Responding to Chemical Burns

Do you know what to do if you or a co-worker are blinded or severely bumed by a chemical splash? The best action is quick action—and for that you need to know what to do and where to go when an accident occurs.

WARNING
Contact lenses can trap chemicals in the eye and should only be worn with permission from your supervisor. Always wear chemical goggles.

Know Your Chemicals

The following chemical groups commonly used in industry and in the home cause chemical burns: reducing agents such as sodium, potassium and lithium, used in metal cleansers and soldering processes; strong acids such as sulfuric, muriatic, tannic and hydrofluoric acid; bleaching agents; and strong bases such as lye.

What Are Chemical "Burns"?

Chemical burns are different from heat burns in two ways. They usually produce no heat, though the victim may feel a burning sensation. And they go on burning until every bit of the chemical is removed. This is because the chemical reacts with body tissue to cause the burn. The longer the chemical remains on the body, the deeper the burn. Therefore, treating a chemical burn is a race with time—and the race leads to the shower or nearest available water source.

Water—and Lots of It

Your workplace is equipped with emergency showers and eyewash stations. When you are dealing with a chemical burn, your top priority is to get under running water as fast as possible and stay there for at least 20 minutes. Clothing contaminated with the caustic chemical should be removed after you're in the shower. Since a burn victim may panic or be in extreme pain, you must know the quickest route to the shower like the back of your hand. You should be able to get there in 15 seconds or less, even if you're not thinking too clearly. If no shower is available, use tap water or a garden hose; but remember that these water sources may not provide the best water pressure and should not be relied on if a shower is available.

Eyes Need Special Treatment

If a chemical splashes into your eyes, you certainly will not be able to see where you are going—an added incentive for learning the route to the eyewash station now. Some companies have special drills in which employees are required to find the eyewash station blindfolded; other companies use a buddy system for ensuring that injured employees get the help they need. The eyewash station is designed to provide low-pressure water to the eyes. If you must use water from other sources, avoid spraying the water directly on the eye; the pressure can cause damage. The victim's head should be sideways, with the affected eye below, *so* that chemicals won't wash into the other eye. A helper should pour water over the bridge of the nose, letting it flow over the eye. If you're wearing contact lenses, remove them and let water flow for 20 minutes or more.

First Aid

Once the burn has been thoroughly flushed and all contaminated clothing removed, cover the burns (including affected eyes) with dry, sterile dressings and get medical attention immediately. Do not use neutralizing solutions or ointments on the burn. Watch for shock, an immediate and potentially fatal complication of injury. Symptoms of shock include clammy, pale skin; rapid pulse; irregular breathing; nausea; confusion; and enlarged pupils. To treat shock, keep the victim lying down with the feet and the burned areas raised, if possible. If the victim is vomiting, turn his or her head to the side. The victim should be kept warm but not overheated. Give fluids only if medical help is more than an hour away; then give cool water only.

Prevention

Chemical burns can cause severe pain and suffering, disfigurement, lifelong disability or death. It is common sense to follow safety procedures to prevent burns. Read the label before using any chemical and know the hazards involved. Follow instructions for the chemical's use, storage and disposal, and always wear the appropriate protective clothing. Last, but not least, learn how to react quickly to a chemical emergency. Your quick action could prevent a chemical splash from becoming a chemical burn.