



Sgrinio Smotyn Gwaed
Newydd-anedig Cymru

Newborn Bloodspot
Screening Wales

After taking the bloodspot sample

- Allow bloodspots to **fully air-dry** away from direct sunlight or heat before inserting card into glassine envelope.
- Record taking the sample in the maternity/professional record and the baby's Personal Child Health Record.
- Inform parents how and when they will receive the results.
- Send the bloodspot card in the NBSW prepaid/stamped addressed envelope (first class) to the Newborn Screening Laboratory on the same day. If not possible, send within 24 hours of taking the sample. Record the date posted.
- Record and notify screening status on discharge home or transfer to another unit.

What happens if parents decline screening?

- Complete information fields on bloodspot card and record in the comments box 'DECLINE' for 'ALL' or specific test(s).
- Ask parent to sign the bloodspot card confirming their decision to decline.
- Send the bloodspot card to the Newborn Screening Laboratory.
- Inform parents whom to contact if they change their mind or would like further information.
- Inform parents that newborn bloodspot screening can be offered to babies up to 1 year of age.
- Inform parents that cystic fibrosis screening is only offered up to 8 weeks of age as the test is unreliable after this time.
- Inform GP and Health Visitor of the screening test(s) declined.

Further information

The full guidelines for newborn bloodspot screening can be found in the programme handbook, accessed via our website

www.newbornbloodspotscreening.wales.nhs.uk

or contact us at:

nbsw@wales.nhs.uk

© Copyright 2019 Public Health Wales NHS Trust. All rights reserved. Not to be reproduced in whole or part without the permission of the copyright owner.

© Crown Copyright 2019. Some of this information was originally developed by Public Health England Screening (<https://www.gov.uk/topic/population-screening-programmes>) and is re-used under the terms of the Open Government Licence v3.0.

Mae'r ddogfen hon ar gael yn Gymraeg / This document is available in Welsh

Guidance for sample takers - Quick reference guide

Newborn Bloodspot Screening - Importance of taking good quality bloodspot samples

The aim is to enable early referral of babies for diagnostic tests and treatment by:

- Taking samples at the right time and sending them without delay.
- Taking good quality samples that do not need to be repeated.

Samples should be taken on day 5 of life

- In exceptional circumstances e.g when a blood transfusion has been given the sample can be taken between day 5 and day 8.
- Day of birth is counted as day 0.

Newborn bloodspot samples are screened for:

- Inherited metabolic disorders:
 - Medium-chain acyl-CoA dehydrogenase deficiency (MCADD)
 - Phenylketonuria (PKU)
 - Maple syrup urine disease (MSUD)
 - Isovaleric acidaemia (IVA)
 - Glutaric aciduria type 1 (GA1)
 - Homocystinuria (HCU)
- Congenital hypothyroidism
- Cystic fibrosis
- Sickle cell disorders

Insufficient or poor quality bloodspot samples will result in:

- Delays in referral of babies for diagnostic tests and treatment
- Increased anxiety/distress due to the need for repeat samples
- Increased workload for health professionals and the Newborn Screening Laboratory.

Preparation for taking bloodspot sample

- Ensure parents have the information leaflet and an opportunity to ask any questions.
- Explain procedure to parents and confirm their decision to accept screening.
- Check the **expiry date** on the front of the bloodspot card.
- Complete the details on the bloodspot card **at the time of sampling**:
 - Ensure the information is **accurate, legible** and **complete**
 - Check with parent that all details on the bloodspot card are correct and make any changes.
- Recording the **baby's NHS number** on the bloodspot card is **mandatory** as the sample cannot be processed without it.
- If the NHS number is not available, please contact your regional Newborn Screening Administration Failsafe Team (office hours Monday - Friday).

Skin puncture sites for full-term and preterm infants

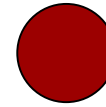
External and Internal limits of the Calcaneus

(shaded areas indicate puncture sites)



Taking good quality bloodspot samples for newborn screening

Correct









A **single**, evenly saturated drop of blood that **fills the circle completely** and **soaks through to the back** of the card.

Good quality bloodspots are essential to obtain accurate screening results.

Do

- Ensure baby is warm and comfortable. **Warming of the foot is not required.**
- Position baby to maximise blood flow to heel - allow foot to hang down.
- Clean baby's heel with plain water (not heated) and ensure skin is dried. This avoids sample contamination.
- Use an age appropriate automated incision device (incision depth $\leq 2.0\text{mm}$).
- Fill each circle completely with a single drop of blood.
- Ensure blood seeps through to back of card.

	Incorrect	Reasoning
	Insufficient sample: small volume spots	Risk of false-negative result (babies with a condition could be missed)
	Insufficient sample: blood not soaked through to the back of the card	Risk of false-negative result
	Multispotted sample	Risk of false-negative result
	Compressed sample	Significant risk of false-negative result
	Layered sample: one spot of blood layered directly on top of another or blood applied to front and back of card	Risk of false-positive result
	Contaminated sample	Risk of inaccurate result