

# HNE AREA Intensive Care

Approved For: JHH ICU and HDU

## Protamine Sulphate

**Trade Name:**

**Presentation:** Protamine Sulphate 1%, 50mg in 5ml ampoule

**Indications:** Protamine is a heparin antagonist.  
It forms a protein that combines with heparin to form an inactive molecule

**Used for:**

Reversal of heparin anticoagulation  
Partial reversal of low molecular weight heparin in haemorrhage situations.

**Administration;** 1mg Protamine per 100 units Heparin remaining in the patient.

The amount of Heparin remaining in the patient will depend on the initial dose and the timeframe ( remember the half life of effect of Heparin is 1-3 hours ) See suggested dosage guide below :

Time since last IV heparin	Dose/100U of heparin
Less than 30 mins	1-1.5 mg
30-60 minutes	0.5-0.75 mg
2 hrs or more	0.25-0.375 mg

For an accurate determination of residual Heparin do an APPT or bedside ACT

**Administer by:** Slow intravenous injection or in a burette with 5% dextrose or 0.9% sodium chloride

Maximum 50mg in 10 minutes

After cardiac surgery (with Cardiopulmonary Bypass) – 100mg Protamine to cover Heparin in each 1000 mls of Pump blood

Heparin rebound (on rewarming) may require additional Protamine

### Dose

### Precautions

- Too rapid administration of protamine may cause severe hypotension, severe pulmonary hypertension and anaphylactoid reactions.
- Patients who may have an allergy to protamine are those patients who have:
  - Previous exposure to protamine
  - A history of diabetes who have been treated with protamine insulin.
  - An allergy to fish

- Have had a vasectomy or are infertile and may have antibodies to protamine

**Adverse effects:**

- Hypotension (if given rapidly)
- Bradycardia
- Dyspnoea
- Flushing, back pain
- Nausea and vomiting
- Anaphylaxis, especially if known sensitivity to fish
- Pulmonary hypertension
- Haemorrhage

**Contraindication:** Allergy to protamine sulphate

**Compatibilities:**

---

Created: 01-Jun-07 by Dr A Mullens Reviewed: 01-Jun-07 by Dr A Mullens Guideline to be reviewed before : 01-Jun-10  
These guidelines are intended for and to be used only by experienced critical care staff under direct supervision of Hunter Health Area Intensive Care Specialists in designated Hunter Health Area Critical Care Areas. The Authors will not be responsible for inappropriate use of these guidelines