

Adult epidural infusion

Troubleshooting
guide



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Pump-to-patient assessment

Pump

- ⊗ Check pump protocol (drug and delivery)
- ⊗ Check protocol matches infusion bag and drug chart

Filter

- ⊗ Is the filter present?
- ⊗ Is it connected and secure?

Epidural site

Check:

- ⊗ Signs of bleeding
- ⊗ Pus or other signs of infection
- ⊗ Leakage
- ⊗ Displacement (catheter length/markings different to that documented)
- ⊗ Dressing secure



Complications

Contact the pain service/on-call anaesthetist if the patient has:

- ⊗ Active bleeding or infection at the epidural site
- ⊗ Headache (frontal and/or photophobic and postural)
- ⊗ Severe back pain at the site of the epidural insertion
- ⊗ Sudden motor block assessed with Bromage scale
- ⊗ Critical hypotension (systolic BP ≤ 90 mmHg)

Local anaesthetic toxicity

Signs:

- ⊗ Sudden alteration in mental state
- ⊗ Severe agitation
- ⊗ Loss of consciousness +/- convulsions
- ⊗ Cardiovascular collapse/cardiac arrest

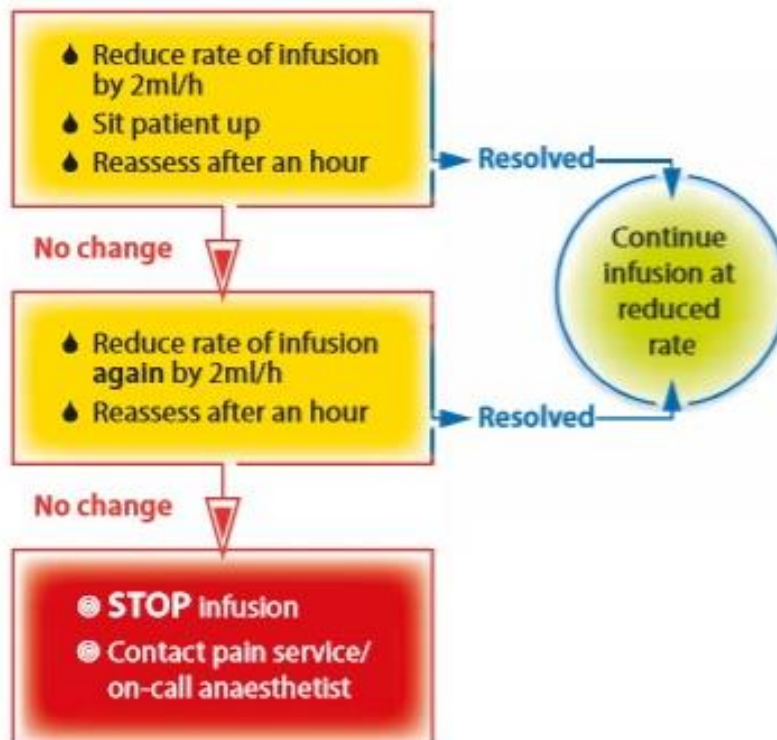
Stop epidural and call 2222

Sensory block assessment

Use cold spray (ethyl chloride) to assess skin sensitivity to temperature bilaterally

WARNING SIGN: patient does not feel cold spray above T4

1 Sensory block above T4



2 Unilateral sensory block

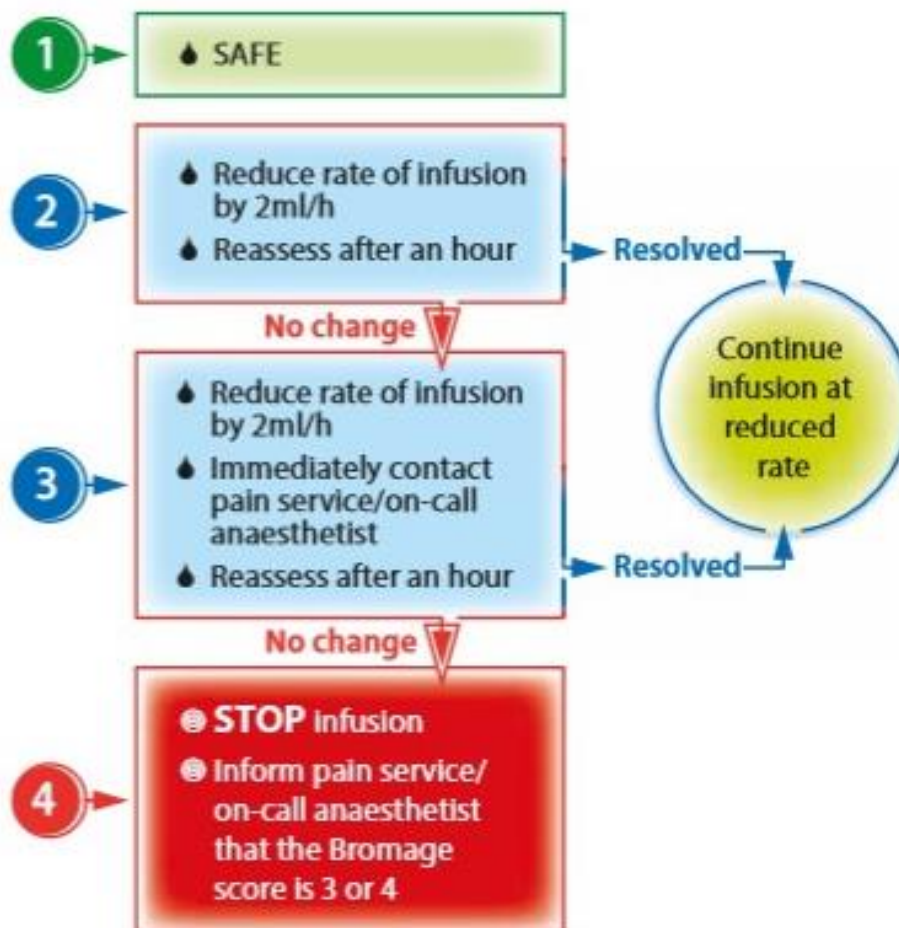
- ⊙ Position patient on to their painful side
- ⊙ Consider infusion rate increase
- ⊙ Anaesthetist/pain service: consider withdrawing epidural catheter 1-2cm



Motor block assessment: Bromage score

Movement assessment	Bromage score
Free movement of legs and feet	1
Just able to flex knees and free movement of feet	2
Unable to flex knees but free movement of feet	3
Unable to move legs or feet	4

Bromage score



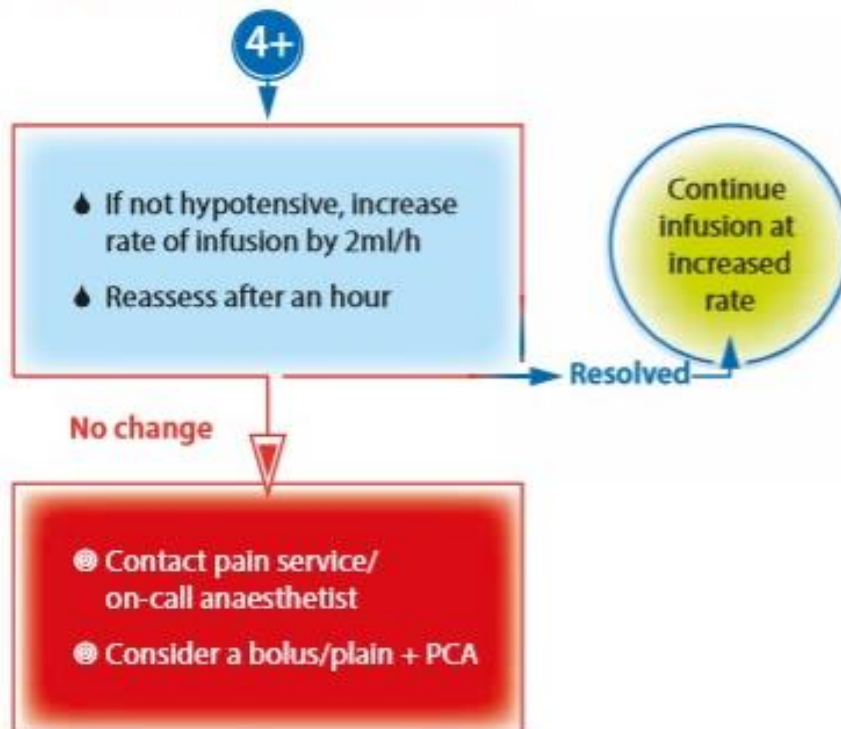
Clinical assessment: pain

Assess the patient's pain level. For most patients use the numerical rating scale (NRS).

NRS for pain

0	1-3	4-6	7-10
None	Mild	Moderate	Severe

The analgesia level is inadequate if the patient scores 4 or above at rest

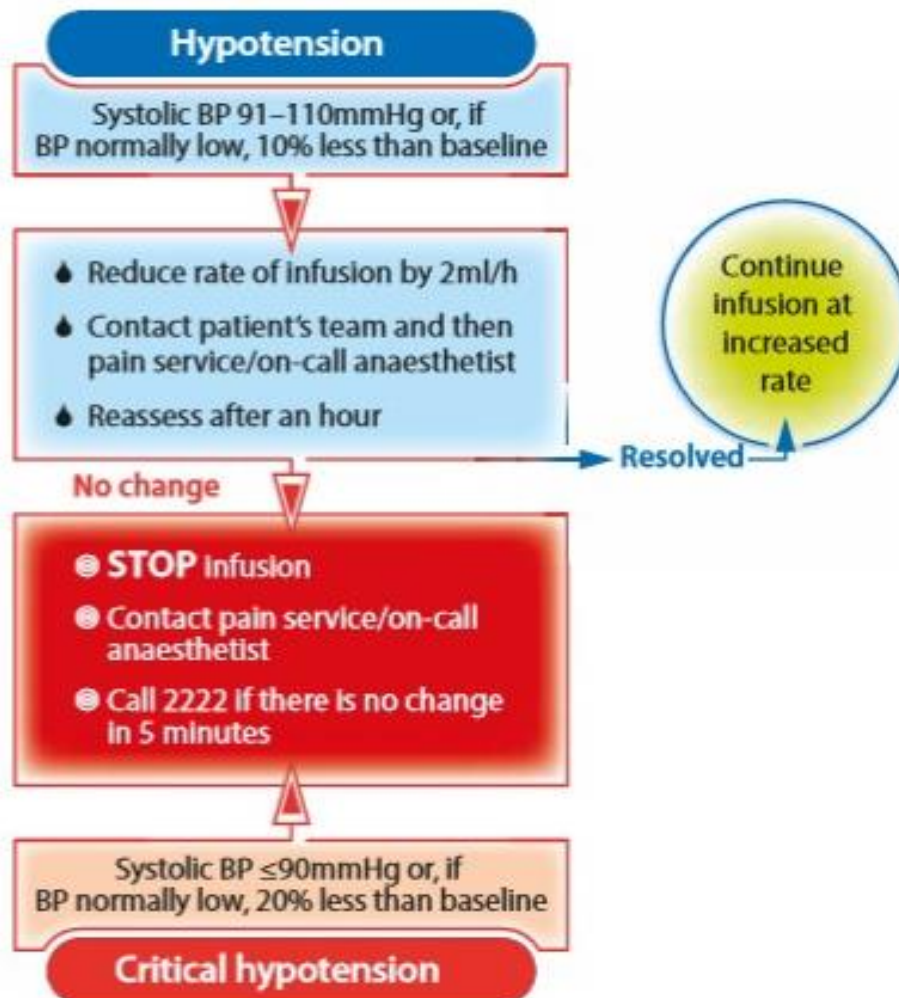




Clinical assessment: hypotension

Check for hypotension. If present, think about possible causes and actively treat:

- Bleeding
- Dehydration
- Epidural-related issues
- Infection





Removal of the epidural catheter

Bleeding risk

Remove the epidural catheter at least 12 hours after the last dose of prophylactic LMWH. Wait at least 4 hours after removal of catheter before giving the next dose of LMWH. If patient is on a treatment dose of LMWH, contact the pain team/on-call anaesthetist for advice about catheter removal. Check clotting and platelets if clinically indicated, eg patient on anticoagulants, major blood loss.

Pain relief

Ensure step-down analgesics are prescribed **before** the epidural infusion is stopped to avoid delay. Administer the prescribed analgesics **after** epidural infusion has been stopped.

Removing the epidural catheter

Remove the catheter and make sure the blue tip at the end is present. If it is not there, contact the pain service/on-call anaesthetist immediately.

Send catheter tip for MC&S and swab insertion site if signs of infection or sepsis.

Cover insertion site with a transparent semi-permeable dressing.

Post-catheter removal

Continue epidural-specific assessments for a further 48 hours.

- ⊗ Motor block
- ⊗ Sensory block
- ⊗ Epidural site

