

(Affix Patient Identity Label)

First Name.....

Surname.....

Date of Birth

Trust ID number.....

STANDARD HEPARIN INFUSION PROTOCOL

Patient weight (kg).....

Ward.....

Consultant.....

This protocol is **not** for use in thrombolysed patients post MI or patients on eptifibatide – see separate protocol

- Prior to administration perform baseline clotting screen and platelet count. Monitor platelet count daily
- Start treatment with intravenous bolus of **5000 units** heparin over 5 minutes prescribed on drug chart
 OMIT BOLUS IF HEPARIN INFUSION IS STARTED AS BRIDGING PRE OR POST-OP
- **'heparin iv infusion as per protocol' must be prescribed on drug chart**
- Prepare infusion and initiate at 16 units/kg/hr as described below
- Check APTT Ratio after 6 hours and adjust infusion rate according to APTT Ratio as described
- Re-check APTT Ratio 6 hours after infusion rate adjustment then at least **DAILY** if no change in rate
- Maintain APTT Ratio between **1.5 and 2.5 (2-2.5 for mechanical heart valves and vascular indications)**
- If reversal of heparin effect is needed (e.g. severe bleeding) contact doctor immediately

Please use this protocol for thrombolysed patients post PE. Heparin should be started once the alteplase infusion is finished and only when APTT falls below 2. See local PE management protocol

Dilute one ampoule of Heparin Sodium Solution for Infusion 20,000units in 20mls with 20mls of sodium chloride 0.9% This gives a concentration of 20,000 units in 40ml (500 units/ml)

To calculate initial infusion rate (mls/hr) the following calculation is used: $\frac{16 \text{ units/kg/hr} \times \text{body weight (kg)}}{500 \text{ (units/ml)}}$

Patients weight in kilograms	Initial infusion rate in ml/hr
40	1.3
45	1.4
50	1.6
55	1.8
60	1.9
65	2.1
70	2.2
75	2.4
80	2.6

Patient weight in kilograms	Initial infusion rate in ml/hr
85	2.7
90	2.9
95	3.0
100	3.2
105	3.4
110	3.5
115	3.7
120	3.8
125 or greater	4

Doctor's signature: **Bleep number:** **Date:**

Treatment Discontinued: Date: Doctor's Signature:

Please file in medical notes. Introduced Oct 2009. Review date Oct 2011. Approved by Thrombosis Committee March 2009 Health Records Committee May 2009 product code CSP05135. Reviewed April 2017 C Proudfoot Update July 2017 Dr R Johnson

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Infusion rate adjustment according to APTT ratio

APTT Ratio	Infusion Rate change
Less than 1.2	Increase by 0.8 ml/hr. Give bolus of 5,000 units
1.2-1.4	Increase by 0.4 ml/hr. Give bolus of 2,500 units
1.5-2.0	Do not change rate for all indications except mechanical heart valve and vascular indications. Increase rate by 0.1ml/hr for these indications with target APTT of 2-2.5
2.0-2.5	Do not change rate
2.6-3.0	Decrease by 0.1ml/hr
3.1-4.0	Decrease by 0.2ml/hr
4.1-5.0	Decrease by 0.6ml/hr
Greater than 5	Stop infusion for at least one hour. Contact doctor for advice and reduce the rate by 1.0 ml/hr when re-starting

Record of infusion preparation details

Date	Time (24 hour clock)	Batch number and strength of heparin	Signature of nurse making infusion	Signature of second check	Line primed with new syringe?	
					Yes	No

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ADMINISTRATION DETAILS

Date	TIME (24 hour clock)	APTT result	Infusion rate (ml/hr)	Volume remaining in syringe	IV trained Nurse signature	Doctor signature *

* a doctors' signature is only required if the doctor is contacted in cases of clinical need (eg APPT ratio >5, patient bleeding)

References:

1. Raschke RA, Reilly BM, Guidry JR et al. The Weight-based Heparin Dosing Nomogram Compared with a "Standard Care" Nomogram: A Randomised Controlled Trial. *Annals of Internal Medicine* 1993; 119: 874 –81
2. Lackie CL, Luzier AB, Donovan JA. Weight-based heparin dosing: clinical response and resource utilization. *Clinical Therapeutics*. 1998; 20: 699-710
3. Data Sheet Compendium. Summary Product Characteristics. Leo Laboratories. Dec 2007

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