

Newborn screening in Northern Ireland

During the first few weeks after your baby is born, they will be offered a blood spot screening test and hearing screening test. These tests form the Northern Ireland newborn screening programmes.

- Newborn hearing screening programme (NHSP)
- Newborn blood spot screening programme
- Physical examination

Newborn hearing screening programme (NHSP)

This screenings aims to identify babies born with a **permanent hearing loss in one or both ears**. This screening test is recommended for your baby, even if there is no history of hearing loss in your family.

How is the test done:

There are two types of screening tests are available:

Automated Otoacoustic Emission (AOAE) test

- soft tipped earpiece in the outer part of a baby's ear to send clicking sounds to the inner ear. Using a computer, the person carrying out the test can see how the baby's inner ear responds to sound. If there are no clear responses in one or both ears, following up to x2 AOAE screening tests, an AABR test is then carried out. If clear responses are not found, the baby is referred to audiology services for diagnostic tests and further follow up.

Automated Auditory Brainstem Response (AABR) test

- An AABR is only required in certain circumstances, for example, if a baby does not have a clear response in one or both ears with AOAE testing, or has been admitted to a neonatal intensive care or special baby care unit. The AABR is a

different type of test that measures electrical brain activity (rather than measuring acoustic energy within the inner ear). This screening test involves placing small sensors on a baby's head, shoulder and nape of the neck. Soft headphones are placed over baby's ears and a series of clicking sounds are played. A computer measures how the baby's ears respond to these sounds.

Follow ups:

The person with parental responsibility should continue to be vigilant and check baby's hearing, as they grow up, using the checklist contained in the Personal Child Health Record (PCHR or 'red book'). Any concerns about your baby's hearing should be discussed with your health visitor or GP.

Key resources:

- The [newborn hearing screening \(English and translations\) privacy notice](#) describes how your personal information will be processed within the Smart4Hearing (S4H) service for the purposes of providing the Newborn Hearing Screening Programme in Northern Ireland. Contact details of [Trust Data Protection Officers](#) for the Smart4Hearing Privacy Notice are also available.
- Newborn Hearing Screening Leaflets can be found at <https://www.publichealth.hscni.net/publications/newborn-hearing-screening-leaflets-english-and-translations>
- Newborn Hearing Screening Patient Journey Protocols can be found at <https://www.publichealth.hscni.net/publications/well-babyearly-discharge-protocolpatient-journey> and <https://www.publichealth.hscni.net/publications/nnuscbu-48hrs-protocolpatient-journey>

- Newborn Hearing Screening in Northern Ireland Annual Reports can be found at <https://www.publichealth.hscni.net/publications/newborn-hearing-screening-northern-ireland-annual-reports>
- Further information can be found on nidirect <https://www.nidirect.gov.uk/articles/newborn-screening>

Newborn bloodspot screening known as 'Heel prick'

In the first week after birth, all babies in Northern Ireland are offered screening for a range of inherited conditions including phenylketonuria (PKU), congenital hypothyroidism (CHT), cystic fibrosis (CF), medium chain acyl coA dehydrogenase deficiency (MCADD) and sickle cell disorders (SCD). From March 2020 this will also include the offer of screening for maple syrup urine disease (MSUD), isovaleric acidemia (IVA), glutaric aciduria type1(GA1) and homocystinuria (HCU).

This screening test is often referred to as the 'heel prick' test. Most babies screened will not have any of these conditions but, for the small number who do, the benefits of screening are substantial. The programme makes a major contribution to the prevention of disability and death in our community, through early diagnosis and effective interventions.

Newborn blood spot screening is a complex programme, involving a wide range of services, from highly specialised laboratories through to individual staff in the community and in hospitals, working closely together. The Public Health Agency and partner organisations are responsible for ensuring that the population has access to safe, effective, high quality and equitable screening programmes.

Key resources:

- Newborn Blood Spot Screening in Northern Ireland Annual Reports can be found at <https://www.publichealth.hscni.net/publications/newborn-blood-spot-screening-northern-ireland-annual-reports>

- Newborn blood spot screening leaflets can be found at [Newborn blood spot screening \(English and translations\) | HSC Public Health Agency \(hscni.net\)](https://www.hscni.net/newborn-blood-spot-screening)

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