



Epidural: Specific Observational Assessment for Epidural Analgesia and Considerations Prior to Stopping and Removing Epidural Catheter

As an intervention neuraxial blockade or epidural analgesia/anaesthesia is potentially high risk with three main risks:

- Wrong route error
- Epidural haematoma
- Epidural abscess.

In order to minimize any of these risks (which would be catastrophic for the patient) it is imperative that stringent risk management strategies are in place in order to facilitate the safe use of epidurals in clinical practice. These strategies must encompass appropriate education and assessment of competence for those caring for patients with epidural analgesia. This should be complimented by guidelines to drive safe, consistent practice, regular documented specific observational assessment and for clarity and consistency pre-printed prescriptions, care plans, standardization of epidural solutions and dedicated epidural infusion devices. Please read the [NPSA safer practice notice 21 – safer practice with epidural injections and infusions](#).

The safe use of Epidural Analgesia is dependent on rigorous observational assessment of an appropriate frequency. It is recommended that basic observational assessment (i.e. Temperature, pulse, respiratory rate, sedation score, oxygen saturation, pain assessment and nausea and vomiting) should initially be half hourly and then subsequently two hourly for the duration of use. This ensures that any problems are identified and rectified at an early stage of their development. **Please note: managing complications and side effects that may be identified in the general and specific observational assessments are covered in another article.**

Specific epidural observational assessment should be as follows:

- Without disturbing the transparent occlusive epidural dressing observe the epidural catheter insertion site for any signs of inflammation, tenderness or pus. In addition ensure that the dressing is intact and the epidural catheter with bacterial filter and connecting line to the infusion device are all secure. Any sign of pus, inflammation or tenderness could be indicative of an epidural abscess. This is a rare occurrence but must be dealt with promptly.
- With epidural analgesia a low concentration of local anaesthetic is used which should not create gross motor weakness. Every two hours the patient should be asked to straight leg raise – (the 4 point Bromage Score is used for this). If the patient is demonstrating signs of bi-lateral gross motor weakness this could be indicative of an epidural haematoma. This is a rare occurrence but must be dealt with promptly. Straight leg raise should be assessed for twenty four hours after the removal of the epidural catheter.

Patients should receive written and verbal information about epidural analgesia which includes alerting them to signs and symptoms that should be of concern following their discharge from hospital. The Epidural patient information leaflet (reproduced by courtesy of The Pain Management Service, Cardiff and Vale University Health Board) indicates this information at the end of the leaflet.

Considerations prior to stopping and removing an epidural catheter should be as follows:

- Level of pain & infusion rate.
- Ability to tolerate free fluids and tolerate analgesia via alternative routes. Prior to actually removing the epidural catheter ensuring that the alternative analgesia that has been administered enabled a smooth end effective transition for the

patient

- At least 12 hours should elapse between the removal of the epidural catheter and the last prophylactic dose of Low Molecular Weight Heparin (e.g. enoxaparin = clexane 20mg or 40mg) or 4 hours if Minihep is being used.
- If the patient is receiving a therapeutic dose of LMWH (e.g. enoxaparin >40mg) then 24 hours should elapse between the last dose given and the time that the epidural catheter is removed.
- The next dose of LMWH (enoxaparin) or Mini-hep should not be administered for at least 4 hours following the removal of the epidural catheter.
- At least 18 hours should elapse between the removal of the epidural catheter and the last dose of rivaroxaban.
- The next dose of rivaroxaban should not be administered for at least 6 hours following the removal of the epidural catheter.
- If the patient has a coagulopathy or is receiving an intravenous heparin infusion, see 5.10 of the epidural guidelines.
- The epidural catheter should not be removed if the platelet count is less than 100. However, if there is a high risk of epidural related infection, specific advice should be sought from the Anaesthetist who inserted the epidural.
- Prior to removal of the epidural catheter the epidural infusion should be stopped for approximately 4 hours, alternative analgesia should be prescribed and administered and its efficacy assessed. If the patient is comfortable, the epidural catheter may then be removed.
- Consideration may be given to the removal of the patient's urinary catheter once the epidural catheter has been removed.

Please refer to epidural analgesia care plan, section 5 of the acute pain guidelines (both reproduced courtesy of The Pain Management Service, Cardiff and Vale University Health Board) and the [ANZCA guidelines](#) (2010).

Attachment	Size
Epidural Analgesia Patient Information Leaflet (in .PDF file format)	155.83 KB
Epidural Analgesia Care Plan (in .PDF file format)	187.42 KB
Acute Pain Combined Guidelines (in .PDF file format)	587.67 KB
Acute Pain Secondary Care Intermediate Advanced Intervention	

The content on this site is free to access. [Please respect copyright and do not copy or distribute except for educational use.](#)

This site is owned and maintained by [Cardiff University's](#) MSc in Pain Management team, who are responsible for its content.

The technical development of the website has been provided by [Napp Pharmaceuticals Ltd](#). Napp have had no influence on the website content.