

PHARMACY Bulletin

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Pharmacy Department, Hospital Canselor Tuanku Muhriz

METHANOL POISONING

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Methanol, the simplest form of alcohol, is present in small quantities in wine and beer, but toxic levels can be found in home-brewed spirits due to less sophisticated distillation systems compared to commercial brands. 45 victims have died in 2018 out of 98 reported cases of Methanol poisoning in Malaysia. (Note: Methanol ≠ Methane poisoning)



In - Hospital Management

- 1) Activated Charcoal is **NOT recommended unless**:
 - a) Recent ingestion
 - b) Co-ingestion of toxins that can be bound by **activated charcoal**.



- 2) IV Sodium bicarbonate should be given to correct severe acidosis

- 3) Following **vitamins** must be administered:
IV Folinic acid/Leucovorin calcium
 - 50mg every 4-6 hours (Methanol)



METHANOL POISONING MANAGEMENT

LOADING DOSE

20% Oral Ethanol (40 proof)	10% IV Ethanol
0.8 gm/kg (4ml/kg) diluted in juice administered orally or via a nasogastric tube	0.8 gm/kg (8ml/kg) administered over 20 to 60 minutes as tolerated

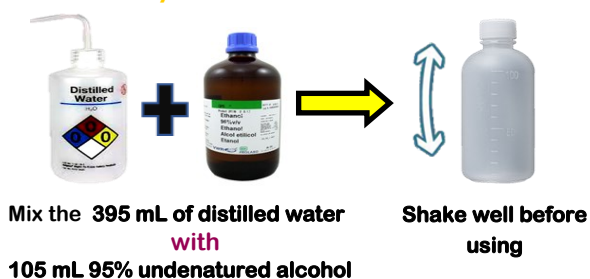
If the patient concurrently has ingested ethanol, then the ethanol loading dose must be modified so that the blood ethanol level does not exceed **100 to 150 mg/dL**

MAINTENANCE DOSE

Patient	20% Oral Ethanol (40 proof)	10% IV Ethanol
Non-drinker	80 to 130 mg/kg/hr (0.4-0.7 ml/kg/hr) PO or via nasogastric tube	0.8 gm/kg (8ml/kg) administered over 20 to 60 minutes as tolerated
Chronic alcoholic	150mg/kg/hr (0.8ml/kg/hr) PO or via nasogastric tube	150mg/kg/hr (1.5ml/kg/hr)
During dialysis	250 to 350 mg/kg/hr (1.3 – 1.8 ml/kg/hr) PO or via nasogastric tube	250 to 350 mg/kg/hr (2.5 – 3.5 ml/kg/hr)

How to prepare 20% Oral Ethanol

Stability : 1 week after reconstitution



How to prepare 10% IV Ethanol

Stability: 24 hours after prepared



Ethanol should be administered as soon as possible to block conversion of toxic alcohols !



Ethanol solution is preferably **avoided** in :

- 1) Pregnant lady
- 2) Paediatrics



For ethanol to be an effective antidote serum levels must be carefully **titrated** and **maintained**.

Oral7® Moisturising Mouthwash

RM 40.30



- ♦ **Indication:**
Oral mucositis for patients receiving chemotherapy
- ♦ **Special ingredients:** Natural enzymes (Lactoperoxidase & Glucose Oxidase, Lactoferrin and Lysozyme)
- ♦ **Alcohol free**

- Gargle **twice daily** or as **frequently** as required.
- Sipping a small amount of mouthwash can help to relieve dryness and discomfort in the throat when needed.

Oral7® Moisturising Mouth Gel

RM 62.00



- ♦ **Indication:**
Relieve symptoms of dry mouth caused by chemotherapy or Sjogren's syndrome
- ♦ **Special ingredients:** Natural enzyme and Aloe Vera gel
- ♦ **Direction of Use :**
 - Use as needed, 7 days a week especially at night.
 - Squeeze approximately one inch or more gel to the entire mouth, surface of tongue and lips.

Lactoperoxidase & Glucose Oxidase

Inhibits the growth of harmful bacteria



How do the natural enzymes in **ORAL 7®** work?

Lysozyme

Destroys cell walls of bacteria

Lactoferrin

Deprives harmful bacteria of iron that is needed for growth

Magnesium Sulphate



Please note there are 2 formulations of Magnesium Sulphate available in HCM.

Magnesium Sulfate 50% w/v solution

5 g in 10 ml



**New ampoule Mg =
2.03mmol per mL**

Try to avoid ordering by 'one or two ampoules', but please specify the gram needed.

- X** order '1 ampoule /hr'.
- ✓** order '2.47 gram/hr'.

GENERAL WARDS (via large peripheral vein or CVC)

Magnesium sulfate 10 mmol (**2.5 g = 5 mL** from ONE Ampoule) diluted with **100 mL** of sodium chloride 0.9%, administer by **IV infusion over 1 hour**. Total volume: 105 mL. Rate of infusion: 105 mL/hr.

CRITICAL CARE UNIT, ED, THEATRE (via CVC)

Same as above.

For severe cases, infusion over 20-60 minutes, MAX rate of infusion 315mL/hr

Magnesium Sulfate 49.3% w/v solution

2.47 g in 5 ml



**Old ampoule Mg =
2 mmol per mL**

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