Episode Title: Poisons, Part 2: Exposure Response

Topic: First Aid and Other Response Measures for Poison Exposures

Episode Summary: Our second episode in the two-part Poison Safety series highlights poison exposure response during National Poison Prevention Week. It focuses on how to react quickly and appropriately when someone is exposed to a poison through swallowing, breathing it in, skin contact, eye contact, or accidental injection. Stories of close calls with carbon monoxide poisoning on farms underscore how dangerous invisible hazards can be in enclosed or poorly ventilated spaces. Tammy Noble of the Iowa Poison Control Center shares practical guidance for responding to poison exposures. The episode also encourages farms to maintain first aid kits stocked for chemical emergencies and to keep the Poison Control number, 1-800-222-1222, readily available.

Expert: Tammy Nobel, Iowa Poison Control Center

Episode Quote:

"We're here 24 hours a day, 7 days a week, even on holidays, even in the middle of the night. There's always a nurse or pharmacist here just waiting for the call."

– Tammy Nobel, Iowa Poison Control Center

Transcript

00:10 E Presnall

Welcome to the *FarmSafe* Podcast brought to you by the Great Plains Center for Agricultural Health. In the blink of an eye, an injury can change your life and your farm forever. During each episode, we share first-hand stories and real-life tips for making safer and healthier decisions while on the farm.

00:33 E Presnall

Thank you for joining us for part two of our poison safety series in recognition of National Poison Prevention Week. Today's focus will be on exposure response, where we will be highlighting the steps that you should take in the event of a poison exposure. Keep in mind that the proper response to an exposure will vary depending on the poison you are exposed to and the route of exposure.

00:59 E Presnall

Today, we will be sharing several stories about close-calls with Carbon Monoxide Poisoning. There have been numerous instances of carbon monoxide, or CO, poisoning while using gasoline-powered tools such as high-pressure washers, concrete cutting saws, power trowels, floor buffers, welders, pumps, compressors, and generators in buildings or semi-enclosed spaces. A more commonly known source of CO is vehicles, including tractors. CO can rapidly accumulate, even in areas that appear to be well ventilated, and build up to dangerous or even fatal concentrations within minutes of use.

01:43 Shared Story, Speaker 1

My husband was pressure washing in the milk house with the doors shut and he started to not feel well and all of a sudden he realized that the gas was coming from the pressure washers, so he was able to get out on time, thankfully.

01:59 Shared Story, Speaker 2

My father was picking corn and in the fall when you were picking corn, it was cold. And so they had these canvas things that fit onto the tractor that would at least break the wind and kind of keep you a little bit warmer when it was cold in the fall when they were harvesting. And my sister, who was just very young at the time, was sitting on the tractor with my dad and he thought she was sleeping. But when they finally got back to the house my mom realized that she wasn't sleeping, she had actually passed out because the fumes of the tractor were coming inside of that canvas wind break. She was passed out, not just sleeping.

02:50 E Presnall

In my conversation with our expert on poison safety, we discuss poisoning that results from a lack of adequate ventilation. CO can rapidly accumulate, even in areas that appear to be well-ventilated, and build up to dangerous or even fatal concentrations within minutes of use. It is not widely known that small gasoline-powered engines and tools present a serious health hazard. They produce high concentrations of CO-a poisonous gas that can cause illness, permanent neurological damage, and death. Because it is colorless, odorless, and nonirritating, CO can overcome exposed persons without warning. Some persons are more susceptible to CO exposures than others. Persons with coronary artery or heart disease are at increased risk of death at lower CO concentrations than healthy persons- for these conditions, the risk of death and hospital admission increases when breathing CO concentrations of 10 ppm. Concentrations of 30 ppm or higher can result in exercise induced angina for healthy persons. At 100 ppm, symptoms of headache, dizziness, and nausea occur, and after 5 hours of this exposure, heart and brain damage can occur. At concentrations of 800 ppm, healthy adults may experience convulsions within 45 minutes, often followed by unconsciousness and death. Awareness of sources of poisons and understanding signs and symptoms of exposure are important to safe responses to these exposures.

04:38 E Presnall

Now we will hear from Tammy Nobel, Education and Outreach Manager at the Iowa Poison Control Center, who joined us last time for part one of our poison safety series. This week, Tammy will offer some recommendations for responding to various poison exposures on the farm.

04:58 T Noble

Sometimes we're using chemicals, you want to make sure you have good ventilation. So, if you're cleaning the bathroom, and you're using a bleach product, the longer you're breathing that in, the more likely you're going to have the irritation from bleach. You want to make sure that you're opening the windows or getting good ventilation. Have a fan going.

T Noble

Forklifts on the farm, making sure that there's some good ventilation so that you're not being overcome by carbon monoxide. And if you have to mix chemicals, it says put this amount in the sprayer and then add this much water. Label it with the exact concentration because if something happens later then you know what was in that container and how much was in it, and that's important for us to know. If you do have to call the poison center with an exposure.

05:51 E Presnall

What steps should you take if you think that you were exposed to a poison, you know, we didn't really go through the symptoms because the symptoms are going to be different depending on what it is that you're exposed to. But if you could give some general advice of knowing when you might have been exposed to a poison and then what you should do from there.

06:14 T Noble

When you think about poisonings that happened by far, majority of poisonings happen because somebody swallows something. They put something in their mouth, whether that's a kid or an adult, oftentimes the first instinct in people is I need to make them throw up or I need to make myself throw up. We do not encourage people to try to make people throw up. That actually can be harmful with certain products. Like if it's an acid where it can burn going down by throwing up, it's going to burn coming back up also or gasoline when you swallow it. Gasoline has a tendency instead of, if you're swallowing it, you hope it goes to your stomach, but sometimes it's so slippery it actually slides into the lungs instead and when you're vomiting, there's that potential, that it can also slide into the lungs. There's many instances where we do not recommend that people throw up. Sometimes they will do that on their own, but we never want somebody to try to make somebody throw up. That's something we did many years ago, but we don't recommend doing that anymore. So, that's a big thing to remember.

T Noble

We do see a lot of eye exposures also because chemicals can get in the eye in many different ways. I would recommend rinsing the eye and in my experience most people do not rinse the eye long enough. Most people will just do a couple of splashes to the eye, for a couple of minutes, but we really recommend rinsing the eye with lukewarm tepid water for a minimum of 15 minutes, and then call

the poison center after that. If you call us first, we're going to tell you rinse your eye for 15 minutes and we'll call you back. It's most important to get that out of your eye as soon as possible to minimize the damage.

T Noble

If you get poisoned on the skin, definitely washing with soap and water is important. If you have it on your clothes, obviously we want you to take those clothes off, they need to be washed. You should not put them back on and wear them again. And remember that farmers, lots of times where leather products, if those get liquid on them, it's going to retain that liquid, so if that if that liquid is a poison, it's going to stay in those leather products. Every time they wear those boots, they're going to have that exposure again to that chemical. Make sure you're being safe about what you're wearing also.

T Noble

Injections on the farm. If you have that happen, the best thing to do is just call poison control right away and make sure you have the exact product name, and sometimes we even ask the ingredients to know what the different vaccine is or what the antibiotics are for that animal. That's important for us to know. Sometimes it's the solution of what it's mixed in is more of a problem than the vaccine or the antibiotics itself, so. And then obviously, if you're breathing something in, whether you're cleaning in the bathroom or you're exposed to sewer gas or carbon monoxide on the farm, you have to stop that exposure, get away and get fresh air, go somewhere else where you're not breathing that poison in. And then, of course, call poison control. There's nurses and pharmacists. That is who answers the call when you call us and we're here 24 hours a day, seven days a week, even on holidays, even in the middle of the night. There's always a nurse or pharmacist here just waiting for the call.

09:58 E Presnall

I don't think you know people necessarily realize that on the other side of the phone is actually an expert. They know exactly what they're talking about.

10:07 T Noble

You're going to get expert advice right away. Don't try Googling it cause you're going to find confusing answers. You're going to get really, really scared and you're going to call us anyway, so just call us right from the get-go and we'll let you know if it's going to be a problem and what to do to take care of it. Nationally in the United States, there is one phone number, so everybody can call the same number and that number will route you to your designated Poison Center. That number is 1800-222-1222. And you can call from wherever you're at, whether you're in the tractor or in the house or on vacation somewhere else. Call that number and you will reach to poison center.

10:55 E Presnall

Chemical safety starts with researching chemicals prior to purchasing to ensure that you are getting the most suitable and least dangerous chemical required to do the job. Take advantage of the Safety Data Sheet (or SDS) that manufacturers and importers are required to supply. These SDSs detail information on the chemical, including: the registered use of the chemical; precautions for use; possible health effects; safety measures for handling; contact numbers for further information; and withholding periods.

E Presnall

The effects of chemical exposure will depend on the type of chemical and the degree of that exposure. For chemical exposure via ingestion, inhalation, or dermal contact, some of the immediate effects may include: headache, nausea, vomiting, diarrhea, pinpoint pupils, dizziness, fine muscle twitching, skin rashes and irritation, or chemical burns.

E Presnall

Remember the first aid for poisoning – if someone has collapsed or stopped breathing: Call 911 or your local emergency number right away. If you get poison in your eyes: Rinse your eyes with running water for at least 15 to 20 minutes. If you get poison on your skin: Take off any clothing that the poison touched and rinse the skin with running water for at least 15 to 20 minutes. It is important to remember that any clothing with chemical contamination should be washed as soon as possible and should be washed separately from any other clothing that was not contaminated. If a poison is inhaled: Get to fresh air right away. If something other than food or

medicine is swallowed: Drink a small amount of milk or water. For every instance of a poisoning, you should call your state's poison control center after you have taken the recommended steps for the type of poisoning.

12:55 E Presnall

For this week's episode on poison safety, I would encourage you to build at least one first aid kit for your farm that includes some supplies needed for treating pesticide exposure. If you already have first aid kits on your farm, then check your kits and ensure that the following pesticide exposure treatment supplies are included: an eyewash bottle; plenty of clean water, at least two one-quart containers; a can of condensed milk, with a can opener, to drink if a poison is ingested; soap; disposable towels; a clean change of clothes; tongue depressors, to stir with or to use for seizures; plastic bandages and tape, to cover contaminated areas; a blanket, for treating shock; and syrup of ipecac, which should only be used if advised the Poison Center or emergency medical personnel.

E Presnall

You should also make a list of emergency phone numbers to include in the kits so they will be readily available if needed. This list should include the numbers of your local emergency response provider (such as 911), your local emergency medical facility, and the Poison Control Center. Again, the number for the Poison Control Center is 1-800-222-1222.

E Presnall

A helpful graphic with a list of these supplies is provided under the resources for this episode. In our next episode, we will be discussing emergency preparedness on the farm, where we will provide you with another resource that will highlight all the first aid supplies that should be included in a farm first aid kit.

14:40 E Presnall

Listen in on the *FarmSafe* podcast to join in on the conversation about keeping safe on the farm.

We want to hear from you. Share your stories about health and safety issues on the farm, about injuries that made you change the way you work, or about the ways you keep yourself and others safe on your farm. Also let us know if there's questions you have or topics that you want to hear about on the air. You can visit our website, at gpcah.org, or email us.

Original music for the *FarmSafe* podcast was written and performed by Ben Schmidt. This work was funded by the Centers for Disease Control and Prevention as part of the National Institute for Occupational Safety and Health's Great Plains Center for Agricultural Health.

Episode Resources

- Recommendations: Carbon Monoxide Poisoning Prevention
- Pesticide Poisoning Symptoms and First Aid, University of Missouri Extension: https://extension.missouri.edu/publications/g1915
- First Aid for Poisoning (8.5x11)
- First Aid for Poisoning Poster (11x17)

Photo


First Aid
POISON HELP
1-800-222-1222
IOWA POISON CONTROL CENTER