

South Australian Perinatal Practice Guidelines

Local anaesthetic toxicity

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Introduction

- > Local anaesthetic toxicity is a potentially fatal complication of regional anaesthesia. It can also occur in other situations with local anaesthetic injections
- > This guideline has been adopted from the Association of Great Britain and Ireland Guidelines for the Management of Severe Local Anaesthetic Toxicity¹ and is endorsed by the Australian and New Zealand College of Anaesthetists

Signs of severe toxicity

- > Central nervous system: sudden alteration in mental status, severe agitation or sudden loss of consciousness with or without tonic-clonic convulsions
- > Cardiovascular system: cardiovascular collapse: sinus bradycardia, conduction blocks, asystole and ventricular tachyarrhythmias may all occur
- > Local anaesthetic toxicity may occur some time after the initial injection

Immediate management

- > Stop injecting the local anaesthetic
- > Call for help
- > If not in theatre or after-hours: call code blue obstetrics (or equivalent hospital Cardiac Arrest Team)
- > If in theatre during working hours: ring theatre emergency bell and if not already present page / contact senior anaesthetist and request additional anaesthetic assistance
- > Maintain the airway and, if necessary, secure it with a tracheal tube
- > Give 100 % oxygen and ensure adequate lung ventilation (hyperventilation may help by increasing pH in the presence of metabolic acidosis)
- > Confirm or establish intravenous access
- > Control seizures: give a benzodiazepine, thiopental or propofol in small incremental dose (the latter two medications should only be administered by an anaesthetist)
- > Assess cardiovascular status throughout
- > Consider drawing blood for analysis but do not delay definitive treatment to do this

Management in cardiac arrest

- > Commence cardiopulmonary resuscitation (CPR)
- > Manage arrhythmias, recognising that the arrhythmias may be very refractory to treatment
- > Consider the use of cardiopulmonary bypass if available
- > **GIVE INTRAVENOUS INTRALIPID EMULSION** (IV intralipid emulsion regimen flow chart)
- > Follow regimen for intravenous lipid emulsion as above
- > Continue CPR throughout treatment with lipid emulsion
- > Recovery from LA-induced cardiac arrest may take >1 hour
- > Propofol is not a suitable substitute for lipid emulsion
- > Lidocaine should not be used as an anti-arrhythmic therapy

Management without cardiac arrest

- > Use conventional therapies to treat

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- > Hypotension
- > Bradycardia
- > Tachyarrhythmia
- > **CONSIDER INTRAVENOUS LIPID EMULSION** (IV intralipid emulsion regimen flow chart)

Follow-up

- > Arrange safe transfer to a clinical area with appropriate equipment and suitable staff until sustained recovery is achieved
- > Exclude pancreatitis by regular clinical review, including daily amylase and lipase assays for two days
- > Notify via Advanced Incident Management System (AIMS)
- > If Lipid has been given, also report its use to the international registry at www.lipidregistry.org. Details may also be posted at www.lipidrescue.org

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Version control and change history

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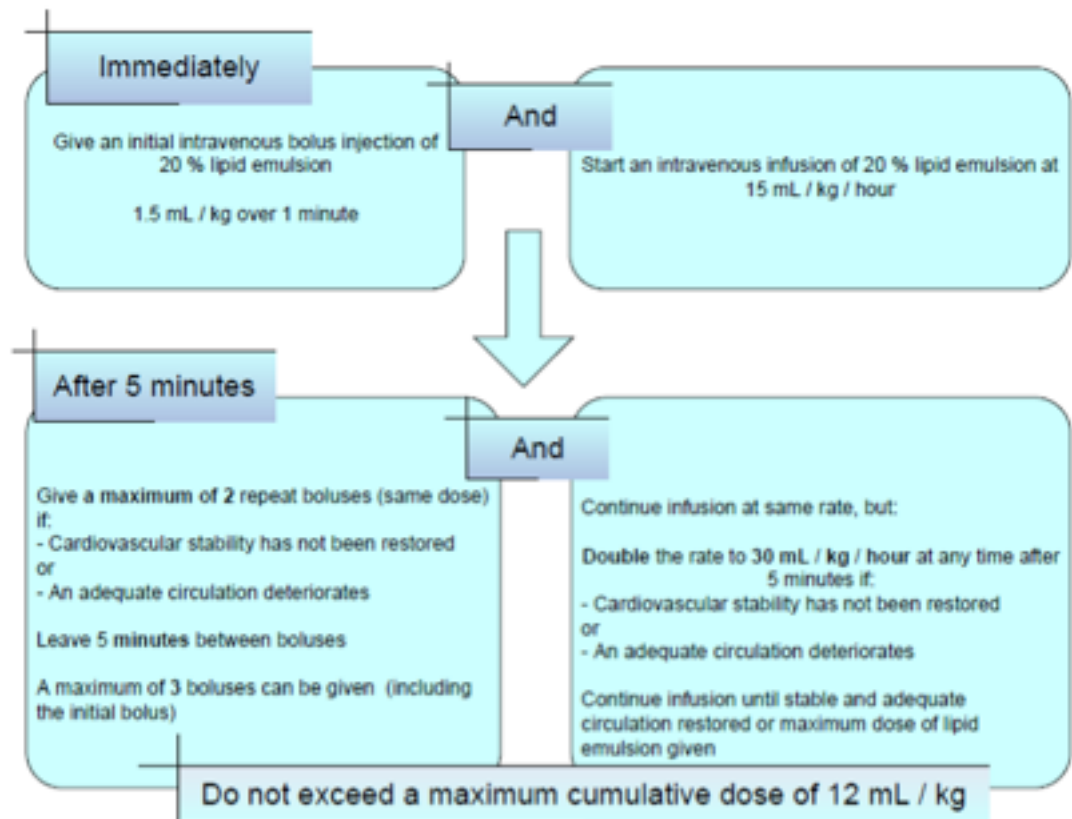
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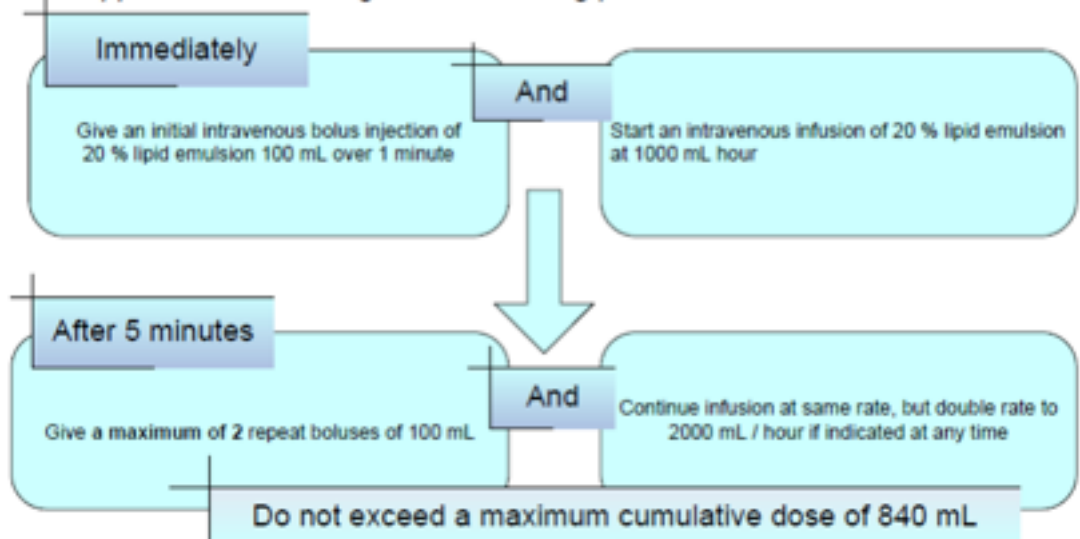
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Regimen for intravenous lipid emulsion



An approximate dose regimen for a 70 kg patient would be as follows



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