

II. Store Management

Topic 31a

Why Wear
Personal
Protective
Equipment?

FACT SHEET

II. Store Management

Topic 31a: Why Wear Personal Protective Equipment?

It is important to protect yourself when working with agri-inputs, because they can enter the body in several ways.

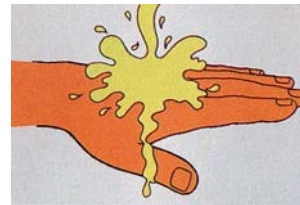
Inputs can **enter the body** in the following ways:

- **Dermal:** Via the skin -when skin and eyes are not protected-, or when pesticides soak through clothing.
- **Inhalation:** by breathing, especially in closed spaces.
- **Ingestion:** by swallowing, when eating, drinking, or smoking with contaminated hands.

The **consequences** of contamination can be very serious.

Contamination of the skin and eyes can cause:

- Itching.
- Burning of the skin, leaving scars.
- Numbness or weakness of arms, legs, feet or hands.
- Some serious cases can lead to infertility and even death.
- Blindness.



Each part of the body has its own absorption rate, which determines how much of the input in contact with the skin will enter the body. The following parts have the following absorption rates:

- Extremely high: scrotum
- Very high: ear canal, forehead, scalp
- High: Abdomen, ball of feet, palm of the hand, forearm
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Contamination by inhalation or ingestion can cause:

- Dizziness
- Vomiting
- Convulsions
- Coma
- In serious cases it can lead to respiratory and cardiac failure resulting in death.



**Do not take any risks:
always protect yourself!**

ADDITIONAL INFORMATION

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Dermal (skin and eyes)

- Most common.
- Pesticides can be splashed into eyes or onto exposed skin.
- Pesticides can soak through clothing.
- Contamination leaves wounds and sores.

Inhalation

- Most rapid.
- Pesticide enters lungs and goes directly into the bloodstream.
- Volatile (evaporates easily).
- Very dangerous.
- Likely to occur in closed spaces or areas where the air is not moving.

Ingestion

- Least likely method of poisoning.
- Very dangerous.
- Likely to happen when eating, drinking, or smoking with contaminated hands.

Symptoms of Poisoning – Initial Symptoms

- Dizziness.
- Discomfort.
- Headache.
- Weakness or fatigue.
- Nausea.
- Vomiting.
- Excessive sweating.
- Shaking.
- Tightness of the chest.

Symptoms of Poisoning – Following or Accompanying Symptoms

- Blurred vision.

- Diarrhea.
- Excessive salivation.
- Watering of the eyes.
- Hyper-excitability.
- Twitching of the muscles of the eyelids.
- Constriction of the pupils.
- Onset of mental confusion.

Symptoms of Poisoning – Late Symptoms

- Fluid in the chest.
- Tremors.
- Convulsions.
- Coma.
- Loss of urinary or bowel control.
- Respiratory and cardiac failure.
- Cancer.
- Neurological effects: Numbness or weakness of arms, legs, feet, or hands; lethargy; memory loss; loss of concentration; and anxiety. Examples of neurological effects are listed here. These are only a small subset of possible neurological symptoms.
- Reproductive toxicity: It can lead to infertility, early pregnancy loss, spontaneous abortion, foetal death, and reductions in fertility and sperm counts in men.
- Developmental toxicity: It can lead to spontaneous abortions and fetal deaths, congenital malformations, and low birth weight.
- Endocrine disruption: Effects on the hormone system.
- Organ disorders: Some chemicals can disrupt the activity of specific organs in the body such as the kidneys, liver, blood, or digestive tract.

INSTRUCTIONS

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Topic 31a: Why Wear Personal Protective Equipment?

Materials needed

- Flip-sheet board with flip-sheets
- Markers (1 black, 5 blue, 5 green, 5 red)

Time needed: 45 minutes

- Preparations:**
- Flip-sheet with the heading *Why wear personal protective equipment?*
 - 5 flip-sheets with a drawing of the human body on each (just draw the outline, not the details)
 - Flip-sheet with the following text:
 - *Very dangerous* (in red)
 - *Slightly dangerous* (in blue)
 - *Less dangerous* (in green)

Set up

- Attention:** Ask if anyone has ever seen someone contaminated with agri-inputs (for example, liquid pesticide contamination on the skin). Refer to a story from the newspaper about a case of contamination, or tell your own story. Emphasize that the consequences were very bad.
- Title:** Tell participants the title while showing the flip-sheet with the title: *Why Wear Personal Protective Equipment?*
- Credibility:** Explain your experience in personal protective equipment (PPE).
- Objectives:** To explain how agri-inputs can enter the body and the possible consequences.
- Benefits:** If you understand the consequences of contamination, you will understand why it is necessary to always protect yourself.

Direction: During this session, we will focus on why we should wear PPE. We will not discuss the types of PPE or how to wear it.

Delivery

Explanation, Demonstration, Exercise, and Guidance:

1. Divide participants into four groups. Give each group one blue, one green, and one red marker, and a flip-sheet with the drawing of the body.
2. Tell participants that agri-inputs can enter the body in various ways. Ask if someone can recall the level of **hazard of pesticides** (this is a reference to Topic 11b on how to read the toxicological band): Red is the most dangerous, then yellow, then blue, then green. Show the flip-sheet with the levels of danger. In the following exercise, red is the most dangerous, blue is slightly dangerous, and green is less dangerous.
3. **Note:** Be aware that the colors on the toxicological band can differ per country.
4. Each group should mark on the drawing how agri-inputs can enter the body. They should indicate the level of danger with the different colors. Let the groups work for a few minutes.
5. Ask each group to paste its flip-sheet on the wall. Paste a flip-sheet with an unmarked drawing of the body in the middle.
6. Start with the **skin**. Tell the participants that we call this **dermal**. Ask if someone knows how dermal contamination can happen. It happens when the skin is not protected or when liquids soak through clothing. Look at how the groups have used colors to mark the different body parts. Ask if anyone knows which parts of the body agri-inputs can enter the quickest (**the absorption rate**). Mention the following absorption rates and put crosses on your empty drawing.
 - a. Extremely high: scrotum. Put a red cross on the scrotum.
 - b. Very high: ear canal, forehead, scalp. Put a blue cross on the ear canal, forehead and scalp.
 - c. High: abdomen, ball of feet, palm of the hand, forearm. Put a green cross on the abdomen, ball of feet, palm of the hand and forearm.
7. Ask participants to name the **consequences** of contamination. It can lead to itching, burning, or irritation of the skin; serious scars; numbness or weakness of arms, legs, feet, or hands; infertility (refer to the scrotum); and even death.
8. Continue with the **eyes**. Look at the colors groups have used, and try to come to a consensus (probably red). Ask how contamination in the eyes can occur. It can happen when you do not wear eye protection; the input can splash into the eyes (liquids) or be blown by the wind (powder). Ask what the **consequences** can be: Itching or irritated eyes, blurred vision, and even blindness.
9. Continue with **ingestion**. Look at the colors groups have used, and try to come to a consensus (red). Ask how ingestion can occur. It can happen when you eat, drink, or smoke with contaminated hands. Ask what the **consequences** can be: Dizziness, vomiting, convulsion, coma, and even death.
10. Continue with **inhalation**. Look at the colors groups have used, and try to come to a consensus (red). Tell participants that this type of contamination is the most rapid. Ask how ingestion can occur. It can happen when you work in a closed

space or do not wear a respirator. Ask what the **consequences** can be: Dizziness, vomiting, convulsion, coma, and even death.

11. Finish the delivery phase by stating that they should not take any risks and always protect themselves.

Finish

Summary: Give a summary using the final drawing. Repeat ways that inputs can enter the body and the highest risks. Mention a few consequences.

Questions: Ask if anyone has a question or comment.

Evaluation: Ask how inputs can enter the body, what the highest risk areas are, and a few consequences.

Next step: In this session, we learned why we should protect ourselves. In the next session, we will learn how.

Distribute the **fact sheet** to all participants.