

AUDITORY BRAINSTEM RESPONSE TEST (ABR)

What is an ABR?

The Auditory Brainstem Response Test is an objective test of hearing. It involves recording the signals in your baby / child's brainstem that are generated in response to sounds introduced into your child's ears. When your ear picks up sounds, signals are generated in the cochlea (inner ear) that then travel up the nerve of hearing to your brainstem and then on into your brain. We can pick up these signals by placing electrodes on your child's scalp. They are then analysed and magnified by a computer and then we can look at them on the computer screen. The test can give us information about the level of sounds required to produce a response and also to confirm the status of the auditory (hearing) pathway from the ear to the brain.

What does it involve?

As the response we are collecting is very tiny, it can be obliterated by any muscle movements and requires your child to be perfectly still.

Natural sleep is fine, and it is often possible to do the test under natural sleep if your baby is under 3 months of age, however in the older baby, infant or child, sedation or a General Anaesthetic (GA) is often required to ensure that your child is still enough for the test to be carried out. If sedation or GA is required, your child will have an appointment with a nurse in a pre-assessment clinic where the nurse will go through a health check questionnaire and answer any questions you may have about the sedation / GA.

Before we can carry out the test, we will need to prepare your babies skin by rubbing special tape on the forehead and behind each ear. This removes dead skin cells and grease and enables a better recording. It is therefore important that you do not use any greasy skin products such as baby oil or moisturiser on your babies face unless these are prescribed and unavoidable for your child. Then we will apply some sticky electrode pads behind each ear and one on the forehead.

Headphones / Earphones are then placed in or on your child's ears and different sounds are played through them and the computer collects the response.

How long does it take?

The test can take up to 2 hours to complete depending on how settled your baby / child is. If your baby / child requires sedation or a GA then you need to expect to be in hospital for the whole morning / afternoon and specific instructions will be given to you.

Can I bring other siblings with me?

If the test is to be done under natural sleep or sedation it is better that noise is kept to a minimum to enable your baby /child to sleep and as the test can take up to 2 hours it can be a long time to expect young siblings to be quiet. Ideally if another adult is present there is a child friendly waiting room in main outpatients.

Will I get the results on the day?

Very occasionally this is possible however the responses may have to be analysed further so be prepared that you may not get the results straight away.

Are there any after effects?

No, if your child has needed sedation or GA they will be checked over before you are allowed to go home. You may notice a reddening of the skin where the electrodes have been placed due to the skin preparation but this will normally disappear quite quickly.

How do I find out more?

If you have a question about the sedation or GA please call preadmission. If you have any questions about the test or would like more explanation please feel free to ask an Audiologist.