

# Suxamethonium

## 100mg/2mL injection, 10mg/2mL pre-filled syringe

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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

### This is a High Risk Medication

Only muscle-relax a neonate if confident that the airway can be maintained, and that hand ventilation can be provided.

If a neuromuscular abnormality of any kind is suspected suxamethonium should not be used (see contraindications)

### Synonyms

Succinylcholine chloride, succinylcholine,

### Dose and Indications

#### Intubation (Depolarising Muscle Relaxant)

##### Intravenous

2 mg/kg/dose, repeated when required



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## Preparation and Administration

### Intravenous

#### **Suxamethonium 10 mg/2mL pre-filled syringe (5 mg/mL suxamethonium)**

Use undiluted.

#### **Dilution instructions to make suxamethonium 5 mg/mL (only if pre-filled syringe unavailable)**

Dilute 1 mL of suxamethonium 100 mg/2mL injection with 9 mL sodium chloride 0.9% (to a total volume of 10 mL), shake vigorously to dissolve. The solution contains 5 mg/mL suxamethonium.

Dose	1 mg	2 mg	3 mg	4 mg	5 mg	6 mg
Volume	0.2 mL	0.4 mL	0.6 mL	0.8 mL	1 mL	1.2 mL

Administer over 10 to 30 seconds.

## Compatible Fluids

Glucose 5%, glucose/sodium chloride combinations and sodium chloride 0.9%

## Adverse Effects

### Common

Muscle twitching, bradycardias (particularly with repeated dosing), excessive salivation, increased intraocular, intracranial and intragastric pressures.

### Infrequent

Tachycardia, arrhythmias, hypertension, hypotension, bronchospasm, jaw rigidity, prolonged neuromuscular blockade and hyperkalaemia.

### Rare

Malignant hyperthermia, myoglobinuria, rhabdomyolysis, anaphylaxis

**Malignant hyperthermia** is a rare hypermetabolic response of skeletal muscle, triggered by certain drugs resulting in increased O<sub>2</sub> consumption and CO<sub>2</sub> production, tachypnoea, tachycardia, arrhythmias, muscle rigidity, rising temperature and metabolic acidosis.

## Monitoring

- > Cardiorespiratory and pulse oximetry monitoring are mandatory. Close monitoring of blood pressure (invasive or non-invasive) is recommended.



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## Contraindications/ Precautions

- > Contraindicated:
  - Severe hyperkalaemia
  - In suspected muscular dystrophies, congenital myopathies or neurological disease involving extensive muscle wasting;
  - Where there is a personal or family history of malignant hyperthermia;
  - Severe metabolic acidosis with hypovolaemia and prolonged use of non-depolarising muscle relaxants due to the risk of suxamethonium-induced hyperkalaemia and cardiac arrest
- > Use with caution in conditions such as electrolyte imbalance, severe sepsis, uraemia, burns

## Practice Points

- > May cause reactive bradycardia and increased salivation, however this is uncommon with single doses
- > Atropine should be available and may be used prior to suxamethonium for intubation to reduce any reactive bradycardia and increased salivation
- > Dose may need to be reduced if used with other anaesthetic or neuromuscular blocking drugs.
- > Muscle relaxants do nothing to reduce pain and distress.

## Document Ownership & History

<b>Developed by:</b>	SA Maternal, Neonatal & Gynaecology Community of Practice
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23/11/2022	V4	Domain Custodian, Clinical Governance, Safety and Quality	Full review in line with 5-year scheduled timeline for review.
9/11/2017	V3	SA Health Safety and Quality Strategic Governance Committee	Addition of pre-filled syringes
5/2017	V2	SA Health Safety and Quality Strategic Governance Committee	Formally reviewed in line with 1-5 year scheduled timeline for review.
11/2012	V1	SA Maternal & Neonatal Clinical Network	Original SA Maternal & Neonatal Clinical Network approved version.

