

Guidelines for Neuraxial Anaesthesia and Anticoagulation

Key Points

- Placement and removal of neuraxial techniques require careful consideration of patient's coagulopathy and any anticoagulants being administered

Version: 8
Date Issued: 17/08/2026
Review Date: 01/08/2029
Key words: Anticoagulation, neuraxial anaesthesia, spinal, epidural, analgesia, anaesthesia

This is a controlled document. If you are using a printed copy, check it against the guidelines site to ensure you are using the latest edition. Print copies must be destroyed after use.

Abbreviations

APTTR	Activated Partial Thromboplastin Time Ratio
APTT	Activated Partial Thromboplastin Time
CEA	Continuous Epidural Analgesia
HELPP	Haemolysis, Elevated Liver enzymes and Low Platelet count (complication of pregnancy)
H	Hour
INR	International Normalised Ratio
LMWH	Low Molecular Weight Heparin
NSAID	Non-Steroidal Anti-Inflammatory Drug
SADU	Surgical Acute Dependency Unit
UFH	Unfractionated Heparin

Identification of risk factors and establishment of guidelines will not completely eliminate the complications of spinal haematoma. Vigilance in monitoring is critical to allow early evaluation of neurological dysfunction and prompt intervention.

Clinicians should exercise their professional judgement and consider individual patient's circumstances when applying these recommendations.

RECOMMENDED TIME INTERVALS BEFORE AND AFTER NEURAXIAL PUNCTURE OR CATHETER REMOVAL

Drug	Acceptable time to remove epidural catheter or to perform epidural/spinal	Administration of drug while spinal or epidural catheter in place	Acceptable time after block performance or catheter removal for next drug dose
Heparins UFH - Subcutaneous (SC) Prophylaxis, (≤ 15000 units/day) - Intravenous Treatment¹ (i.e. infusions) LMWH (Dalteparin) - SC Prophylaxis (depending upon body weight) - SC Treatment	4 h or normal APTTR 4 h or normal APTTR 12 h 24 h	Caution Caution Caution Not Recommended	1-2 h 4 h 4 h 4 h 24 h if block was traumatic
Apixaban	48 h	Not Recommended	6 h
Aspirin Caution with concomitant anticoagulants	At any time	No additional precautions	At any time
Clopidogrel	7 days	Not Recommended	6 h
Coumarins, i.e., Warfarin	INR 1.4 or less	Not Recommended	After catheter removal
Dabigatran	CrCl > 80ml/min: 48 h CrCl 50-80 ml/min: 72 h CrCl 30-50 ml/min: 96 h	Not Recommended	6 h
Dipyridamole	At any time		6 h
Edoxaban	Cr Cl > 30: 24 h Cr Cl < 30: 48 h	Not Recommended	6 h
Eptifibatide	8 h	Not Recommended	6 h
Fondaparinux (Prophylaxis dose only, avoid in treatment dose)	36-42h (consider anti-Xa levels)	Not Recommended	6-12 h
NSAIDs	At any time	No additional precautions	At any time
Prasugrel	7 days	Not Recommended	6 h
Rivaroxaban Rivaroxaban treatment dose (10 mg BD or more) or high bleeding risk	CrCl > 30 ml/min: 24 h CrCl < 30 ml/min: 48 h CrCL > 30ml/min: 48 h CrCl < 30ml/min: 72 h	Not Recommended	6 h 24 h if traumatic puncture

Ticagrelor	5 days	Not Recommended	6 h
Tirofiban	8 h	Not Recommended	6 h
Cilostazol	5 days	Not Recommended	6 h

If patient is on low dose aspirin and low molecular weight heparin: providing the low molecular weight heparin has been stopped for >12 hours, the platelet count is >75 and normal coagulation is confirmed neuraxial blocks can be categorised as increased risk only.

For an anticoagulation regimen/drug outside of this advice, hepatic or renal dysfunction: consider risk/benefits to patient of epidural/spinal anaesthesia and refer to SPC and or/haematologist. (General rule of thumb: Anticoagulant should be stopped for 3 half-lives prior to an invasive procedure; however, this may be prolonged in renal failure).

N.B. Creatinine clearance (CrCl) is an estimate of Glomerular Filtration Rate (GFR); however, CrCl is slightly higher than true **GFR** because **creatinine** is secreted by the proximal tubule (in addition to being filtered by the glomerulus). For all practical purposes eGFR can be used in place of CrCl.

Reference: www.Kidney.org

Appendix

1. Full intravenous heparinisation.

- Management of epidurals should take place in an area where there is a high level of vigilance i.e. should be appropriately staffed (trained) e.g., SADU, Level 1 or 2.
- Monitor
 - Carefully monitor and document sensory and motor nerve blockade. In event of **DENSE** block, STOP epidural infusion, seek **urgent** medical assistance (see appendix 7 of Continuous Epidural Analgesia (CEA) Guidelines)
 - Monitor TWICE daily APTT, maintain in therapeutic range i.e. twice normal range for APTT.
 - For removal of epidural catheter, STOP heparin infusion; check blood clotting 4-6 hours later, correct anticoagulation if necessary, and prior to removal of epidural catheter.

Relative risk related to Neuraxial blocks in **obstetric patients** with abnormalities

Risk factor	Normal risk	Increased risk	High risk	Very high risk
LMWH – prophylactic dose	>12h	6-12h	<6h	<6h
LMWH- therapeutic dose	>24h	12-24h	6-12h	
UFH-infusion	Stopped>4h and APTTR <1.5			APTTR above normal range
UFH-prophylactic bolus dose	Last given >4h	Last given <4h		
NSAID + aspirin	Without LMWH	With LMWH dose 12-24h	With LMWH <12	
Warfarin	INR<1.5	INR 1.4-1.7	INR 1.7-2.0	INR>2.0
General anaesthesia	Starved, not in labour, antacids given		Full stomach or in labour	
Pre-eclampsia	Platelets >100 x 10 ⁹ .l ⁻¹ within 6h of block	Platelets 75-100x x 10 ⁹ .l ⁻¹ (stable) and normal coagulation tests	Platelets 75-100x x 10 ⁹ .l ⁻¹ (decreasing) and normal coagulation tests	Platelets < 75-100 x 10 ⁹ .l ⁻¹ or abnormal coagulation test with indices >1.4 or HELLP
Idiopathic thrombocytopenia	Platelets 75-100 x 10 ⁹ .l ⁻¹ within 24h of block	Platelets 50-75 x 10 ⁹ .l ⁻¹	Platelets 20-50 x 10 ⁹ .l ⁻¹	Platelets <20 x 10 ⁹ .l ⁻¹
Intra uterine fetal death	FBC and coagulation tests normal within 6h of block	No clinical problems but no investigation results available		With abruption or overt sepsis
Cholestasis	INR <1.5 within 24h	No clinical problems but no investigation results available		

References

- AAGBI (2013) Association of Anaesthetists of Great Britain and Ireland, Obstetric Anaesthetists' Association and Regional Anaesthesia UK. Regional anaesthesia and patients with abnormalities of coagulation. *Anaesthesia* 2013; **68**: pages 966-72. Available from: http://www.aagbi.org/sites/default/files/rapac_2013_web.pdf
- Baglin, Keeling, Kitchen (2012) Effects on routine coagulation screens and assessment of anticoagulant intensity in patients taking oral dabigatran or rivaroxaban: Guidance from the British Committee for Standards in Haematology. *Br J Haematol*; 159(4):427-9.

Full version control record

Version:	8
Guidelines Lead(s):	Dr Govindarajan Sridhar Consultant Anaesthetist FPH
Contributor(s):	Karin Cannons Nurse Consultant Pain Management; Dr Clare Rees Consultant Haematologist FPH; Dr Rafik Sedra Consultant Anaesthetist WPH; Angela D'Souza Pain Nurse Specialist
Director of Service:	Mr Luke Forster
Library check completed:	01/01/2023
Ratified at:	Anaesthetic Clinical Governance 20 th May 2026, DTC: 10/08/2026
Date Issued:	17/08/2026
Review Date:	01/08/2029
Pharmaceutical dosing advice and formulary compliance checked by:	Laura Johnson/ Harminder Sangha 30/4/2026
Key words:	Anticoagulation, neuraxial anaesthesia, spinal, epidural, analgesia, anaesthesia

This guideline has been registered with the Trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt, contact a senior colleague or expert. Caution is advised when using guidelines after the review date.

This guideline is for use in Frimley Health NHS Foundation Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

Version Control Sheet

Version	Date	Guideline Lead(s)	Status	Comment
1 to 5	2010-2017	Dr Pradip Joshi	Final	FPH specific documents
6	August 2017	Dr Pradip Joshi	Final	Trust wide
6.1	November 2019	Dr Pradip Joshi	Draft	Updates post removal administration of LMW heparin to 4 hrs as per AAGBI. Adds edoxaban.
7	April 2020	Dr Asif Ahmad	Final	Approved at CG
7.1	September 2022	Clinical Guidelines Administrator	Interim	Transferred to new Clinical Guidelines Template
8	June 2026	Dr Govindarajan Sridhar Consultant Anaesthetist FPH	Final	Ratified at: Anaesthetic Clinical Governance 20th May 2026 DTC: 10/08/2026

Related Documents

Document Type	Document Name
Policy	Medicines Management Policy
Guideline	Guidelines for the management of Adult Non-Obstetric Patients with Continuous Epidural Analgesia (CEA)