



Auditory Brainstem Response (ABR) test

An Auditory Brainstem Response (ABR) test is used to measure how well sound is conducted through the ear and passed to the midbrain. The volume of the sound is varied throughout the test so that we can work out your child's 'hearing threshold' for each ear, that is, the quietest sound that elicits a response in the midbrain. This is a diagnostic test so your baby will need to have this test even if they have passed the usual new-born hearing tests.

Preparing for the test

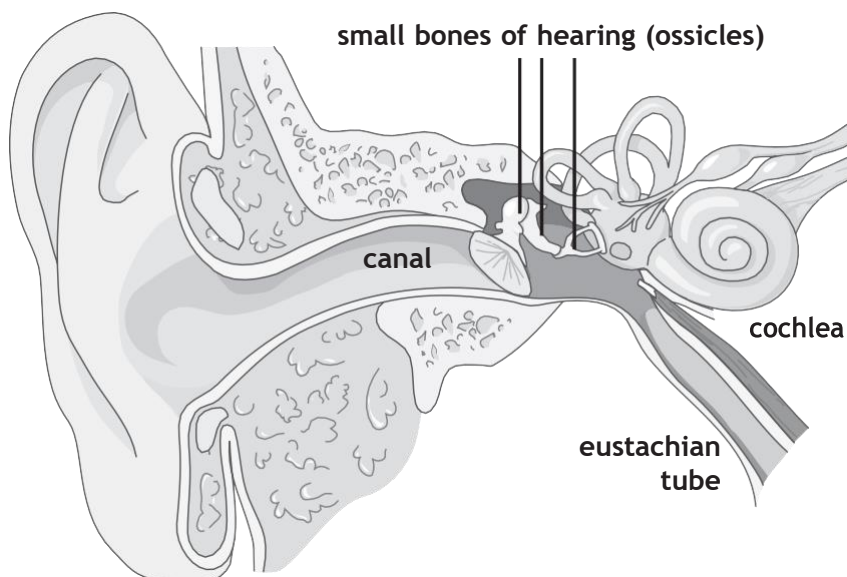
The ABR test can only be carried out if your baby is asleep.

- Please keep your baby awake until the appointment.
- Do not give your baby a feed for at least two hours before the test is scheduled - we will ask you to feed them once they are ready for the test, as usually babies sleep well after a full feed.

If your baby does not sleep or wake up for an extended period during the test, we may have to complete the testing on another day.

Please do not bring your baby's brothers and sisters to the appointment as this can make it harder to get your baby to sleep. If you do have to bring your other children with you, please bring another adult with you to supervise them outside the test room, for example the waiting area before and during the test.

You may be at GOSH for an entire morning or afternoon, depending on how quickly your baby drops off to sleep and stays asleep during the test. Please bring a couple of feeds and a spare nappy.





What does the test involve?

When you arrive, hospital staff will note your arrival and then direct you to our waiting area on the lower ground floor. The audiologist will later collect you from the waiting area downstairs.

If you are running late, please telephone us on the number below but please be aware that we may have to reschedule the test if you are very late.

We will bring you through to the testing room to get your baby ready for the test. Using cotton wool and mild abrasive gel, we will gently rub your baby's skin on their forehead and behind each ear for good skin contact for the test. After this, depending on the equipment used, three or four sticky electrode pads will be placed on your baby's head. We will place a soft foam earphone into each ear to present the sounds. In some cases, we will use a headphone cupped over the ear to present sounds. Depending on the results, sounds may also be presented via a headband holding a small vibrating box held just behind the ear (in this case sounds are transmitted to the inner ear via vibration). Following these preparations, you will be able to give your child a feed and wait for them to drop off to sleep naturally.

During the test, we will present specific sounds into each of your child's ears in turn and record the response from the midbrain on a computer. You will be able to see the display which shows midbrain waves in response to each sound. The sounds start at a level which can be

easily heard and then we gradually make them quieter during the test to determine hearing levels. Finally, we check how well your baby's middle ear is functioning by inserting a small soft probe into each ear which will present a sound while changing the air pressure in the ear canal. This test does not hurt.

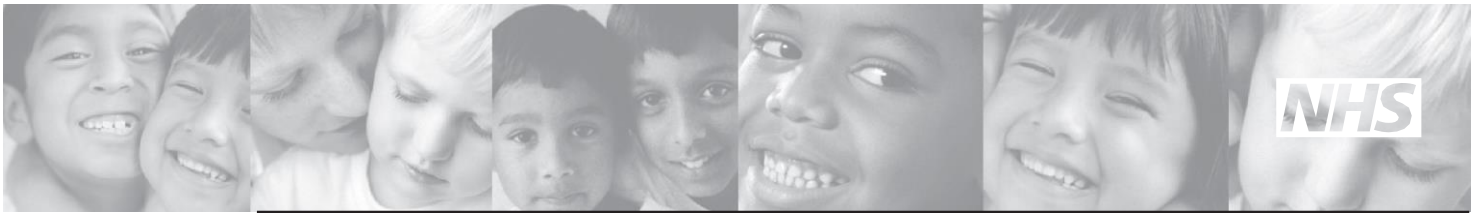
Once your baby is asleep, the test typically takes up to 90 minutes. If we cannot complete the test, for instance if your baby does not fall asleep or wakes up during the test, we may need to reschedule it for another occasion. In some cases, it may be necessary to book a double session, lasting up to 3 hours.

What happens afterwards?

Once the test has finished, we will gently peel off the sticky pads and wipe away the gel and remove the earpieces.

This does not hurt, but your baby will probably wake up at this point.

The audiologist will give a brief description of test findings to you just after testing. Note, however, that all results need to be peer reviewed before a definitive description of test findings can be given. After results have been checked, a letter will be written to yourselves and the Audiovestibular Doctors involved in your child's care, which may involve further consultations with them depending on the results. They will also explain what the tests have shown and discuss treatment and management where required.



**If you have any questions,
please call the Audiology Department on 020 7813 8315.**

**This document must be read in conjunction with all
Great Ormond Street Hospital NHS Trust Policies and Procedures**

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