



Poison HOTLINE

1-800-222-1222

July 2014



Did you know

Diethyltoluamide, commonly known as the common ingredient DEET found in insect repellents, should not be used on children less than 2 months of age. Most experts agree that only low concentrations (10% or less) of DEET may be used on children aged 2 months to 2 years of age.

DEET can be absorbed through the skin. Repeat applications or prolonged exposures can cause toxicity including seizures, encephalopathy, and coma.

Ideally after returning indoors, one should wash DEET treated skin with soap and warm water. DEET-treated clothing should not be re-worn until washed thoroughly.

Methanol Poisoning

Methanol, also referred to as wood alcohol, is a toxic alcohol found in windshield wiper fluid, gas line antifreeze, fuels, other automotive products, and as an adulterant in homemade ethanol. Methanol poisoning is most commonly reported after ingestion but has also been reported with inhalation and dermal exposures.

Methanol initially causes symptoms of intoxication similar to ethanol, but is less intoxicating than ethanol. The most severe symptoms may be delayed 18-24 hours as methanol is slowly metabolized and it is the methanol metabolites that cause toxicity.

Methanol is metabolized first to formaldehyde and then to formic acid via the enzymes alcohol dehydrogenase and aldehyde dehydrogenase. Formic acid causes a metabolic acidosis and causes blindness through direct toxicity to the retina. Most experts agree that a methanol concentration of 25 mg/dL is the threshold for treatment. An ingestion of as little as 0.2 mL/kg of 100% methanol would theoretically (assuming 100% absorption) result in a toxic methanol concentration.

Signs and Symptoms

- CNS: Inebriation, confusion, ataxia, seizures, coma
- Eyes: Blurred vision, dilated & sluggish pupils, papilledema, flashing lights (scotoma), paralysis of eye movements (ophthalmoplegia), change in color perception, constricted visual fields, blindness
- GI: Nausea, vomiting, abdominal pain, pancreatitis
- Metabolic: Anion-gap metabolic acidosis

Treatment

Activated charcoal and gastric lavage are not typically recommended due to rapid absorption of methanol and poor binding of activated charcoal with alcohols. For systemic toxicity, treatment starts with symptomatic and supportive care and ruling out other causes for the patient's condition. Specific antidotes include fomepizole, a medication which blocks the action of alcohol dehydrogenase, and folic acid supplementation. Seizures are treated with benzodiazepines. Dialysis is appropriate for severe cases. Methanol levels should be monitored after dialysis because methanol can redistribute from the tissues into the serum after dialysis.

*Sue Gottsch RN, BSN, CSPI
Certified Specialist in Poison Information*

POISON
Help
1-800-222-1222

Post and share this edition of **Poison Hotline** with your colleagues. Send comments or questions to Poison Hotline, 712-234-8775 (fax) or Tammy.Noble@UnityPoint.org. To subscribe or unsubscribe from this distribution list, contact the IPCC education office at 712-279-3717. Read past issues of **Poison Hotline** at www.iowapoison.org.