Ontario Poison Centre
Centre Anti-Poison de l'Ontario

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Whole Bowel Irrigation

OVERVIEW

- Whole bowel irrigation (WBI) should NOT be used routinely in the care of the poisoned patient.
- Although WBI can lead to passage of tablets or illicit drug packets in rectal effluent, there is no evidence that this is associated with improved outcomes.
- WBI can be considered for patients who have ingested substantial amounts of iron, lithium or potassium. See other possible indications following.
- Based on literature reports, there is morbidity (treatment failure, abdominal distension, vomiting, hypotension) and mortality associated with the use of WBI.
- WBI is contraindicated in patients with bowel obstruction, perforation, ileus, hemodynamic instability or compromised, unprotected airways. It should be used cautiously in those who are debilitated, or in patients whose medical condition can be further exacerbated with its use.

INDICATIONS

Ingestion of a toxic dose (see Micromedex or Toxinz) of the following substances:

- Heavy metals without significant charcoal binding (including arsenic, iron, lead and zinc)
- Lithium (SR preparation)
- Body packers (NOT body stuffers)
- Potassium chloride
- Suspected pharmacobezoar
- WBI should rarely be considered for modified or sustained-release preparations:
  - Bupropion: role for WBI in selected circumstances
  - Ingestion of patches: fentanyl, clonidine

DIRECTIONS FOR USE

- There is no good evidence regarding when to start WBI. If there is evidence of continuing drug presence in the GI tract, WBI can be started any time after the ingestion.
- Use GoLytely® or other appropriate Polyethylene Glycol Electrolyte solution. See rates following.
- Use nasogastric tube (NG). NG placement must be confirmed with an upright CXR.
  Note: Most patients cannot drink PEG solution at the required rate.
- Patient should be seated or head of bed elevated to 45° to decrease risk of vomiting.
- May give activated charcoal prior to initiation of WBI.
  Note: Since WBI may decrease the efficacy of charcoal, start of WBI should be delayed by 1 hour after charcoal given.
- May consider metoclopropamide for emesis. If emesis occurs despite the above measures, decrease the infusion rate by 50% for 30–60 minutes and then return to the original rate.

*Do not give multiple doses of activated charcoal during WBI. When MDAC is indicated (limited drugs only), repeat doses of charcoal may be initiated after completion of WBI.

Dosage:	Initial Dose	Increase To
Adolescents & Adults	1000 ml/h	1500 – 2000 ml/h as tolerated
Children (9 mos – 6 years)	250 ml/h	500 ml/h as tolerated
Children (6-12 years)	250 ml/h	1000 ml/h as tolerated

Recommended dosing schedule above is based on expert opinion. Rate of administration may need to be adjusted based on patient size and tolerance.

Notes on administration:

Additional suggestions for administration either using a feeding pump or by gravity are available through the Canadian Antidote Guide available at:

https://www.ciusss-capitalenationale.gouv.qc.ca/en/antidotes/polyethylene-glycol
Antidote: Polyethylene glycol -----+Special Notes on Administration

DURATION

Until rectal effluent is clear and there is no evidence of continuing absorption or remaining toxin in the GI tract. This may require imaging to confirm. May take 6-10 hours or longer.

MONITORING

Periodic clinical assessment should be done for abdominal distension or vomiting. There is no need to monitor fluid or electrolyte status during WBI beyond what is clinically indicated.

CONTRAINDICATIONS

- Abdominal distension
- GI ileus
- GI obstruction
- GI perforation
- Unprotected airway in an unconscious/convulsing patient
- Patient with clinically significant gastrointestinal bleeding
- Patient with hemodynamic instability

REFERENCES

American Academy of Clinical Toxicology, European Association of Poison Centers and Clinical Toxicologists, Position Paper: Whole Bowel Irrigation. J Tox Clin Tox, 42(6), 843-854, 2004.

Position Paper Update: Whole bowel irrigation for gastrointestinal decontamination of overdose patients. Clin Tox 53, 5-12, 2015