

Newborn Metabolic Screening Programme

Purpose

The newborn metabolic screening programme screens for several treatable disorders.

Applicability

This procedure applies to all nursing and midwifery staff in Waitaha Canterbury and Te Tai o Poutini West Coast Maternity facilities and the Neonatal Unit.

Associated documents

- [Newborn Screening Unit](#)
- [Your newborn baby's blood test](#) (Code HE2310) Reviewed October 2023, Ministry of Health
- [Neonatal Handbook](#) (Ref.2402528)
- [Neonatal Clinical Resources Maternity](#) (Ref.2403289)

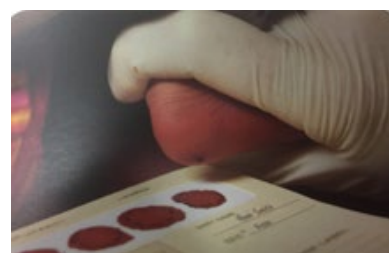
Procedure

STEP ACTION

1. Informed parental consent is required prior to the collection procedure and documented on the [Newborn Record QMR0044 form](#) (Ref.2400438) and the [Neonatal Multidisciplinary Care Plan](#) (Ref.2400454)
2. [Your newborn baby's blood test](#) information leaflets for parents are given to parents on admission to the Neonatal Unit and are available in the Well Child Tamariki Ora My Health Book and on the [Newborn Screening Unit](#) website.
3. Newborn metabolic screening tests are done on all term /pre-term babies as soon as practical between 24-72 hours of age. Do not take before 24 hours.
For pre-term infants < 1500 g or less than 32/40 weeks gestational age, a second sample is taken at 14 days of age and third sample at 28 days of age.
At 36/40 weeks corrected age a further sample is taken - exception – not required if a sample was taken within two weeks of reaching this age.

Note: A Blue Coloured Blood Spot Card is to be used for ALL babies admitted to the Neonatal Unit.

4. A blood spot sample is taken and dropped onto circles of sample card.
Do not use Heparinised capillary tubes for collection of blood for metabolic screening.
Do not touch the specimen collection paper (circles).
If the circle is not completely filled another drop may be applied immediately.



STEP ACTION



The Best Practice – Newborn Metabolic Blood Spot Collection e-learning module is available on [Learn Online](#) via the [Newborn Screening Unit](#) website

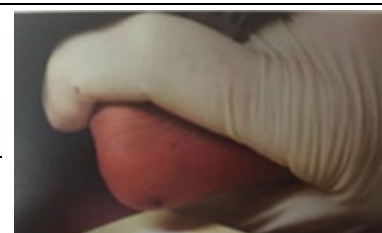
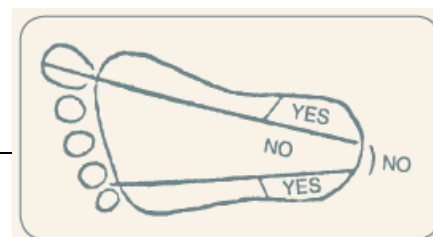
5. Dry the card horizontally – using the flap as a stand, dry until the blood spot is no longer red.
6. The card needs to be completely filled out with infant and mother's information, using a ballpoint pen. This includes lead consultant and LMC for NICU babies and LMC information for all other babies. Note areas on card that are not to be covered by sticky labels.
Note that the baby's NHI number and surname must also be entered above the perforation.
Ensure that the name matches that given below the perforation.
7. In NICU place the card in the collecting tray at reception. In the Maternity Ward cards are left to dry in either of the medication rooms. The ward clerk sends the cards to the laboratory to be posted to the screening centre in Auckland.
8. When taking a newborn metabolic screening test at 24-48 hours in NICU a serum bilirubin needs to be completed at the same time.

Procedure: Heel pricks for capillary blood

STEP ACTION

1. Wash hands and prepare equipment – appropriately sized approved lancet, gloves, skin wipe, band aid, gauze square, heel warmer, sucrose, appropriate blood tubes, Capillary tube and or Newborn Metabolic Screening Test card.
2. Apply heel warmer if required to infant's foot – a warm heel is needed for good perfusion.
3.
 - a) Encourage the mother to breastfeed or if the baby is taking artificial milk then bottle feed during the procedure;
 - b) Ensure the parent or carer holds the infant during the procedure if possible and employs multi-sensory stimulation;
 - c) If a) or b) above are not possible, consider the use of oral sucrose.
4. Positioning the baby to allow the baby's foot to hang down can also aid blood flow.
5. Hold infant's foot in 'C' shape as in image to right. Clean site with cleansing wipe, place the lancet firmly against the heel in either area shown in the above diagram then activate lancet.
6. Gently squeeze foot and release to allow foot to reperfuse.
NOTE: Wipe the first drop of blood off the baby's heel to eliminate dilution due to tissue fluid.
7. Apply gentle pressure to puncture site to stop bleeding, wrapping a piece of gauze around site may be required. Band aids are available if required.

RECOMMENDED SAMPLE SITES



Keywords

Guthrie, heel pricks, capillary blood

References

[Newborn Screening Unit](#)

Pre-term Metabolic Bloodspot Screening Protocol