Emergency Procedures

Introduction

Pesticide emergencies may arise because of the improper storage, handling or application of pesticides or due to a leak, spill, fire or theft. If an accident happens, it is important that you are familiar with the proper emergency procedures.

First Aid

- Serious exposure to a pesticide may cause blindness, skin burn, internal bleeding, convulsions, paralysis or stop a person's breathing.
- Knowing and using the proper first aid procedures to use when a person is exposed to a pesticide may reduce the of injury or even save a life.
- When a person is exposed to a pesticide, the type of exposure determines the first aid and medical treatment required. To prepare for a medical emergency, one can enroll in an American Red Cross first aid course that includes cardiopulmonary resuscitation (CPR) training.

First Aid

It is important that the person administering first aid not be affected by the same pesticide that the victim has been exposed to. Some basic safety information is presented below.

- The pesticide affecting the victim can also affect the person administering first aid.
- When administering first aid, avoid getting pesticide onto one's skin or inhaling vapors from pesticide.

First Aid

- If the victim has been overcome by toxic fumes, do not enter the affected area without the proper respiratory equipment.
- The speed at which the victim receives medical care often controls the extent of the injury.
- Provide medical personnel with information about the pesticide. Information about the pesticide can be found in the material safety data sheet (MSDS) and pesticide label.

Pesticide on One's Skin or Clothing

The following sequence of steps is recommended for a person suffering from skin exposure to a pesticide (Marer, 2000).

Leave the Contaminated Area. Get the victim away from the source of poisoning whether it is fumes, spilled pesticide or another source. Do this quickly!

Loosen Clothing. Loosen clothing worn by the individual. This makes it easier for the person to breathe and helps to release vapors trapped between the clothing and skin.

Pesticide on One's Skin or Clothing

The following sequence of steps is recommended for a person suffering from skin exposure to a pesticide (Marer, 2000). (continued)

Restore Breathing. If the victim's breathing has stopped, is irregular or labored, perform artificial respiration. Continue until the victim's breathing has improved or medical personnel arrive. If the person has stopped breathing and has no pulse, perform CPR until medical personnel arrive.

Treat for Shock. Individuals injured by inhaling pesticides many times will go into shock. Keep the exposed person calm and lying down. After removing any contaminated clothing, prevent chilling by wrapping the person in a blanket. Do not let the victim drink any alcoholic beverages.

Pesticides on One's Skin or Clothing

The following sequence of steps is recommended for a person suffering from skin exposure to a pesticide (Marer, 2000). (continued)

Watch the Person for Convulsions. Keep watch over the person that has been poisoned by inhaling a pesticide. Should the individual go into convulsions, protect the individual from falls or injury and keep air passages clear by making sure the head is tilted back.

Get Immediate Medical Care. Call an ambulance, 911 or transport the person to the nearest medical facility as quickly as possible.

Swallowed Pesticides

There are two primary dangers when a person swallows a pesticide.

- The first danger is associated with the pesticide's toxicity and the poisoning effect it will have on a person's nervous system or other internal organs.
- The second danger is associated with the physical injury that the swallowed pesticide might cause to the linings of the mouth, throat and lungs.

Swallowed Pesticides

The main decision to make after a person has swallowed a pesticide is whether to induce vomiting. Never induce vomiting if the victim is unconscious or having convulsions.

It is usually best to get rid of a swallowed poison fast but remember the following:

- Corrosive materials, those that are strongly acidic or very alkaline, can seriously burn the delicate linings of the mouth, throat and lungs. *Never induce vomiting if the person has swallowed a corrosive poison.* The person that swallows a corrosive liquid usually complains of severe pain and burning in the mouth and throat.

Swallowed Pesticides

It is usually best to get rid of a swallowed poison fast but remember the following: (continued)

- Petroleum based products are corrosive. Most pesticides that come in liquid formulations are dissolved in petroleum products and thus, are corrosive. The words “emulsifiable concentrate” or “solution” on the pesticide label are strong signals NOT to induce vomiting if the person has swallowed a pesticide concentrate. However, if a dilute form of these pesticides has been swallowed, force the victim to vomit immediately.
- If a corrosive pesticide has been swallowed, dilute the poison as quickly as possible. For acids and alkalis use milk or water. For 1 to 5 year-olds, use 1 to 2 cups; for persons 5 and older, use up to 1 quart. For acids, milk of magnesia may also be used (2 tablespoons in one cup of water).

Swallowed Pesticides

- Usually, the best first aid to administer to a person that has swallowed a pesticide is to dilute the poison immediately. This is usually accomplished by drinking large doses of water or milk according to the directions on the label. Then get the person to a hospital. Never give liquids to a person that is unconscious.

- If one is certain that the person poisoned has not swallowed a corrosive pesticide, induce vomiting.

Swallowed Pesticides

How to Induce Vomiting -

(Renchie, 2009)

1. Give the person large doses of milk or water. This is 1 to 2 cups for persons up to five years old and up to a quart for persons that are older.

2. If the person is alert and breathing normally, give syrup of ipecac followed by one to two glasses of water to induce vomiting.

- For persons 12 years and older: 2 tablespoons ipecac syrup.
- For children under 12 years old: 1 tablespoon ipecac syrup.

Activity hastens the effect of the syrup.

3. Make sure the person is kneeling or lying face down while vomiting. Do not let the victim lie on his or her back because the vomitus could enter the lungs. Collect some vomitus while wearing gloves and give the sample to the doctor. It might be used to test for chemicals.

Swallowed Pesticides

How to Treat for Shock -

(Renchie, 2009)

Poisoning victims sometimes go into shock. If untreated or ignored, the victim will sometimes die from shock even if the poisoning injuries are not fatal. Shock symptoms include: pale, cold and clammy skin; vacant and lackluster eyes with dilated pupils; shallow and irregular breathing, and very weak, rapid and irregular pulse.

1. Keep the victim flat on his back with his legs 1 to 1.5 feet above his head.

2. Keep the victim warm enough to prevent shivering. Do not overheat.

3. Keep the victim quiet and reassure him or her often.

Contents for a First Aid Kit (Renchie, 2009)

- In case of a medical emergency involving a pesticide, a well equipped first aid kit should be kept nearby.
- The fist aid kit should have a tight-fitting cover with a latch, so it won’t come open by accident or allow pesticides to enter.
- Label the first aid kit with a waterproof marker or paint.

Contents for a First Aid Kit (Renchie, 2009)

Pack the following items in the first aid kit.

1. Small bottle of common detergent for washing pesticides off skin.

2. Small package or bag of activated charcoal. When mixed with water and swallowed, this product absorbs pesticides.

3. Syrup of ipecac. This is used for vomiting.

4. Small plastic airway for mouth-to-mouth resuscitation.

Contents for a First Aid Kit (Renchie, 2009)

Pack the following items in the first aid kit. (continued)

5. Thermos or large plastic bottle of clean water (at least one quart).

6. Simple band-aids, gauze bandages and tape.

7. Blanket.

8. Coins for an emergency phone call.

9. Small plastic cup or empty plastic jar with a tight fitting lid. This can be used as a drinking glass to feed activated charcoal or to collect vomitus to take to the doctor.

Activated Charcoal

The information that follows is from the website mayoclinic.org.

Activated charcoal for oral consumption can be found under the following U.S. brand names:

Actidose-Aqua

Charcoal

Diarrest

Di-Gon II

Donnagel

EZ-Char

Kaodene NN

Kaolinpec

Kaopectate

Kaopek

Kerr Insta-Char

Activated Charcoal

The information that follows is from the website mayoclinic.org. (continued)

Activated charcoal is used in the emergency treatment of certain kinds of poisoning. It helps prevent the poison from being absorbed from the stomach into the body. Sometimes, several doses of activated charcoal are needed to treat severe poisoning. Ordinarily, this medicine is not effective and should not be used in poisoning if corrosive agents such as alkalis (lye) and strong acids, iron, boric acid, lithium, petroleum products (e.g., cleaning fluid, coal oil, fuel oil, gasoline, kerosene, paint thinner), or alcohols have been swallowed, since it will not prevent these poisons from being absorbed into the body.

Some activated charcoal products contain sorbitol. Sorbitol is a sweetener. It also works as a laxative, for the elimination of the poison from the body.Products that contain sorbitol should be given only under the direct supervision of a doctor because severe diarrhea and vomiting may result.
Activated charcoal has not been shown to be effective in relieving diarrhea and intestinal gas.
Activated charcoal may be available without a doctor's prescription; however, before using this medicine, call a poison control center, your doctor, or an emergency room for advice.
This product is available in the following dosage forms:
Suspension
Powder for Suspension

(mayoclinic.org)

In the Event of a Poisoning

Contact your Poison Control Center Immediately using the information below.

Get Poison Control Help Online or Call 1-800-222-1222
www.poison.org

Both options are free, expert, and confidential.

Reference

Renchie, D. L. 2009. Texas pesticide applicator general. Texas AgriLife Extension Service Publ. B-5073.