

Chemical Safety: Fact Sheet

Chemicals are all around us, but often get a bad rap. Chemicals are defined as any substance that has similar characteristics. Chemicals are used to have an impact on something else, like when soap dissolves grease on your hands. We use chemicals when cleaning our teeth as well as fertilizing our yard.

Chemicals are used on farms to enhance or diminish growth and used for a multitude of reasons. If used correctly and according to directions, chemicals should be safe. The problem comes when they are not used properly. The Environmental Protection Agency (EPA) estimates there are over 10,000 poisonings each year, but just over a quarter of them occur on the job. Most take place in the home where many chemicals exist.

Common Chemicals on the Farm

- Insecticides – to kill insects
- Fertilizers – to enhance plant growth
- Herbicides – to stop plant growth
- Fungicides – to kill fungus
- Fuels – to provide heat or energy
- Solvents – to dissolve substances

Chemical Exposure can take place many ways depending on the chemical and form it comes in

- Swallowed- drank or eaten
- Inhaled – breathed through nose into lungs
- Dermal/External –
- 97% of chemical exposure is through the skin
- Usually through the hands and arms, but other areas especially the genital area are more susceptible to negative impact on the body
- Laundry – Common exposure to children and other family members when washing contaminated clothing
- Eye exposure – splashing liquid chemicals
- Injection – cuts or needles

Symptoms of Chemical Exposure – If exposed to pesticides, the body may react by heightening sensitivity, causing an acute illness, or causing a chronic illness. Your doctor can run a blood enzyme test to determine your cholinesterase level which determines if pesticides have impacted your body negatively.

- Headaches
- Poisoning
- Respiratory illness
- Burns
- Birth defects



Preventing Harm from Farm Chemical

Read the label before using any chemical and follow instructions. Keep the label in case an incident takes place. This label will tell what to do in case of exposure.

Accidental Chemical Exposure Procedures				
<i>Dermal- Skin</i>	<i>Swallowed</i>	<i>Injected</i>	<i>Inhaled - Breathed</i>	<i>Ocular - Eyes</i>
Remove contaminated clothing and put on clean clothes	Wash mouth out with clear water	Retain covers on syringes	Get person to fresh air by tipping head back to keep passages open	Wash eyes out with clear, cool water
Wash affected area with soap and water	The label will tell you if milk should be given	Wear long sleeved and legged clothing to reduce the risk of cuts	Begin artificial respiration if person stops breathing until medical help arrives	
Remove chemical residue from under fingernails	Do not induce vomiting if person is unconscious	When injecting livestock control animal in pens	Protect person's head if convulsions happen	

Seek medical attention and take the label with you to the medical facility.

First Aid Kits – Have these items available when chemicals are used:

- Clean water
- Soap
- Clean towels
- Change of clothing

Chemical Storage

- Store in locked facility
- Store in original containers
- Don't use empty chemical containers for storing other items

Training - If applying farm chemicals, take a class on safely applying chemicals. Check with your state Department of Agriculture for requirements and schedules.

Laundry – Wash chemical laden clothing separately from the family's laundry so the chemicals are spread to other family members.

Dispose of chemical containers according to EPA's recommendations listed on label.

PPE – When applying farm chemicals wear

- Tyvek coveralls or old clothing which can be washed separately or discarded
- Vinyl gloves
- Eye protection or goggles

