IOWA STATEWIDE POISON CONTROL CENTER

Poison HOTLINE

Partnership between Iowa Health System and University of Iowa Hospitals and Clinics

November 2011

Did you know ……
The ISPCC has its own Facebook page packed with useful information. On our page you will find product recall information; poison prevention tips; new trends in poisonings, overdoses and drugs of abuse; and seasonal items. Stay up to date by friending the ISPCC on Facebook.

Iowa Statewide Poison Control Center

The American Association of Poison Control Centers also has a free Poison Center Help iPhone app that can put you in touch with your local poison center 24 hours a day, 7 days a week just by touching the Poison Help logo.

POISON Help 1-800-222-1222

Cyanide, Smoke Inhalation and Hydroxocobalamin

Cyanide exposure is more common than most of us realize. While cyanide is usually thought of as a chemical used in industry or in a laboratory, cyanide is generated when plastics, acrylics and other synthetic material burn. People who experience smoke inhalation from being caught inside a burning building are therefore exposed to not only carbon monoxide, but to cyanide as well. Cyanide may account for as many or more smoke-inhalation-related deaths than carbon monoxide.

Cyanide causes toxicity on a cellular level by binding to certain enzymes and shutting down a cell's ability to use oxygen to produce energy. The cell's inability to use oxygen is not overcome by giving more oxygen, but only by removing the cyanide from the enzymes to which it is bound.

The symptoms of cyanide poisoning can look similar to those of carbon monoxide poisoning. Symptoms in mild to moderate cyanide poisoning include nausea, vomiting, headache, confusion, weakness, dizziness and shortness of breath. Hypertension and tachycardia may precede hypotension and bradycardia. With severe toxicity there can be sudden loss of consciousness, apnea, hypotension, metabolic acidosis, cardiac dysrhythmias, seizure, coma and death. Large cyanide exposures can lead to death within a few minutes.

Cyanide toxicity is treated initially with high flow oxygen and good supportive care. Definitive treatment includes the use of a cyanide-specific antidote. In 2006, hydroxocobalamin was approved as an antidote for known or suspected cyanide poisoning. Hydroxocobalamin binds up cyanide and removes the chemical from the enzymes to which it was bound. For adults, an initial dose of five (5) grams is infused over fifteen minutes. A second five gram dose can be administered depending upon the severity of the exposure and the clinical situation. This antidote appears to be more efficacious and produce beneficial effects more quickly than the older cyanide antidote kit that contained sodium nitrite and sodium thiosulfate. For questions about cyanide poisoning or the use of hydroxocobalamin, call the ISPCC at **800-222-1222**.

Randall E. Crouch, MS, RN, CSPI
Certified Specialist in Poison Information

Post and share this edition of **Poison Hotline** with your colleagues. Send comments or questions to Poison Hotline, 712-234-8775 (fax) or nobletf@ihs.org. To subscribe or unsubscribe from this distribution list, contact the Iowa Poison Center education office at 712-279-3717. Read past issues of **Poison Hotline** at www.iowapoison.org.