



THE FAMILY PHARMACIST

A QUICK READ FOR YOUR OTC NEED!

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DRUGS AND CHEMICALS THAT CAN HARM IN SMALL AMOUNTS

Each year in the United States the third full week in March is proclaimed National Poison Prevention Week. This year Poison Prevention Week is March 21-27. According to the newspaper, *Southeast Missourian*, it all started in Cape Girardeau, Missouri:

"It all began in 1958 when founding Broadway Prescription Shop owner and pharmacist, Homer George, voiced his concerns about children's safety. Mr. George became concerned that there were not proper antidotes for medicines and chemicals in his pharmacy. He convinced the Cape Girardeau mayor to declare a Poison Prevention Week in Cape Girardeau. He then pushed it to the Governor of Missouri, who proclaimed the first in the nation, statewide Poison Prevention Week. Mr. George didn't stop there. He convinced state legislators to introduce the idea before Congress. Public Law 87-319 authorized the president to designate the third week in March as Poison Prevention Week. President John F. Kennedy signed the law on September 16, 1961. The first National Poison Prevention Week was observed March 18-24, 1962."

In 1962, before the introduction of safety closures on medicine bottles, pediatric poisoning deaths were mostly due to baby aspirin overdoses. Today, poisoning in children involves many different drugs and non-drug substances and some of them can be dangerous, even lethal, in very small amounts.

Fortunately, most ingestions in children don't result in serious poisoning. But there are a handful of drugs and chemicals that everyone should be aware of that can harm or kill a child in small quantities. If you have these drugs or chemicals in your home make sure that they are in safety closures and kept out of sight and reach of curious small children. Grandparents sometime forget to do this because grandchildren may visit infrequently. Any of the substances mentioned below are cause for a call to the poison center (see page 2) or an emergency room visit.

Blood Pressure Medicines. A certain class of blood pressure drugs, known as *alpha-adrenergic blockers*, can dramatically slow the heart, lower blood pressure, and depress the central nervous system and

respiration in children. *Catapres®* or *clonidine* is the most common example. If swallowed, symptoms can occur quickly.

Beta blockers are another class of drugs used for many things, but primarily high blood pressure. Beta blockers are available as numerous brand names and generics. *Toprol® (metoprolol)*, *Coreg® (carvedilol)*, *Corgard® (nadolol)*, and many others, are widely prescribed. Beta blockers will lower a child's heart rate and they can also cause low blood sugar (hypoglycemia).

Calcium channel blockers are another type of medicine used to control blood pressure and angina in adults. If you take *Norvasc® (amlodipine)*, *Calan® (verapamil)*, or *Cardizem® (diltiazem)*, for example, and have them around the house, these drugs can affect the heart, dangerously lower blood pressure, and cause hypoglycemia in a child. Any child suspected of ingesting any of these should be observed in an emergency room.

Antimalarials. Although not common in the average American household, *chloroquine* is a drug approved by the FDA for the treatment of lupus, rheumatoid arthritis, and to prevent and treat malaria when traveling outside the US. Children are extremely sensitive to the effects of chloroquine, which can cause difficulty in breathing, seizures, and heart arrhythmias.

Alkaline Corrosives. These are products that contain lye (*sodium hydroxide*) like household drain cleaners and oven cleaners. One swallow of these products can produce corrosive burns in the mouth, throat, and esophagus. Burning in the mouth and vomiting occur immediately and seizures can happen very quickly.

Opioids. Pain medicines account for 10% of childhood ingestions in the US. And many times the pain reliever is an opioid. *Opioids* cause central nervous system and respiratory depression. Death occurs when breathing stops. Opioids are particularly dangerous because some are long-acting and the effects may not peak for 18 to 24 hours after the ingestion by a child.

Essential Oils. Two ingredients that are still used in externally applied over-the-counter (OTC) products have been a longtime problem in childhood poisoning.

Camphor is found in OTC products (like *Tiger Balm®*) sold as a rub-on pain reliever. Camphor can also be purchased online as a "pure and natural essential oil." For application to the skin, camphor is dissolved in an oil or ointment base. It is very dangerous in small amounts, which can cause seizures in children. *Oil of wintergreen* is another essential oil sometimes listed on labels as *methyl salicylate*. This can be purchased on line for aromatherapy which makes it particularly likely to be found in homes. Swallowing as little as one teaspoonful has caused death in children. Essential oils can also be aspirated (inhaled) into the lungs by children, causing a serious and difficult-to-treat medical emergency.

Iron tablets. Purchased OTC, iron tablets are used to treat iron deficiency. For iron deficiency, most people need 100 to 200 mg/day of elemental iron. Supplements on pharmacy shelves often have 65 mg elemental iron in each dose. Sometimes candy coated and brightly colored, it doesn't take many iron tablets to cause serious poisoning and death in a child.

Nasal sprays and eye drops. Nasal sprays and eye drops can contain *oxymetazoline (Afrin® Original)* and *tetrahydrozoline* (as in *Visine® Red Eye Total Comfort*, and others). These drugs are intended for use in the nose or eyes and are sometimes swallowed by small children. In the same class as some blood pressure medicines taken by mouth, they slow the heart rate, cause nervous system depression, and a sudden drop in blood pressure if swallowed by a child.

Diabetes medicines. One class of drugs for diabetes is called *sulfonylureas* and includes the generics *glipizide*, and *glimepiride*. Ingestion of these drugs by children requires 24 hour observation in an emergency room while monitoring blood glucose every hour or two. Symptoms may be delayed for up to 24 hours.

Toxic alcohols. Three alcohols that can be found around the home are *isopropyl alcohol* (rubbing alcohol), *methanol* (wood alcohol), and *ethylene glycol*

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(found in automobile antifreeze). While not as common as medicines, they are worth mentioning because a couple of swallows of methanol or ethylene glycol in an 18 month old child can cause serious symptoms of poisoning and even death.

Tricyclic antidepressants. This class of antidepressants was among the first antidepressants developed. Newer antidepressants have fewer side-effects and are usually tolerated better by adults. However, tricyclic antidepressants are still around and continue to rank in the top 100 drugs prescribed in the US because they seem to work better for some people. *Amitriptyline*, *imipramine*, and *desipramine*, all prescription drugs, are in this class. These drugs are deadly if ingested by children, causing central nervous depression, life-threatening heart arrhythmias, seizures, and metabolic changes. Suspicion of a child ingesting any amount of these drugs is an immediate emergency room situation.

Pesticides. Chemicals used in and around the home to control vermin and undesirable plants are particularly poisonous. Many times they are available as concentrated liquids and can easily be ingested in poisonous amounts by children swallowing a mouthful. Store them in high cabinets and safety closures are a must. These products should never be transferred to unoriginal containers, especially old food jars and bottles. This is an invitation to drink.

Recommendation

Remember that poisonings in children are *predictable* and *preventable* injuries! If you have any of these medicines or chemicals in your home please make sure they are away from those most vulnerable to poisoning. Children under the age of five are at greatest risk because they still tend to explore by putting things in their mouth. If you have small children in your home, or you are a grandparent, keep the poison control number in your contacts on your phone. **The National Poison Help Line is 800-222-1222.** This number is automatically routed to the poison center in your area anywhere in the US. Pharmacists and nurses are trained to assess your situation and determine the seriousness of any exposure. The staff will be familiar with the health care system in your location and can provide immediate help. If necessary, you will be directed to a local emergency treatment center that can provide appropriate care. The lead agency in Missouri is the Missouri Poison Center located at SSM Cardinal Glennon Children's Hospital in St. Louis. If for any reason the poison control number is unavailable, calling 911 will also provide assistance in getting immediate help.

References on file

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