

# Esmolol

## 100mg/10mL injection

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**Note:**

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

## Dose and Indications

### To be used only on Cardiology recommendation

#### Arrhythmias, Supraventricular tachycardia

##### Intravenous infusion

100microgram/kg/minute, increase in increments of 50-100microgram/kg/minute every 5 minutes until clinical response achieved.

Usual maximum dosage is 200micrograms/kg/minute.

#### Short-term treatment of post-cardiac surgery hypertension

##### Intravenous infusion

50micrograms/kg/minute, increase in increments of 25-50micrograms/kg/minute every 5 minutes until desired blood pressure is achieved.

Usual maximum dosage is 200micrograms/kg/minute.

## Preparation and Administration

### Intravenous

May be given undiluted or diluted to less than 10mg/ml solution with compatible fluid and infuse intravenously. Solution is stable for 24 hours.



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### Compatible Fluids

Sodium Chloride 0.9%, Glucose 5%, Glucose/sodium chloride combinations

### Adverse Effects

#### Common

Hypotension, peripheral ischaemia, vomiting, constipation, agitation, sweating, inflammation (injection site)

#### Infrequent

Bronchospasm, dyspnoea, skin necrosis (injection site)

#### Rare

Severe bradycardia, asystole, cardiac arrest, seizures, respiratory arrest

### Monitoring

- > Continuous ECG
- > Blood pressure

### Practice Points

- > May cause hypotension which usually reverses within 30 minutes of stopping infusion or reducing dose
- > Monitor infusion site for extravasation which can cause skin necrosis and sloughing.
- > Contraindicated in second-or third-degree heart block, sinus bradycardia or cardiogenic shock. Heart failure may worsen.

### References

- > Wiest DB, Garner SS, Uber WE, Sade RM, Esmolol for the management of pediatric hypertension after cardiac operations, J Thorac cardiovascular surgery, 1998, 115:890-7



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### Document Ownership & History

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