KNOW WHAT IS IN YOUR DRINK?

WHAT IS METHANOL POISONING?

Methanol is not in itself toxic, but is metabolised to the highly toxic formic acid. Treatment focuses on blocking the enzyme (ADH) with antidote (ethanol), buffering the metabolic acidosis with bicarbonate, and, if possible, using dialysis to remove methanol and formate thereby correcting the metabolic acidosis. Folic acid may also be given to enhance the endogenous metabolism of formate.

The most important part for the treatment is early administration of antidote. Apart from alcohol (ethanol), the only other antidote is Fomepizole. Fomepizole was included in the WHO Essential Medicine List in 2013. It is an established drug in the international guidelines, but the current price makes it unattainable for most victims in high-risk countries where people are affected. MI is working to make Fomepizole available at a price point which could then allow for a wider acceptance and adoption as a primary antidote.

WHEN TO CALL FOR ASSISTANCE:

Methanol poisoning can be treated if diagnosed within 10 to 30 hours of ingestion.

If there are patients with a strong suspicion of methanol poisoning, call your local hospital for advice and to discuss possibilities for intervention.

One of the most important reasons for this is the possibility to identify illicit alcohol in the environment, starting early treatment, and be able to warn the public about the possible dangers, as soon as possible.

Where there is one there are usually many.

All content herein is for informational purposes only and not intended to be a substitute for independent professional medical judgment, advice, diagnosis, or treatment.
Could it be methanol poisoning?

01 Symptoms

History of drinking?
Has the patient taken illegal/bootleg alcohol and/or drinking with suspected cases of methanol poisoning?

Feeling hungover?
Feeling nauseous and unwell.

Chest pain or gastrointestinal symptoms?
Heavy chest pain and gastrointestinal (GI) symptoms, stomach ache.

Hyperventilation?
More than 25 respirations per minute.

Visual disturbances?
All kinds of visual disturbances, from blurred vision to complete blindness.

Coma?
Unconscious.

02 Treatment

If asymptomatic patient:
Observe. (See under symptoms below left)

Hyperventilating, coma:
Give ethanol, bicarbonate, folinic (or folic) acid, transport to dialysis facilities.

Normoventilation or hypoventilation (slow breath), coma:
• Likely poor prognosis if methanol poisoning.
• Be careful with ethanol in case this is an ethanol intoxication unless confident of methanol poisoning.
• Give bicarbonate, folinic (or folic) acid and consider transport to referral hospital.

03 Dosage

Fomepizole:
• Fomepizole is commonly used to inhibit methanol metabolism, but if not readily available, high doses of ethanol can have a similar effect.

Bicarbonate (NaHCO₃):
• 500 mmol/L: Give 250–500 mL or more within 1–2 hours until hyperventilation is corrected (RF <20 /min).
• 167 mmol/L: Give 1000–1500 mL or more within 1–2 hours until hyperventilation is corrected (RF <20 /min).
• If only oral treatment is available: Tablets of 500 mg bicarbonate (= 6 mmol), 6–10 tablets every hour until hyperventilation is corrected (RF <20 /min).

Folinic (or folic) acid:
• 50 mg iv. or orally (e.g. 10 tablets of 5 mg) every 6 hours for 24–48 hrs.

If intubation is necessary:
• The patient must be hyperventilated (RF >25 /min) (until transferred to a unit with ICU). Give antidote (ethanol orally or intravenously) without delay. Please see dosaging below.

<table>
<thead>
<tr>
<th>Ethanol</th>
<th>5% Ethanol (beer)</th>
<th>10% Ethanol (beer)</th>
<th>20% Ethanol (fortified wine)</th>
<th>40% Ethanol (spirits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading dose</td>
<td>15 mL/kg</td>
<td>7.5 mL/kg</td>
<td>4 mL/kg</td>
<td>2 mL/kg</td>
</tr>
<tr>
<td>Drinking dose (hour) (not regular drinker)</td>
<td>2 mL/kg/hr</td>
<td>1 mL/kg/hr</td>
<td>0.5 mL/kg/hr</td>
<td>0.25 mL/kg/hr</td>
</tr>
<tr>
<td>Drinking dose (hour) (regular drinker)</td>
<td>4 mL/kg/hr</td>
<td>2 mL/kg/hr</td>
<td>1 mL/kg/hr</td>
<td>0.5 mL/kg/hr</td>
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</tbody>
</table>