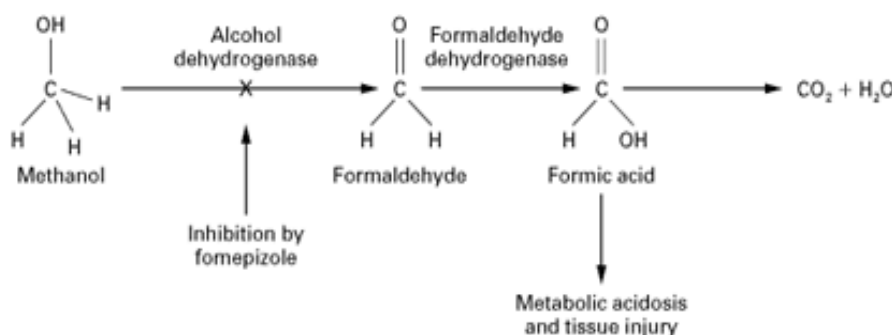


*Case of the Month*  
March 2008

NJPIES received a call from an Emergency Department requesting assistance in managing a 16-month old toddler who ingested 2oz (60 ml) of liquid contained in Thin Prep® PAP Test solution. The infant was in a private Ob/Gyn office with the mother and somehow ingested the solution. The toddler presented to the emergency department alert and responsive with normal vital signs.

A poison specialist from NJPIES contacted Cytoc Corporation, the company that manufactures the product, and identified it as PreservCyt® solution. The product contains 30 - 60% Methanol and 40 - 70% Water. NJPIES recommended starting the methanol antidote, Fomepizole (4-Methylpyrazole), and obtaining a methanol level.

In 2007, NJPIES received calls for 38 cases (0.25%) related to methanol exposure. Methanol, also known as wood alcohol, wood spirits, is a colorless liquid commonly found in, windshield washer fluid, solvents, fuels, and as a denaturant. Methanol poisoning typically induces nausea, vomiting and mild central nervous system depression. Untreated or treated late after the ingestion, methanol can cause life threatening metabolic acidosis and visual function impairment. Visual disturbances range from blurred vision and altered visual fields to complete blindness.<sup>1</sup> Although methanol itself is not highly toxic, it is metabolized by alcohol dehydrogenase to formaldehyde and subsequently to formic acid; these metabolites cause the metabolic acidosis, blindness, cardiovascular instability, and death attributed to methanol toxicity.<sup>2</sup>



Brent et.al. N Engl J Med 2001;344(6):424-429

When a patient presents soon after the possible ingestion of a methanol containing product, the first priority is to assess the likelihood and magnitude of ingestion, inhibit methanol metabolism if ingestion is likely, and then proceed to confirm and quantify the serum methanol concentration.<sup>1</sup> If a patient presents with ophthalmological symptoms and signs or with significant acidosis in the context of a likely methanol ingestion, the initial priorities are to correct the acidosis with sodium bicarbonate, attempt to enhance metabolism of formate to CO<sub>2</sub> by administration of folinic acid, inhibit further metabolism of methanol to formate with either fomepizole or ethanol, and finally to arrange hemodialysis for further correction of metabolic abnormalities, if necessary.<sup>1</sup>

As suggested by NJPIES, fomepizole was started and blood was sent out by courier to a laboratory with the capability for a rapid turn around of the results. Within hours of the fomepizole being given, the laboratory confirmed the methanol level was negative. Because of NJPIES involvement, the 16-month old toddler was treated with only one dose fomepizole, and later discharged home.

Early recognition and treatment is imperative in any methanol exposure case. Most hospitals in NJ do not have the ability to rapidly obtain methanol level. NJPIES can assist a healthcare facility in obtaining a methanol level expeditiously and thus prevent significant morbidity, mortality and unnecessary costs. .

<sup>1</sup> Barceloux DG et. al. American Academy of Clinical Toxicology practice guidelines on the treatment of methanol poisoning. J Toxicol Clin Toxicol 2002; 40(4):415-46.

<sup>2</sup> Brent et. al. Fomepizole for the Treatment of Methanol Poisoning. N Engl J Med 2001; 344(6):424-429