Local Anesthetic Systemic Toxicity

Although rare, local anesthetic systemic toxicity (LAST) can occur and warrants vigilant nursing assessment whenever local anesthetics (LA) are administered. Symptoms of toxicity often develop in a sequential and predictable manner according to LA blood levels.

Symptoms of Local Anesthetic Toxicity
NOTIFY provider for new onset of symptoms.

### Mild to Moderate
- Lightheadedness
- Numbness around the tongue and mouth
- Ringing in the ears
- Dizziness
- Metallic taste in mouth
- Hallucinations (visual or auditory disturbances)
- Drowsiness/lethargy
- Headache
- Euphoria
- Anxiety/confusion

### Severe
- Muscle twitching
- Seizures
- Coma
- Hypotension
- QRS prolongation
- Respiratory arrest
- Cardiac arrest

Treatment of LAST:
- STOP infusion
- AIRWAY management
- INITIATE CPR if pulseless
- CHECK VS including SpO2
- TREAT seizures and cardiac arrhythmias
- ANTICIPATE intralipid emulsion administration:
  - **Initial bolus:** 1.5 mL/kg (lean body mass) of 20% lipid emulsion given over 2 – 3 minutes; if limited or no response, may repeat twice at 5-minute intervals.
  - **Infusion:** After initial bolus, may consider infusion of 0.25 – 0.5 mL/kg/min for 30 – 60 minutes. Maximum dose is 10 – 12 mL/kg over first 30 – 60 minutes.

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Resources:


