

Treatment recommendations do NOT cover all clinical scenarios and do not replace the need for clinical judgement.

Infusion Nomogram for Intravenous Unfractionated Heparin For FLUID RESTRICTED PATIENTS 25,000 units in 50 mL

Patients requiring fluid restrictions (e.g. patient with heart failure or severe renal impairment) may require a more concentrated dilution of unfractionated heparin than the standard dilution used in the WA Anticoagulation Medication Chart -25,000 units in 500 mL of sodium chloride 0.9% (50 units/mL).

Print a copy of the FLUID RESTRICTED nomogram and ATTACH to Anticoagulation Chart over existing page 3 – put a line through the original nomogram on the WA Anticoagulation Medication Chart.

This nomogram (weight-based guides) is ONLY valid when using an unfractionated heparin concentration of 25,000 units in 50 mL and STANDARD aPTT targets.

INITIAL ORDER : Prescriber should complete order (initial bolus and initial infusion rate) on page 2. See below for recommended dose for Venous Thromboembolism (VTE) or Acute Coronary Syndrome (ACS).

- It is important that a bolus dose of unfractionated heparin is prescribed and administered on initiating an unfractionated heparin infusion to ensure that the therapeutic range is reached within the first 24 hours of therapy.

MAINTENANCE : Prescriber to indicate on page 2 of Anticoagulation Chart whether nurse should maintain infusion rate based on nomogram as indicated OR whether the prescriber is to be contacted following each aPTT test.

IT IS RECOMMENDED FOR SAFETY THAT

- All bolus doses be drawn up from separate ampoules into a syringe for administration.
- A syringe driver is used to administer the infusion due to the very low infusion rates required.

Venous Thromboembolism (DVT/PE) Bolus and Initial Rate Requirements

		Weight Based Guide for Initial Dose												
		Weight	≤ 40 kg	45 kg	50 kg	55 kg	60 kg	65 kg	70 kg	75 kg	80 kg	85 kg	90 kg	≥ 95 kg
Bolus Dose	80 units/kg	Units	3200	3600	4000	4400	4800	5200	5600	6000	6400	6800	7200	7200
	Initial Rate	18 units/kg/hour	Rate (mL/hour)	1.4	1.6	1.8	2	2.2	2.3	2.5	2.7	2.9	3.1	3.2

Acute Coronary Syndrome Bolus and Initial Rate Requirements

		Weight Based Guide for Initial Dose												
		Weight	≤ 40 kg	45 kg	50 kg	55 kg	60 kg	65 kg	70 kg	75 kg	80 kg	85 kg	90 kg	≥ 95 kg
Bolus Dose	60 units/kg	Units	2400	2800	3000	3300	3600	4000	4000	4000	4000	4000	4000	4000
	Initial Rate	12 units/kg/hour	Rate (mL/hour)	1	1.1	1.2	1.3	1.4	1.5	1.7	1.9	2	2	2

Nomogram for modifying rate of administration for Venous Thromboembolism and Acute Coronary Syndrome

		Weight Based Rate for Maintenance Dose												
		Weight	≤ 40 kg	45 kg	50 kg	55 kg	60 kg	65 kg	70 kg	75 kg	80 kg	85 kg	90 kg	≥ 95 kg
MAINTENANCE	MAINTENANCE ORDER Use weight column on nomogram and row for aPTT range for unit/kg/hour conversion of unit/kg/hour													
	aPTT	Dose Adjustment	Rate Change (mL/hour) This rate equals recommended change in units/hour for a 500 unit/mL dilution. Remeasure aPTT within 6 hours of each rate change											
	≤ Kk	Bolus dose as per indication (VTE OR ACS listed above) Then increase 3 units/kg/hour	+0.2	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.5	+0.6
	LI-Mm	Increase 2 units/kg/hour For VTE consider 40 units/kg bolus dose	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4
	Nn-Pp	No Change	Remeasure aPTT within 24 hours (or next morning)											
	Qq-Rr	Reduce 1 unit/kg/hour	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
	Ss-Tt	Hold for 30 minutes Then reduce 2 units/kg/hour	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4
> Zz	<ul style="list-style-type: none"> Contact doctor Hold for 60 minutes Then reduce 3 units/kg/hour 	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.6	

Slight variances of aPTT ranges may occur due to changes in laboratory reagents used. Please check with your Pathology Laboratory.

Please note: Each hospital is required to check with their Pathology laboratory should determine its own therapeutic target range for heparin against a gold standard test (eg residual anti-Xa activity). Because of this, hospitals should not use a WA Anticoagulation Chart from another hospital as ranges will change from hospital to hospital.