Acacium Group

Heplock of Central Venous Access Device (CVAD)

Procedure Reference | SOP TPN 04

Version | V4

Procedure Name	Heplock of Central Venous Access Device (CVAD)
Purpose of Document	To ensure that the correct preparation, procedure and outcome are achieved by implementing a consistent and systematic approach to effective heplock of a central line
Target Audience	All appropriately trained nurses
Version	V4.0
Author	Kate Nicholson-Florence
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Lead Director	Karen Matthews-Shard
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Last Reviewed	3 yearly or when clinical or operation guidelines change
Next Review Date	March 2026
Equality Impact Assessment (EIA) Form	Acacium Group is committed to Equality, Diversity and Inclusion and in line with our values, we strive to ensure that everyone that is part of the Acacium community is not disadvantaged or discriminated against given their individual need or characteristics. To support this, an Equality Impact Assessment has been undertaken on this policy/procedure. This information is held centrally and can be requested from the Clinical Governance Team.
About Acacium Group	Details of all Acacium Group trading companies that this policy applies to are detailed within Appendix A

Document History			
Version	**Date**	**Changes made/comments**	**By whom**
V1	Dec 2016	Implementation of document history page	KNF/SJ
V2	Nov 2019	3 Yearly Review	Clinical Advisory Group
V2.1	Nov 2020	Rebrand	CC
V3	Mar 2023	Review and updated	Clinical Advisory Group
V4	Jan 2024	Rebrand	Clinical Advisory Group

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1. Introduction

It is important that the client requiring TPN's central line remains patent to ensure administration. This is particularly prevalent when clients do not require TPN on a continual basis. When the central line is not in use the potential for the line to 'clot off' increases significantly. It is important that the central line is adequately flushed to expel any blood out of the line and for heparin to be injected to reduce the risk of clotting.

2. Aim

To provide guidance in the safe and effective management of hep-locking of a client's central line.

3. Who needs to be aware of this procedure

All Acacium Group nurses who are trained and competent to conduct this procedure.

4. Hazards/complications

- Infection of site
- Line sepsis
- Bleeding
- Air embolism

5. Assessment of need

Assessment of care needs should be an ongoing basis and give consideration to the possible hazards/complications above as well as considering infection, overall health and nutritional status.

6. Consent

Please read the Acacium Group Policy on consent thoroughly and ensure valid consent has been gained.

Please now ensure you understand the Consent Policy and Mental Capacity Act in full.

7. Client and relatives/carers involvement

Initially the need for TPN may be distressing to the relatives or care workers of the client. Where possible, they should be fully consulted and informed about the care required and involved. It is important to allow family members to be informed and involved where appropriate.

8. Client information

Detailed information should be provided on what is required to effectively administer the TPN safely. This should be in documented in the care plan and clients may also have an individual patient information leaflet if required.

9. Equipment

- 2 x 10ml LeurLock Syringe
- 10ml ampoule sodium chloride 0.9%
- 5ml ampoule sodium heparin (10 units sodium heparin in 1ml)
- 2 x filter needle
- 2 x alcohol wipe
- Ampoule opener if applicable

10. Procedure

Heplocking the central line

	Action	Rationale
1.	Gather equipment	To ensure that you have all the equipment required
2.	Place the equipment on the trolley/ work area	To prepare for the procedure
3.	Wash hands thoroughly and dry them with a paper towel	To prevent infection
4.	Put on non-sterile gloves or recommendations from local guidelines	To protect against contamination with hazardous substances
5.	Open syringes and attach filter needles using a non-touch technique. Re-sheath the needle and place syringe on a clean surface.	To prepare for the procedure To maintain infection control
6.	Check expiry dates on the 0.9% sodium chloride and open ampoule	To ensure that the sodium chloride 0.9% is in date
7.	Draw up 10mls sodium chloride 0.9% into the syringe	To allow flushing of the line to ensure patency
8.	Dispel air from the syringe as necessary using aseptic non-touch technique and place syringe on a clean surface	To reduce the risk of air embolism.
9.	Check expiry date on the ampoule of sodium heparin and ensure that it is the correct concentration. Open the ampoule	To ensure that the sodium heparin is in date and that the client does not become over heparinised.
10.	Draw up 5mls of sodium heparin into the syringe.	To heplock the central line to minimise the risk of 'clotting off'
11.	Dispel air from the syringe as necessary using aseptic non-touch technique. Re-sheath the needle and place syringe on a clean surface.	To reduce the risk of air embolism.
12.	Remove the needles from both syringes.	For administration into a needleless system
13.	Clean rubber bung of bionector with alcohol wipe and allow to dry for 30 seconds (whilst keeping hold of bionector in one hand)	Infection control and de-contamination
14.	Connect syringe of sodium chloride 0.9% to the bionector.	To flush the central line and ensure patency
15.	Release clamp on central venous catheter, draw back until you see a blood flashback	To ensure patency of the central venous catheter and expel any air left in the barrel of the syringe.

16.	Slowly push the prescribed amount of sodium chloride 0.9% into the central venous catheter using a pulsing technique.	To flush any remaining irritating solution away from the central venous catheter
17.	Clamp catheter and remove syringe	To prevent bleeding and enable the connection of heplock
18.	Connect syringe of sodium heparin (10 units/ml)	To flush the heplock into the central line to prevent 'clotting off'
19.	Release clamp on central venous catheter, draw back until you see a blood flashback	To ensure patency of the central venous catheter and expel any air left in the barrel of the syringe.
20.	Slowly push the prescribed amount of sodium heparin into the central venous catheter with a smooth technique.	To administer the heplock to prevent the central venous line clotting.
21.	When flushing the last ml of sodium heparin, clamp central venous catheter as you flush	To clamp the central venous catheter under pressure to prevent backtrack and clotting in the catheter.
22.	Remove the syringe from the bionector and secure the central venous catheter	To prevent displacement of the central line
23.	Dispose of clinical waste and sharps safely	Infection control.

Heplocking the central line with pre-filled syringes

	Action	Rationale
1.	Gather equipment	To ensure that you have all the equipment required
2.	Place the equipment on the trolley/ work area	To prepare for the procedure
3.	Wash hands thoroughly and dry them with a paper towel	To prevent infection
4.	Put on non-sterile gloves or recommendations from local guidelines	To protect against contamination with hazardous substances
5.	Check expiry dates on the pre-filled syringes.	To ensure that the sodium chloride 0.9% is in date
6.	Dispel air from the syringes as necessary using aseptic non-touch technique and place syringe on a clean surface	To reduce the risk of air embolism.
7.	Clean rubber bung of bionector with alcohol wipe and allow to dry for 30 seconds (whilst keeping hold of bionector in one hand)	Infection control and decontamination purposes
8.	Connect syringe of sodium chloride 0.9% to the bionector.	To flush the central line and ensure patency
9.	Release clamp on central venous catheter, draw back until you see a blood flashback	To ensure patency of the central venous catheter and expel any air left in the barrel of the syringe.
10.	Slowly push the prescribed amount of sodium chloride 0.9% into the central venous catheter using a pulsing technique.	To flush any remaining irritating solution away from the central venous catheter
11.	Clamp catheter and remove syringe	To prevent bleeding and enable the connection of heplock
12.	Connect syringe of sodium heparin (10 units/ml)	To flush the heplock into the central line
13.	Release clamp on central venous catheter, draw back until you see a blood flashback	To ensure patency of the central venous catheter and expel any air left in the barrel of the syringe.
14.	Slowly push the prescribed amount of sodium heparin into the central venous catheter with a smooth technique	To administer the heplock to prevent the central venous line clotting.

15.	When flushing the last 0.5ml of sodium heparin, clamp central venous catheter as you flush	To clamp the central venous catheter under pressure to prevent backtrack and clotting in the catheter.
16.	Remove the syringe from the bionector and secure the central venous catheter	To prevent displacement of the central line
17.	Dispose of clinical waste and sharps safely	Infection control.

11. Associated Policies / SOPs

Policies
CLIN 42 Management of TPN Policy
CLIN 07 Infection Prevention Policy
CLIN 06 Consent Policy
ORG 03 Health and Safety Policy

SOPs
SOP TPN 01 Connection of TPN
SOP TPN 02 Disconnection of TPN
SOP TPN 03 Changing a Central Venous Access Device (CVAD) Dressing
SOP TPN 05 Changing the Bionector

12. References

- Great Ormond Street Hospital for Children Home Parenteral Nutrition Teach Pack - https://www.gosh.nhs.uk/conditions-and-treatments/procedures-and-treatments/introduction-parenteral-nutrition-home/
- Nutrition Support in adults NICE Clinical Guideline no. 32 (2006); Updated 2017
- Infection Control: prevention of healthcare-associated infection in primary and community care NICE Clinical Guidelines no. 2 (2003); Updated February 2017
- Central venous catheter - dressing change: MedlinePlus Medical Encyclopedia

Appendix A: About Acacium Group

Acacium Group consists of a number of trading companies, each providing services within core niche areas of the health and social care industries. Therefore, as this document is a Group Policy, the Policy herein applies to all trading companies detailed below:

pulse Part of Acacium Group	Thornbury Nursing Services Part of Acacium Group
Thornbury Community Services Part of Acacium Group	Scottish Nursing Guild Part of Acacium Group