**Objective: Prevent and treat hazards from chemical skin irritants.**

**Trainer’s Note**

Skin is a valuable body tissue; it must be protected from chemical irritants. For this module:

• Review the information below on chemical irritants and their effects.

• Ask workers to identify chemical irritants in their workplace.

• Review the Personal Protection Equipment (PPE) workers should use.

• Review the important points.

• Have workers take the True/False quiz to check their learning.

**Background**

Different chemicals can irritate the skin. Some chemicals remove fats and oils from the skin. When this occurs, the skin becomes cracked and dry. Irritants can also cause severe burns. Or irritants can cause oils and waxes to plug hair follicles and sweat ducts. That can cause dermatitis and acne.

Types of irritants are shown below. The table also lists examples and effects.

**Dermatitis**

With dermatitis, the skin is inflamed and irritated. There are two types:

* **Primary irritation.** Occurs from contact with a chemical irritant.
* **Sensitization.** Skin becomes more sensitive after exposure. Then, just a small amount can cause a severe allergic reaction.

|  |  |  |  |
| --- | --- | --- | --- |
| **Types and Effects of Chemical Irritants** | | | |
| **Chemical Irritant** | **Examples** | **Found In** | **Effects** |
| Strong Acids | Hydrochloric Acid | Fertilizers Dyes Paint Pigments | Severe burns Brief or prolonged effects |
| Sulfuric Acid | Battery Acid Phosphate Fertilizers |
| Nitric Acid | Fertilizers Metal Working |
| Strong Caustics | Sodium Hydroxide | Soaps, Detergents Cleaning Products Adhesives Paint Remover Disinfectants |
| Potassium Hydroxide | Disinfectants Sterilizing Agents |
| Strong Solvents | Dichloromethane N-methylpyrrolidine | Paint Remover Alcohol | Prolonged dermatitis Prolonged acne |

**Chemical Irritant Safety Practices**

* Identify hazards before working with chemicals.
* Read the Material Safety Data Sheet (MSDS) and labels on the containers.
* Identify emergency procedures in case an accident occurs.
* Avoid contact with strong chemical irritants.
* Use Personal Protection Equipment.
* Goggles
* Gloves
* Sleeves
* Aprons
* Shields
* Footwear
* In case of exposure
* Use showers, eyewash fountains, hand/face spray units, and other emergency equipment.
* Call 911 if appropriate.
* Report accidental exposures to hazardous substance.

**Review These Important Points**

* Be aware of all types of skin irritants.
* Know what substances you use that may be dangerous.
* Follow the correct procedures in an emergency.
* Wear protective equipment when on the job.
* Use emergency equipment and call 911 if appropriate.

**Verbal Quiz**

1. Caustics can remove fats and oils from the skin. **T F**

2. Skin is a valuable body tissue. **T F**

3. It is not necessary to avoid direct contact with primary irritants. **T F**

4. Strong acids can cause severe burns. **T F**

5. An allergic reaction can be the result of exposure to solvents. **T F**

|  |  |
| --- | --- |
| Answer Key | |
| 1 | T |
| 2 | T |
| 3 | F |
| 4 | T |
| 5 | T |