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6384-Newborn hearing test at a neonatal intensive care unit (NICU)



Coronavirus (COVID-19) Are you a patient, companion or visitor? Below you will find important information about your visit to Isala.

Healthy babies are screened for hearing loss shortly after birth. Babies admitted to the Neonatal Intensive Care Unit (NICU) also receive a hearing test shortly after birth. This is done using the AABR method. Read more about the AABR hearing screening below.

Why do we do hearing screening?

Why do we do a hearing test just after birth? Congenital hearing loss occurs in one in every thousand healthy newborns. Hearing loss is more common in babies that have spent time in the NICU: two in every hundred. Hearing loss in children is easy to overlook because young children cannot tell that they have trouble hearing. Because children learn to talk by hearing and listening, a child with a hearing impairment will have problems with speech and language development.

The most critical period for language development is from birth to the age of three. It is, therefore, important to detect and treat a congenital hearing loss as early as possible. This gives the child the best possible development opportunities.

Hearing screening

How can we test hearing?

It is possible to perform reliable screening with the AABR hearing test shortly after birth. Soft sounds are played to your baby, one ear at a time, via a single headphone. Three electrodes (integrated into the headphones) pick up signals from the brain. These are then

automatically analysed. The AABR hearing test gives an immediate result.

Picture: hearing test

How long does the test take?

The screening is best carried out when the child is asleep or resting, for example, after feeding. The test takes five to ten minutes.

Is the test stressful for the child?

It is not stressful or painful. Most children sleep during the test. The test is performed in the ward.

Results

What do the results mean for your child?

The AABR hearing test measures each ear separately. The results of the hearing test are either PASS (indicating normal hearing) or REFER (an unclear response).

What does a REFER mean?

If your child did not pass the test, it does not necessarily mean that they have a hearing loss. There could be another reason that they did not pass; the child may be too young (immature) for the test or have water in their ear. The test will be repeated in a few weeks.

This screening test differs from the screening method used by the Dutch Youth Health Care, so your child must be screened at a NICU centre again after an unclear result from the initial test or if your child has been admitted to the NICU but has not been screened yet. If your child also has a REFER in the re-test, additional tests will need to be done to find out if there is evidence of hearing loss.

Hearing loss, then what?

What can be done if your child has hearing loss? The treatment usually takes place at an audiological centre. The severity and type of hearing loss determine the type of treatment. If your child needs sound amplification, this is best started before the age of six months. Parental instruction and guidance are very important for the development of a child with hearing impairment.

Does hearing loss run in the family?

If there is a congenital form of hearing loss that runs in the family, please report this to your doctor.

What happens to your child's data?

Isala Zwolle is responsible for the national coordination of hearing screening at the NICUs and is the manager and owner of the central database. Isala Zwolle has engaged TNO (Child Health Department) to process the data. The registration includes the results of the screening and, in the case of unclear screening results, the results of any further testing by the audiologist and ENT doctor. The purpose of this registration is to monitor the progress of the research into hearing loss. Your child's data can also contribute to ensuring that this screening continues to function properly. The registered data may be used anonymously for scientific research. Your data will be handled with care. If you do not want your child's details to be registered, you can refuse. Please inform your paediatrician of your decision.

Hearing screening and the government

The AABR hearing screening is part of the standard package of care for sick newborn babies. If you do not wish to have a hearing screening, you can tell the nurse. This will not affect any further treatment.

Questions

If you have any questions, please contact the nurse or doctor in charge. You can also visit our website for more information on [neonatal hearing screening](#).

In conclusion

This screening does not rule out a hearing loss in the child's first year. It is good to stay alert to the development of hearing loss in your child.

The AABR hearing screening for NICU babies takes place at the following intensive care units for newborns:

- Amsterdam UMC
- Erasmus MC, Sophia Children's Hospital, Rotterdam
- Maxima Medical Centre, Veldhoven
- UMCU, Wilhelmina Children's Hospital, Utrecht
- LUMC, Leiden
- Haga Hospital, The Hague
- UMCG, Beatrix Children's Clinic, Groningen
- UMC, St. Radboud, Nijmegen
- AZM, Maastricht
- Isala, Zwolle

Contact

If your child is undergoing treatment at Isala in Zwolle and you have any questions, please call:

Zwolle

Neonatal intensive care

+31 (0) 88 624 52 71 (available day and night)

If you are unable to make your appointment, let us know as soon as possible and we will schedule a new one.