



Diagnostic hearing tests

Information for patients from the Audiology Department

You have been referred to the Audiology Department as you are having problems with your hearing. To help with your diagnosis, you will undergo various hearing tests which form part of a test battery. What test or tests you need will depend on why you have been referred and what information is needed for a diagnosis.

This leaflet will explain:

- the various tests that are available
- what happens during the tests, and
- what happens next.

If after reading this leaflet you still have questions, please speak to your audiologist.

What tests could I have?

Depending on why you have been referred and what information we need to diagnose you, you may have one or more of the following tests. These tests are grouped into three categories.

- **Hearing (auditory) investigations** evaluate your ability to hear and process sounds and speech.
- **Balance (vestibular) investigations** involve investigating and treating balance conditions.
- **Newborn hearing investigations** is further diagnostic hearing testing if your baby fails their maternity baby hearing screening.

Below is more information of the test(s) you may have at the hospital. If you have any questions, please speak to your audiologist.

Hearing (auditory) investigations

- **Pure Tone Audiogram (PTA)** is a subjective hearing test. This tests your hearing across a range of calibrated frequencies. It involves listening to sounds via head / earphones and bone conductor transducer, and responding by pressing a button every time you hear a sound.

- **Tympanometry (Tymps)** tests how well your tympanic membrane (ear drum) and your middle ear is working. It involves placing small plugs in your ears.
- **Acoustic Reflex Testing (ARTs)** is a longer version of the tympanometry testing. It tests your middle ear muscle reflexes and sound transmission to the brain. It may include listening to some loud noises.
- **Otoacoustic Emissions (OAE)** assess your hair cell function in the cochlear (hearing organ in the inner ear). It involves listening to a clicking sound or a combination of two tones for a few minutes.
- **Auditory Brainstem Response (ABR) - threshold / neurological / screening.** This is a hearing test that assesses sound transmission along the whole hearing pathway, from the ear to the auditory area in the brain. It involves listening to a clicking sound through headphones. The results are recorded using four sensors that are placed on each ear and on your forehead.
- **Auditory Cortical Response (ACR / CERA)** is similar to the ABR, but it can give us specific frequency information.
- **Auditory Steady State Response (ASSR)** is where frequency specific stimuli is used. The aim is to create an estimated threshold for your hearing test.
- **Speech testing** assesses your ability to understand speech using single words. It involves listening to words and repeating what you have heard to the audiologist, who records the results.

Balance (vestibular) investigations

- **Video Nystagmography (VNG)** is a test that measures involuntary eye movements that causes dizziness and helps find the source of it.
- **Video Head Impulse Testing (vHIT)** is used to diagnose reduction in vestibular function in one ear compared to the other.
- **Vestibular Evoked Myogenic Potential (VEMP)** is used to assess the balance function of the otoliths in the inner ear.
- **Caloric test** measures the function of the semi-circular canals, which are responsible for horizontal head movements. It can help decipher the function between the left and the right balance organs.

Newborn hearing investigations

As part of the Newborn Hearing Screening Programme (NHSP), every baby's hearing is tested after birth. A diagnostic test is for those babies that fail hearing screening on the labour ward. More information on NHSP is available on the NHS web site. (<https://www.nhs.uk/conditions/baby/newborn-screening/hearing-test/>)

Who has referred me for these hearing tests?

You have been referred by either:

- your ear nose and throat (ENT) consultant
- your GPwSI (GP with a special interest in ENT)
- your own GP, or

- the audiology clinician may need further testing and information to manage your care and rehabilitation.

How will I know which test I need?

The test(s) you need will depend on the reason for your referral and the information needed for diagnosis, treatment, and care management. The test(s) you need will be fully explained before your appointment, and again at the start of your test.

When will I receive the test results?

We are not always able to give you the results of your test straightaway. Your clinician may need to spend some time analysing them. If we are unable to give you the results straightaway, we will discuss them with you at another appointment or we will send you a report.

If your referral was from an ENT consultant, a GP, or GPwSI in ENT, your results and a report will be sent to them. Another appointment will be made for them to discuss your results with you.

What if I have any questions or concerns?

If you have any queries about your hearing test(s), please contact the Audiology Department.

- **Audiology Department**

Telephone: 01227 864252

Lines are open 10am to 12 noon, and 2pm to 4pm

Email (ekh-tr.audiology@nhs.net)

This leaflet has been produced with and for patients.

Please let us know:

- If you have any accessibility needs; this includes needing a hearing loop or wanting someone to come with you to your appointment.
- If you need an interpreter.
- If you need this information in another format (such as Braille, audio, large print or Easy Read).

You can let us know this by:

- Visiting the Trust web site (<https://www.ekhuft.nhs.uk/ais>).
- Calling the number at the top of your appointment letter.
- Adding this information to the Patient Portal (<https://pp.ekhuft.nhs.uk/login>).
- Telling a member of staff at your next appointment.

Any complaints, comments, concerns or compliments, please speak to a member of your healthcare team. Or contact the Patient Advice and Liaison Service on 01227 783145 or email (ekh-tr.pals@nhs.net).

Patients should not bring large sums of money or valuables into hospital. Please note that East Kent Hospitals accepts no responsibility for the loss or damage to personal property, unless the property has been handed into Trust staff for safe-keeping.

Further patient information leaflets are available via the East Kent Hospitals' web site (<https://www.ekhuft.nhs.uk/patient-information>).

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