68 (2):214-220.)*

The above information can be found on Healthy Hearing &Balance Care, Bondi Junction **https://www.healthyhearing.com.au/conditions-new**

Dr Celene McNeill has pioneered the use of such hearing aids for patients with MD as part of her PhD studies. Hundreds of patients have been successfully fitted with self-programmable hearing aids at Healthy Hearing & Balance Care**.**

Dizzy Anne