

The School Nurses' Prescription

News You Can Use from Your Indiana Poison Center

That Time of Year

November
2014

This month our newsletter will take a slightly different turn. Instead of having more in-depth coverage of one topic, we'll have a brief review of several timely topics that you may encounter during this autumn. Let's get started!

Food-borne illness – Food-borne illnesses are caused by bacteria or toxins in the foods themselves, or by foods that causes toxic effects directly. Symptoms can vary widely but frequently include gastrointestinal upset (nausea, vomiting, abdominal pain and diarrhea) and can onset anywhere from a few hours to a few days after the contaminated food was eaten.

How do you know that it is “food poisoning” vs. the “flu?” Well, often you cannot tell, without extensive testing and cultures of emesis and stools. And often it doesn't make any difference, as far as treatment goes. Usually food-borne illnesses are treated strictly symptomatically with hydration and comfort measures. Concerns warranting medical evaluation would be if the patient had significant dehydration, aggressive GI symptoms, or additional medical conditions. You may be able to tentatively diagnose food-borne illness when there are multiple patients with similar symptoms who all ate at the same event at the same time. Your local board of health can help with investigating and managing such cases.

Quick ways to prevent food-borne illness include: Don't eat any food which should be refrigerated, which has been left at room temperature for 2 hours or longer. Re-heating or cooking food does NOT make it safe (after it has been left out). Be sure not to cross-contaminate between raw meats, fish, poultry and eggs, and fruit and vegetables. Use clean cutting boards, platters, sponges, and other utensils and receptacles to prevent this. And, most importantly, **Wash Your Hands** frequently!!

Carbon Monoxide - Carbon monoxide is a sneaky poison. It is an invisible, odorless, tasteless gas, which is present anywhere there is incomplete combustion of carbon containing fuels (so nearly everywhere something is burning). Carbon monoxide (or CO for short) com-



petes with the oxygen in your body for a chance to bind with the hemoglobin in your blood – and your silly hemoglobin prefers CO and binds it up first! Therefore the body lacks oxygen and quickly becomes ill with nausea, vomiting, a headache, blurry vision, chest pain, shortness of breath and eventual loss of consciousness. Death can quickly follow. If the patient is retrieved from the area while they are still alive, they may live but face severe brain injury. CO is also extremely toxic to the developing fetus, causing fetal death or brain injury, and CO can trigger worsening cardiac symptoms in those with a history of cardiac disease.

CO is frequently mistaken for the “flu” in the wintertime. It is wise to be suspicious for CO in any situation where several members of the same residential group are ill with similar symptoms, especially if symptoms resolve when leaving the residence. Treatment is first to remove the people to the fresh air, and then to place them on high-flow 100% O₂ via a tight-fitting non-rebreather mask as soon as possible. Cardiac and neurological evaluation and monitoring is necessary.

Sources of CO include furnaces, hot water heaters, gas washers, dryers and dishwashers, automobile exhaust systems, kerosene and gasoline generators (may be used after storms to heat/provide electricity to the home), gas or “Coleman®” stoves (may be used inside after storms), and use of paint stripper with methylene chloride (which is absorbed via inhalation and metabolizes in the body to CO). It is essential that once a poisoning with CO is determined, to identify the source of the CO, remove all people from that area, have the source “turned off” and the area well-ventilated, and to keep all people out of the area until the source is fixed and local fire department or gas company says it is OK to return.

Ebola - IPC isn't a primary response center for Ebola Virus Disease (EVD), as it is an infectious disease, not a toxin (poison). However, we are certainly getting calls on the subject, from both the public and healthcare providers. If you have questions about EVD, or you have parents or staff

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How can IPC help you? - Call **1-800-222-1222** and find out!

members who have questions for you, we encourage you to contact the Indiana State Department of Health, which is directing the Ebola response for the state of Indiana.

Their phone numbers are:

For healthcare providers, such as school nurses, with questions, call the:

Health care provider call line at **844-257-0052** to address questions related to Ebola exposure and preparedness. This line is open **Monday-Friday from 8:15 a.m. to 4:45 p.m.** For urgent calls afterhours, please contact the ISDH Duty Officer at 317-233-1325.

Also, the ISDH activated a **call center for the public** at **877-826-0011 (888-561-0044** for the hearing impaired) to address general questions related to Ebola, including guidelines and symptoms, which will be open **Monday-Friday from 8:15 a.m. to 4:45 p.m.** The public call center line will be staffed by ISDH health representatives.

Glow necklaces – Glow sticks and glow jewelry are very popular toys/accessories this time of year. These glowing tubes seem to have an overwhelming attraction for children of all ages – they want to bite them! Every year we get dozens of calls regarding children who have done this. Fortunately the glow liquid is present in only a tiny amount in these products and it takes a large amount to cause any toxicity, so biting a piece of glow stick is not a dangerous exposure. The liquid can make your mouth sting, so we do recommend to have the child spit the liquid out, rinse his or her mouth and brush their teeth, and then have something cold to drink (like Kool-Aid® or iced tea). If local irritation is persistent, then you should follow-up with IPC. The plastic casing is a foreign body, but most children have only a taste of the product and spit out the plastic, so it generally is not a true choking or obstruction hazard.

Street Walking

Caffeine Powder

Caffeine powder is one of the newer versions of OTC stimulant on the market. The idea behind this novel formulation of caffeine is that you can mix the powder with your beverage of choice to give it a little “pop” of caffeine, thus getting the caffeine boost that you want without having to drink a particular liquid to achieve it. The problem with caffeine powder is that the “pop” frequent-

ly turns out to be a massive EXPLOSION of caffeine, which can make the user deathly ill or even be fatal.

Caffeine is available on the internet for \$10-20 for 40-100 grams. The amount of caffeine in an average cup of coffee is 60-100 mg (so, 0.06-0.10 g) of caffeine. A 100 gram container of caffeine powder is the equivalent of 1,000 cups of coffee! An acceptable dose of caffeine, 125 mg, would be equal to 1/8 teaspoon of powder. One label we encountered even recommended a dose of 1/16 teaspoon.

But very few people are set up to measure out 1/8 or 1/16 of a teaspoon at home, and if they do measure that tiny amount out, it looks so miniscule that they rarely “believe” that it is the “real” dose, so they usually take more – thus, even if they aren’t intending to overdose, they often do. And many caffeine powder users deliberately take more than what the label indicates, as they want to stay awake longer, work out harder, or be more alert ... and they think “more is better”!

Too much caffeine causes more than just a bit of “jitters”. The patient may be anxious, nervous, shaky and nauseated at first. Of more concern, they may develop active shaking and then seizures. They may be tachycardic and hypertensive, usually followed by hypotension. Tachydysrhythmias may develop. Nausea, vomiting, electrolyte imbalances and renal dysfunction may follow. Rarely death has been seen. It is especially dangerous to take an overdose of caffeine just prior to a hard physical workout, which users of caffeine powder often do, as it can hypersensitize the heart.

If you have a student or staff member who has taken some caffeine powder, it is likely that they will present because they have become uncomfortably symptomatic. Treatment for caffeine overdose is based upon the patient’s signs and symptoms. Emergency Department monitoring is essential. It is unusual for a patient to present within one hour of the ingestion, when activated charcoal would be effective, so generally gastric decontamination is not an applicable therapy. The patient should be watched on a heart monitor, a 12 lead EKG should be obtained, and IV access should be established.

The School Nurses’ Prescription is an e-newsletter for Indiana school nurses from the Indiana Poison Center. If you have comments, suggestions, or topics you would like to see addressed in future e-newsletters, or if you aren’t on the Indiana School Nurse list-serve and would like to subscribe to this e-newsletter, please contact Gwenn Christianson at gchristi@iuhealth.org