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To: NEBRASKA HOSPITAL EMERGENCY DEPARTMENTS AND LABORATORIES
From: Ron Kirschner, MD, Medical Director, Nebraska Regional Poison Center
RE: Ethylene Glycol and Methanol Levels
Date: 5/29/14

- Ingestion of ethylene glycol (EG) or methanol (MeOH) should also be considered in cases of suspected overdose with unexplained anion gap metabolic acidosis (AGMA). Acidosis results from the production of toxic metabolites. Because clinical presentation is similar for EG and MeOH toxicity, it is often appropriate to obtain serum levels of both substances.
- When EG or MeOH ingestion is suspected, levels should be sent to a reference lab while starting fomepizole to block production of toxic metabolites.
- **For years, the Alegent Creighton lab in Omaha has offered same day serum EG and MeOH levels. Due to equipment failure, these tests will not be available at Alegent Creighton until further notice.**
- The poison center can assist with finding a lab that is able to perform EG or MeOH levels. It is important for the provider to then contact the lab directly to ensure that the sample is sent appropriately.
- Although results may not be available in real time, the poison center can help determine an optimal treatment plan based on the specific situation.
- Serum osmolality, in comparison with calculated osmolality, can be helpful, but is not a definitive test. A high "osmole gap" suggests alcohol ingestion (always check ethanol), but a near-normal value does not rule it out. The poison center can review calculation of the osmole gap for specific cases.
- Hemodialysis should be considered in cases of acidemia ($\text{pH} < 7.25$), renal failure (creatinine ≥ 2 mg/dL), or suspicion of significant methanol ingestion. Fomepizole dosing should be adjusted if dialysis is performed (contact the poison center for specific dosing recommendations).
- The duration of fomepizole treatment is based on EG/MeOH levels and a number of other factors. The poison center can address this issue for specific cases.
- **Please share this information with your hospital laboratory staff and encourage them to call the poison center if they need additional information.**

Our trained staff of nurse specialists in poison information and physician toxicologists is available 24 hours a day to answer your questions.