



Poison HOTLINE

1-800-222-1222

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Did you know

It is important to make sure that spilled metallic mercury is cleaned up immediately and completely.

After a spill, open windows and doors to the outside and close off doors leading to other areas. Isolate the area to keep others from entering the area during clean up.

Never use a vacuum cleaner as it will aerosolize more of the mercury into the air. **Never use a broom** to sweep mercury as it will break mercury into smaller beads. **Never pour mercury down the drain.** It will likely get stuck in the plumbing or contaminate the septic tank.

Call **1-800-222-1222** for cleanup recommendations for a mercury spill.

High Dose Insulin Therapy for Beta Blocker and Calcium Channel Blocker Overdose

Overdoses of calcium channel blockers (CCB) and beta-blockers (β B) can be difficult to treat because the severe bradycardia and hypotension can be refractory to traditional treatment (e.g. fluid boluses, adrenergic agents). Decreased calcium entry into cardiac myocytes leads to vasodilation, negative cardiac inotrope, decreased rate of SA node firing, decreased AV node conductance.

High dose insulin therapy (HDI) is effective at treating the hypotension caused by CCB and β B overdoses. In human case reports and case series, HDI has led to improved hemodynamic parameters. In animal studies, HDI was shown to increase survival due to a significant improvement in cardiac metabolics. The improved heart function is caused by insulin's direct effect on myocardial metabolism. There is also significant improvement in cardiac contractility from the improved cardiac metabolics, which also increases coronary artery blood flow.

HDI should be started early in the management of severe CCB and β B overdoses. The effects of HDI can be delayed 30-60 min after therapy has been started so other therapies, such as fluids, vasopressors, glucagon, should be used simultaneously.

HDI is being used to increase the cardiac contractility and NOT to treat serum glucose levels. Supplemental IV dextrose needs to be given to prevent the hypoglycemic effects of the insulin. All HDI therapy is done with regular insulin. All patients on HDI should get a bedside echocardiogram to assess cardiac contractility.

When the patient has improved clinically and maintained hemodynamic stability, hemodynamic support should be weaned in the following order:

1. Adrenergic vasopressors
2. Calcium chloride infusion
3. Glucagon infusion
4. High dose insulin
5. Dextrose infusion (may be needed for 24-48 hours after insulin stopped).
Monitor for 12 hrs after dextrose stopped.

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Help
1-800-222-1222

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