



**Information for GPs and other  
Health Professionals:**

**Paediatric and Adult Audiological  
Assessments available at  
Midwest Hearing Clinic**



## Paediatric and Adult Audiological Assessments provided at Midwest Hearing Clinic:

**Visual Reinforcement Audiometry (VRA)** - VRA is a reliable and standardised test procedure used to assess the hearing threshold levels of children from 7 months of age to approximately 2.5 years. It involves a procedure whereby the child is 'conditioned' to associate the test tones with a visual reward such as a toy which lights up. In this way the child's response to the test tone is reinforced each time, allowing reliable hearing threshold results to be obtained across a range of audiometric frequencies.

**Play/ Performance Audiometry** - For children aged approximately 2.5 years to 5 years, play or performance audiometry is used, whereby the child responds to the test tones through play rather than pressing a button as an older child or adult would.

Both VRA and Play/ Performance Audiometry can be carried out using either insert earphones, where ear specific results are obtained, or by using soundfield speakers (often used in younger children who will not tolerate insert earphones or headphones).

**Pure-tone Audiometry** is used to measure the hearing thresholds of older children and adults across a range of audiometric frequencies. The patient wears earphones and is instructed to press a button in response to the tones. This is carried out in an audiometric booth.

**Tympanometry** is used to assess middle ear function in both children and adults. It is used to test the compliance of the tympanic membrane and middle ear pressure to identify middle ear disorders e.g. middle ear effusion, eustachian tube dysfunction, tympanic membrane perforation and ossicular chain disruption.

**Acoustic Reflex testing** evaluates the stapedial muscle reflex. Loud tones are presented to the ear via a probe and the contraction of the stapedial muscle in response to the tones is measured. The presence/ absence of an acoustic reflex and level of loudness of the tone needed to cause an acoustic reflex provides information about the middle ear status, the cochlea and the innervations of the stapedial muscle. It is a useful test for those who cannot cooperate with other tests.



**Otoacoustic Emissions (OAE) testing** is used to objectively assess the function of the cochlea. OAEs are responses generated by the cochlea in response to an acoustic stimuli. OAE screening tests are widely used in newborn hearing screening programmes, however on its own OAE testing is not sufficient to diagnose hearing loss, the results must be carefully interpreted in conjunction with other audiological assessments. OAE testing is carried out by placing a probe which presents a stimulus to the ear to stimulate the cochlear hair cells. As a by-product of this cochlear stimulation, 'Otoacoustic Emissions' are produced, which can be recorded using a probe in the ear canal. The presence of OAEs to a satisfactory level indicates that the cochlea is functioning well. If OAEs are absent or 'not recordable' this indicates that there may be defective cochlear function. It is important to know that the recording of OAEs is strongly affected by non cochlear factors such as excessive wax or middle ear effusion, which will preclude the recording of a response.

**Speech Discrimination testing** is used to assess a person's ability to hear speech. It is carried out using recorded standardised test materials presented via headphones/ speaker at a calibrated level. The patient is asked to repeat back the words they hear and their responses are scored. It is useful as a prediction of hearing aid benefit, in cases of suspected non-organic hearing loss, and as an indicator of possible retrocochlear problems.

**Speech Discrimination in Noise testing** is used to assess a person's ability to hear speech in noise. The Bamford Kowal and Bench Speech in Noise (BKB-SIN) is a standardised test that can be administered to children aged 5 years and upwards and is also suitable for adults. Sentence lists with four talker speech noise in the background are presented via headphones/ speaker and the patient is asked to repeat the sentences they hear. Responses are scored and compared to normative values for their age.

**Auditory Brainstem Response (ABR) testing** is an electrophysiological assessment of auditory function allowing hearing thresholds to be measured.

**Onward referral to ENT is arranged where necessary and a report is sent to referral source and patient.**

# Other services available at Midwest Hearing Clinic

## Hearing aids

A full range of Digital Hearing Aids from leading manufacturers are available including: Receiver in Canal (RIC) hearing aids, In the Ear (ITE) / Completely in Canal (CIC) hearing aids and Behind the Ear (BTE) hearing aids with Earmoulds or Open Fit Tubes.

## Tinnitus Management

For patients complaining of tinnitus an audiological assessment is recommended. Sound therapy devices (white noise generator, tinnitus masking devices) can be provided to reduce the perception of tinnitus.

## Assistive Listening Devices

Bluetooth listening devices for use with hearing aids (compatible with mobile phone/ music players/ television).

Personal FM systems

## Ear Protection

Custom Swim Moulds (for those with grommets/ perforations/ ear infections)

Custom Hearing Protection / Musicians Ear Plug

## Appointments

Patients/ Parents may contact clinic directly or be referred by GP/ other professional. Appointments are available Monday to Friday. Saturday appointments are also available for children. For adults Home/ Nursing Home visits are available by written request.

## Assessment Fees (Includes reports)

Paediatric/ Adult Audiological Assessment-€100 (Includes Audiometry, Tympanometry, Acoustic Reflexes and Otoacoustic Emission testing as appropriate).

Speech Discrimination testing - €50    Speech in Noise testing - €50

## Contact

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