



Poison HOTLINE

1-800-222-1222

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Did you know

The IPCC is often consulted by health care providers dealing with an overdose patient with severe hemodynamic instability and poor prognosis. The off-label use of lipid emulsion therapy may be considered as a last resort in drug toxicity when:

- The offending drug is lipophilic.
- Good supportive care has already been administered.
- There are no further conventional therapy options.
- The patient continues to be unstable or in cardiac arrest.

There are no studies proving benefit of this therapy in poisoned patients and it has the potential to severely worsen the patient's condition when used inappropriately.

Call **1-800-222-1222** to consult with an IPCC toxicologist 24/7.

Treatment of Toxin-Induced Hypotension

Toxin-induced shock can be a life-threatening condition characterized by severe hypotension and other symptoms of poor perfusion.

Deciding which treatment to use for hypotension or shock caused by a toxin depends on several factors: what the patient was exposed to, the patient's other medical conditions and medications, vital signs, the patient's signs and symptoms, and lab results. An echocardiogram can help guide treatment by showing if the patient has poor cardiac contractility, insufficient fluid resuscitation, or a host of other non-toxicological cardiac problems.

IV fluids are normally the first line treatment. After fluid resuscitation, treatment specific to the drug ingested or a vasopressor may be appropriate. Vasopressors fall into two main groups. Inotropes increase myocardial contractility and cardiac output (e.g. epinephrine, dobutamine). Vasoconstrictors increase vascular tone and resistance (e.g. norepinephrine, vasopressin, phenylephrine). In some cases, a vasopressor after fluid resuscitation may be all that is needed to correct the hypotension.

While dopamine is frequently the first vasopressor chosen, norepinephrine, in general, is the vasopressor of choice to treat toxin-induced hypotension. Dopamine, a precursor to norepinephrine synthesis, has different effects at different infusion rates and causes more dysrhythmias than norepinephrine.

For certain toxins, there are specific treatments that can be more effective than the general approach of fluid resuscitation and norepinephrine.

Toxin	Specific Treatment
Calcium channel blocker	High dose insulin > glucagon
Beta adrenergic blocker	Glucagon > high dose insulin
Sodium channel blocker	Sodium bicarbonate
Cardiac glycoside	Anti-digoxin antibodies
Local anesthetic	Intravenous lipid emulsion

The Iowa Poison Control Center has a Medical Toxicologist available for consult 24/7 if help is needed in treatment of toxin-induced hypotension.

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