

Performing a Heelstick for Blood Sampling

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

PURPOSE & SCOPE: To collect capillary blood by correct heel stick technique.

EQUIPMENT:

- Gloves
- Gauze
- Appropriate Puncture Device
- Alcohol Swab
- Required Blood/Capillary Tubes
- 25% oral sucrose





Device	Device Name	Device Type	Width x Depth (mm)	Intended Use ^a	
	BD Microtainer® Contact-Activated Lancet (Purple)	Puncture (needle)	30 G x 1.5 mm	Fingerstick – Low Flow (single drop) Demonstrates significantly less pain for your patients than comparable products*	} Choice of these to use for premature infants
	BD Microtainer® Contact-Activated Lancet (Pink)	Puncture (needle)	21 G x 1.8 mm	Fingerstick – Medium Flow	
	BD Microtainer® Contact-Activated Lancet (Blue)	Puncture (blade)	1.5 mm x 2.0 mm	Fingerstick – High Flow (500 µL from single puncture)	
	BD Microtainer® Quikheel™ Lancet (Pink)	Incision (blade)	1.75 mm x 0.85 mm	Heelstick – Low Flow (premature infants) Low birth-weight babies or full-term infants where lower blood volume is required	} For Term infants
	BD Microtainer® Quikheel™ Lancet (Teal)	Incision (blade)	2.5 mm x 1.0 mm	Heelstick – High Flow (infants) Full-term infants where higher blood volume is required	

* BD Clinical Documentation V57499

Picture 1

PROCEDURE		
	Process	Rationale
1	Preform hand hygiene and clean blue tray.	To prevent cross contamination and provide a clean working surface.
2	Collect equipment. Select the appropriate puncture device – Refer to Guide(Picture 1).	To be prepared for procedure.
3	Administer 25% sucrose and provide comfort measures.	To provide developmentally sensitive care.
4	Preform hand hygiene, apply gloves and prepare equipment.	To prevent cross contamination and to meet area health infection control guidelines.

Performing a Heelstick for Blood Sampling continued...

<p>5</p>	<p>Nominate an area for puncture on the foot on the medial or lateral plantar surface (Picture 1).</p>  <p align="center">Picture 1</p>	<p>To prevent damage to bone, tendons, cartilage and nerves. To allow more area for multiple heel sticks.</p>
<p>6</p>	<p>Select the surface area to puncture. Continue in a “stepping” ladder pattern from the first puncture for subsequent blood sampling.</p> <p>Clean foot with alcohol and allow 30 seconds to dry completely.</p>  <p align="center">Picture 2</p>	<p>The bacteriostatic effect of the alcohol is dependent on adequate drying time.</p>
<p>7</p>	<p>Puncture heel holding the puncture device at a 90 degree angle (Picture 3).</p>  <p align="center">Picture 3</p>	<p>Creates a gap puncture which opens when pressure is applied and allows blood to flow freely (Picture 4).</p>  <p align="center">Picture 4</p>


Performing a Heelstick for Blood Sampling continued...

8 Wipe away first drop of blood with gauze.

To remove platelet plug that forms at puncture site that initiates the clotting process.









9 Collect blood in correct Order of Draw (Picture 5), gently agitating tubes between each drop while avoiding scraping and scooping.

To decrease chance of haemolysis and and/or skin and tissue contamination of the specimen.


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Order of Draw (for Capillary blood Collection)

BD Microtainer® Tubes with Microgard™ Closure

Order of Draw / Catalogue #	Additive	Recommended Fill Volumes (Min - Max)	Mix by Inverting
 365974	K ₂ EDTA	250µl -500µl	10x
 365965	Lithium Heparin	400µl -600µl	10x
 365985	Lithium Heparin and Gel for Plasma Separation	400µl -600µl	10x
 365987			
 365992	NaF/Na ₂ EDTA	250µl -500µl	10x
 365967	Clot Activator and Gel for Serum Separation	200µl -400µl	5x
 365978			
 365963	No Additive	400µl -600µl	0x

Please note: It is recommended that blood specimens for coagulation testing be collected by venipuncture.*

* In accordance with CLSI (formerly NCCLS) guidelines [Collection, Transport and Processing of Blood Specimens for Testing Plasma-based Coagulation Assays, Approved Guideline, 4th Edition, Document H21-A4, Dec 2003]

BD Diagnostics
Preanalytical Solutions

Picture 5

Performing a Heelstick for Blood Sampling continued...

10	Seal blood containers.	To prevent loss of specimen.
11	Apply direct pressure to puncture site.	To stop bleeding.
12	Label collection tubes with correct the infant's name label.	To ensure correct identification of blood sample, diagnosis and treatment to the correct patient.
13	Dispose of puncture device in sharps container.	To avoid needle stick injury.
14	Collect and dispose of remaining equipment.	To leave a clean work space.
15	Clean blue tray and remove gloves.	To prevent cross contamination and to meet area health infection control guidelines.
16	Preform hand hygiene.	To adhere to 5-Moments of Hand Hygiene.

References

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Date	Revised No.	Author; Revised by
20 th August 2013	Primary	RN. E. Siddons
		Nil