



## Cortical Evoked Response Audiometry (CERA)

**You have been referred for a hearing assessment which will last up to 120 minutes and you will be seen by an audiologist.**

### What is CERA?

CERA is an objective test of hearing. It involves recording the signals in your auditory cortex (the part of the brain that recognises sound) that have been generated in response to sounds introduced into your ears.

When the ear picks up sounds, signals are generated in the cochlea (inner ear) that then travel up the nerve of hearing through the brainstem and then on to the auditory cortex. We can pick up these signals by placing electrodes on the scalp. The signals are then analysed and magnified by a computer and we can look at them on the computer screen. The test can give us information about the level of sound needed to produce a signal, and also to confirm the status of the auditory (hearing) pathway from the ear to the cortex. This is valuable information that we cannot obtain from a routine hearing test.

### Before the CERA test

1. We will examine your ears
2. Tympanometry – a soft tip is placed in your ear canal. You will feel a slight pressure for a few seconds and hear a low pitched tone. A chart is recorded showing how well your eardrum moves
3. Oto-acoustic emission – a soft tip is placed in the ear canal. You will hear some tones. This test examines how well the organ of hearing (cochlea) is working

### What does the CERA test involve?

First we need to apply 4 small electrodes; one behind each ear, one on the forehead and one on the top of your head. These are then connected via leads to the computer. Before we put the small electrodes on we need to rub the skin underneath with some slightly abrasive cream which helps to ensure that the small electrode and skin has a good contact. This is not painful, but may feel a little rough. A cream is applied to the small electrode before it is placed on the skin.

### Do I need to do anything?

24 hours before the test please avoid loud environments or listening at high volume levels. During the test you will need to sit relaxed and comfortably in an armchair. We will place foam earphones in your ears (if you wear hearing aids, they will need to be taken off at this point). You need to stay alert throughout the test.

### Will I hear anything?

You will hear tones through the earphones. Sometimes they will alternate between ears. However the test is done at various loudness levels, so the tones may come and go.

### Do I need to bring anything with me?

Yes, because you need to stay alert throughout the test so bring something to read, a puzzle book or you can look at your mobile phone as long as the sound is turned off.

## Information for Patients

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### Results

After the test the audiologist will discuss the results with you and if appropriate a report will be sent to your ear, nose and throat (ENT) consultant.

### Communication needs

If you require an interpreter at your appointment please telephone **0121 371 4756** or email [interpreting.service@uhb.nhs.uk](mailto:interpreting.service@uhb.nhs.uk).

### Students

Please note that as this is a teaching hospital, a student may carry out some or all of your appointment under supervision of a qualified audiologist. If you do not wish to have a student present during your appointment please let reception know on your arrival.

### Patient transport

If you are eligible for patient transport, please contact West Midlands Ambulance non-emergency Patient Transport Service on **0800 035 6511**. Please note that transport is only available for Monday to Friday appointments.

**Audiology** University Hospitals Birmingham NHS Foundation Trust

If you require this information in another format, such as a different language, large print, braille or audio version please ask a member of staff or email [interpreting.service@uhb.nhs.uk](mailto:interpreting.service@uhb.nhs.uk)