Ethanol is used as an antidote to competitively inhibit alcohol dehydrogenase in methanol and ethylene glycol poisoning, preventing the production of toxic metabolites.

**Indications**
- **Methanol poisoning**
- **Ethylene glycol poisoning**
- **Poisoning with other toxic alcohols**

**Presentation**
- Commercially available 40-43% preparations (e.g. Vodka) may be given orally (PO) or nasogastric tube (NG)
- 20 mL vial of 100% ethanol for dilution and administration via intravenous infusion

**Dose and Administration**

**Loading dose:**
- **PO or NG:** 1.8 mL/kg of 40-43% ethanol (4 x 30 mL shots vodka in a 70 kg adult)
- **IV:** 8 mL/kg of 10% ethanol

**Maintenance:**
- **PO or NG:** 0.4 mL/kg/hour of 40-43% ethanol (30 mL of vodka each hour in a 70 kg adult)
- **IV:** 1-2 mL/kg/hour of 10% ethanol

*If available, Fomepizole is the preferred antidote in children*

**Adverse effects:**
- IV solution may cause phlebitis
- Ethanol intoxication
- Hypoglycaemia may occur, especially in children

**Therapeutic Endpoint:**
- Maintenance of blood ethanol concentration of 100-150 mg/dL (22-33 mmol/L)

*(The use of a breathalyser is NOT reliable in this setting)*
- Alcohol dehydrogenase is not effectively blocked at ethanol concentrations < 100 mg/dL (22 mmol/L)
- Ethanol pharmacokinetics are extremely variable and blood ethanol measurement should be measured hourly until steady state is reached and then 2-3 hourly
- Ethanol dosing will need to be increased when haemodialysis is commenced for the treatment of toxic alcohol poisoning (doubled initially and adjust according to the hourly ethanol concentration)

**Pregnancy:** treatment with ethanol should be instituted if indicated for treatment of toxic alcohol poisoning