

THE PacificComp TRAINER

BURNS

Did you know that someone is burned in the United States every 25 seconds? Employers are required to recognize the hazards in their workplace as well as train and protect their employees from them.

Here are some interesting facts about burns:

- While most people associate burns with flames, liquids are the largest cause of burns
- Burn injuries come from a variety of sources, including heat, chemicals, and electricity
- While hands are typically the body part affected, burns can also affect the entire body as well as a person's internal organs
- Burns are a result of contact to skin and underlying tissue caused by heat, chemical reaction, or electricity
- Burns damage or destroy skin cells, fat, muscle, bone material, and can be so severe that the human body will not grow back or replicate skin cells
- The severity of the burn including the amount or percentage of human body involved, will affect a person's ability to survive a burn injury

Burns range in severity and are described as follows:

- First degree = superficial to the skin surface
- Second degree = partial skin thickness
- Third degree = which involves the full thickness of the skin

How hot is too hot? The following water temperatures correspond to the time required for third degree burns:

- 155 degrees = 1 second
- 148 degrees = 2 seconds
- 140 degrees = 5 seconds
- 133 degrees = 15 seconds
- 127 degrees = 1 minute
- 124 degrees = 3 minutes
- 120 degrees = 5 minutes
- 100 degrees = safe temperature
- Sources of heat exposures include: hot work surfaces, production operations, hot or extremely cold liquids in production process or through transfer pipes, welding, kitchen

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operations and cooking utensils, the handling and use of liquid nitrogen or propane, etc.

Sources for chemical exposures include: strong corrosive chemicals including acids, bases, oxidizers, solvents, reducing agents and alkylants used in production operations, part of the final product, or a by-product of the production operation. Chemical burns produce no heat but damage the skin cells through contact. Chemicals can contact and damage external skin, and when inhaled, can damage lungs, and when ingested, can damage internal organs.

Electricity is an invisible energy source that can be lethal if enough is absorbed through contact by the human body. Electrical exposures occur within production equipment, power boxes, fuses, electrical lines, cords, etc.

Employers are required to safeguard against hazards of heat, chemicals, and electrical exposures either through safe practices that will eliminate an employee's exposure or by protective devices, equipment, and controls made available to prevent the chance of any injury. Warning signs or labels should identify hot or extremely cold surfaces. Formal training with documentation is also a required element of any safety program to identify and train employees on the exposures within their work areas.

To reduce the chance of burn injuries in the workplace, employers must:

- Recognize the exposures for heat, chemicals, and electricity and either eliminate the hazard OR establish safe practices, procedures, and controls to safeguard employees
- Train employees for the exposures and the proper procedures needed for protection from injury with documentation
- Enforce safe practices, protective personal equipment (PPE), and company policies

IS YOUR WORKPLACE SAFEGUARDED AGAINST EXPOSURE FOR BURN INJURIES?