

	<p>Policies and Procedures</p> <p>Title: EPIDURAL – CATHETER REMOVAL</p> <p>RN Specialty Practice: RN Procedure: Epidural Catheter Removal</p> <p>I.D. Number: 1080</p>
<p>Authorization:</p> <p><input checked="" type="checkbox"/> Former SKtnHR Nursing Practice Committee</p>	<p>Source: Nursing</p> <p>Date Revised: March 2018</p> <p>Date Effective: June 2001</p> <p>Scope: Former SKtnHR Acute Care: Urban Adult (except Labor and Delivery)</p>

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DEFINITION

Prophylactic anticoagulation – For the purpose of this policy refers to the administration of unfractionated heparin or low molecular weight heparin to patients who are at risk for venous thromboembolism.

ROLES

Graduate Nurses (GNs) – GNs identified by their manager, in targeted practice settings, will be certified in the RN Specialty Practice: RN Procedure of “Epidural Catheter – Removal” The GN may only remove epidural catheters under the direct supervision of a RN who is certified in epidural catheter removal.

Registered Nurses (RNs) - RNs identified by their manager, in targeted practice settings, will be certified in the RN Specialty Practice: RN Procedure of “Epidural Catheter - Removal”.

1. PURPOSE

- 1.1 To safely remove epidural catheters once they are no longer required by the patient for pain management.

2. POLICY

- 2.1 The RN/GN certified in this RNSP will have successfully completed the following learning modules/activities prior to removing an epidural catheter:
 - Complete the required learning module and quiz
 - Attend an educational session led by a Clinical Nurse Educator

- Complete a skills checklist with a certified RN during simulation or during first removal to ensure safety checks are followed appropriately
- 2.2 Notify the anesthesiologist **prior to the initiation** of any therapeutic anticoagulation therapy, fibrinolytic drug, anti-platelet drug, or high dose prophylactic anticoagulation therapy in a patient with an epidural catheter. Best practice is to first remove the catheter to reduce the risk of epidural hematoma. These include:
- Intravenous heparin
 - Twice daily subcutaneous low molecular weight heparin
 - Treatment dose of low molecular weight heparin
 - Thrice daily subcutaneous unfractionated heparin
 - Total daily dose of greater than 10,000 units subcutaneous unfractionated heparin
 - Warfarin
 - Clopidogrel (Plavix®)
 - Dabigatran (Pradaxa®)
 - Rivaroxaban (Xarelto®)
 - Apixaban (Eliquis®)
 - Edoxaban (Lixiana®)
 - Fondaparinux (Arixtra®)
 - Argatroban
 - Bivalirudin
 - Dipyridamole (Persantine®)
 - Prasugrel (Effient®)
 - Ticagrelor (Brilinta®)
 - Ticlopidine (Ticlid®)
 - Abciximab (ReoPro®)
 - Eptifibatide (Integrilin®)
 - Tirofiban (Aggrastat®)
 - Alteplase (Cathflo®, Activase® rt-PA)
 - Streptokinase (Streptase®)
 - Tenecteplase (TNKase®)

Note: If any of these treatments have inadvertently been initiated without first removing the epidural catheter, do not remove the catheter and notify the anesthesiologist immediately.

- 2.3 The anesthesiologist is responsible for all orders regarding epidural catheter removal.
- 2.4 Notify the anesthesiologist to remove the epidural catheter if there is any concern about safe removal.
- 2.5 Obtain an order from the anesthesiologist to assess platelets and PTT prior to epidural catheter removal if there is clinical suspicion of heparin-induced thrombocytopenia (HIT).
- 2.6 For patients receiving subcutaneous prophylactic anticoagulation therapy remove the epidural catheter according to the following guidelines or as ordered by the anesthesiologist:
- **Twice daily unfractionated heparin (UFH).** Remove the catheter a minimum of 4 -6 hours after a dose of UFH. Administer the next dose of UFH no sooner than 2 hours after catheter removal.

- **Once daily low-molecular weight heparin (LMWH).** Remove the catheter a minimum of 10 – 12 hours after a dose of LMWH. Administer the next dose of LMWH no sooner than 2 hours after catheter removal.

Note:The *epidural* infusion may be stopped and, utilizing sterile technique, the epidural catheter capped with a sterile dead end cap if removal of the catheter must be delayed due to anticoagulant administration.

- 2.7 Maintain IV access for 12 hours post-removal.
- 2.8 Patient monitoring is required every 4 hours for 12 hours after medication discontinuation. *Refer to: Epidural/Intrathecal Analgesia – Care of Patients Receiving Policy#1047.*

3. PROCEDURE

- 3.1 Supplies:
- Dressing tray
 - Sterile normal saline
 - Small island dressing
 - Clean gloves
- 3.2 Explain the procedure to the patient/family.
- 3.3 Turn off epidural infusion.
- 3.4 Position patient side-lying, if possible, with knees, head and shoulders flexed towards the chest or sitting on the side of the bed with shoulders and back hunched forward.

Note:Flexed position opens the intervertebral spaces to release the catheter. If the back is extended, the overlying vertebral arches may grip the catheter making removal more difficult.

- 3.5 Perform hand hygiene and don clean gloves.
- 3.6 Carefully remove tape securing the catheter and the epidural dressing.
- 3.7 Grasp the epidural catheter at the insertion site and withdraw at 90° angle to skin surface using a slow, steady pull. If resistance met, reposition the patient by increasing the flexed position or positioning as used for insertion, and re-attempt. Stop removal attempt, secure catheter site with sterile gauze and tape, and call Anesthesia if:
- Removal requires too much traction.
 - The patient experiences paresthesia (abnormal sensation of tingling, numbness or pain). Paresthesia may indicate the catheter tip is wrapped around a nerve root. Traction could result in permanent nerve injury.
- 3.8 Ensure catheter tip is intact by inspecting for colored marking.
- 3.9 Assess insertion site for bleeding, bruising, swelling, redness or drainage.
- 3.10 Cleanse site with sterile normal saline, dry and apply small island dressing. Assess site every 12 hours for 24 hours. Dressing may be removed after 24 hours.

- 3.11 Monitor patient for adverse drug effects and signs or symptoms of epidural hematoma every 4 hours for 12 hours including:
- Vital signs
 - Pain
 - Sedation
 - Sensory level
 - Lower extremity weakness or paresthesia
 - Bowel and bladder function
 - Back pain
- 3.12 Report to the anesthesiologist:
- Complications during or following removal
 - If the catheter tip is not intact
 - Persistent drainage, localized bleeding or expansion of bruising
- 3.13 Documentation
- Date & time of removal
 - Condition of catheter tip
 - Drainage, bleeding, or hematoma at catheter site
 - Patient tolerance of procedure
 - Complications and interventions

4. REFERENCES

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