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Heat Related Illnesses

As hot conditions intensify this summer and we continue to perform our regular job duties, the potential for heat related illnesses rises dramatically. Collectively known as heat stress, these illnesses are serious and can even cause death in some cases. Your employees must be vigilant in their efforts to prevent them. This program discusses how hot conditions affect the human body, the symptoms of heat-related ailments and what to do if we start to experience them, how to treat victims of heat stress and most importantly, the precautions that must be taken to avoid problems when working in hot environments.

HOW THE HUMAN BODY RESPONDS TO HOT CONDITIONS

- Our bodies naturally attempt to maintain a constant internal temperature.
- When exposed to hot conditions, excess body heat is expelled when the amount of blood circulating to the skin is increased, allowing cooling to occur. As this heat exits your body, it may cause your skin to appear flushed.
- If the increased blood flow alone cannot cool the body, your sweat glands release perspiration onto the skin. As this perspiration evaporates from the skin, heat is removed, cooling the body and preserving its temperature.
- The body can only maintain its internal temperature if this process functions properly. If the process is interrupted or cannot regulate the temperature effectively for any reason, the symptoms of heat stress will begin to appear.

HEAT RASH

- Heat rash, sometimes called prickly heat, can occur when perspiration stays on the skin so long that the sweat glands become clogged.
- The rash is accompanied by a hot, prickly sensation. It also reduces our tolerance to heat by limiting our ability to sweat.
- To avoid contracting heat rash, take periodic breaks in cool areas to allow sweat to evaporate and your body to cool off.
- To treat heat rash, first allow the affected area to air dry. Then gently clean with a mild, non-deodorant soap.
- Rinse and pat dry thoroughly with a cotton towel. Avoid rubbing or irritating the skin.

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HEAT CRAMPS

- Heat cramps often occur after extended periods of heat exposure combined with very heavy sweating.
- These cramps are painful muscle spasms of the abdomen, arms and calves that result from extreme losses of water, salt and other minerals.
- Water alone will not replenish the salt and minerals needed to prevent heat cramps. When working in hot environments with prolonged, profuse sweating, drink sports drinks or other fluids specially made to provide salt and minerals.

HEAT SYNCOPE

- Heat syncope occurs when blood is directed to the skin to cool the body down and results in the lack of blood flow to the brain. This reduces or halts its function, causing fainting or severe dizziness.
- Heat syncope often occurs when a person must stand for long periods of time or rises suddenly from a sitting or lying position during hot conditions.
- In addition to fainting and dizziness, symptoms of heat syncope can include headache, increased pulse rate, nausea, fatigue, dry mouth and vomiting.
- If you or a co-worker experiences these symptoms, it is imperative that you take action as soon as possible. Heat syncope can lead to the much more serious condition of heat stroke if ignored.
- Loosen the victim's clothing and have him lie down in a cool place and slightly elevate his feet for about 15 minutes. If possible, fan the victim or apply a cool compress to his forehead.
- After the victim regains his composure, have him slowly drink small quantities of water, clear juice or a sports beverage approximately every five minutes.

HEAT EXHAUSTION

- Heat exhaustion is usually brought on by intense physical exertion in hot conditions. In such environments, profuse sweating causes dehydration and loss of salt and other materials.
- Besides intense sweating, victims of heat exhaustion often experience blurred vision and rapid breathing. Their skin may be moist and cool to the touch and they usually have a weak pulse.
- The judgment of a victim of heat exhaustion can also become clouded, causing them to insist they are okay.
- If you discover a co-worker in this condition, medical attention must be sought immediately.
- Get the victim to a cool area. Try to cool the victim by soaking with water or sponging with a cool, damp cloth.

- It is also helpful to create airflow over the victim by fanning until help arrives.
- Keep in mind that heat exhaustion can kill. Unless the victim's internal temperature is brought under control, he or she will die, so you must take immediate action when you or a co-worker exhibit its symptoms.

HEAT STROKE

- The victims of heat stroke have hot, dry skin that may be spotted or red. Heat stroke victims may not appear to be sweating. This is because their internal cooling processes have completely shut down.
- Heat stroke victims have an internal body temperature at near fatal levels and with no working mechanism for cooling, their lives are in immediate danger.
- A heat stroke victim may be delirious or go into convulsions when their body temperatures elevate to levels the body cannot tolerate.
- First aid must be administered immediately to prevent brain damage or death. Have someone call for emergency help, then remove any of the victim's unnecessary clothing and lay him on his side so the skin will be exposed to as much air as possible.
- Then, cool the person's entire body by sponging or spraying with cool water.
- If possible, apply ice packs to the groin, neck and armpits, where large blood vessels lie close to the skin surface. This helps cool the blood, which in turn helps cool the body.
- Create air flow over the victim by fanning the person, which will also help lower their body temperature.

ACCLIMATION

- If your job requires you to work in hot conditions on a regular basis, the first step in preventing heat stress is acclimation. Acclimation is simply having your body adjust to the heat by gradually increasing exposure.
- It generally takes about five to seven days of exposure to become acclimated, but the time may be shorter or longer depending on the individual.
- If you experience any heat stress symptoms or other health problems during the acclimation process, be sure to notify your supervisor.

PRECAUTIONS FOR PREVENTING HEAT-RELATED ILLNESSES

- Before work activity begins, "pre-hydrate" your body by drinking about 16 ounces of fluid.
- Be aware that you can sweat out as much as a quart of water per hour. You should try to drink in as much liquid as you lose in hot conditions.

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- In extreme temperatures, your company will provide drinking stations close to work areas. Cool down areas will also be designated along with a schedule of rest breaks dictated by the conditions.
- No matter how hot it is, always wear the appropriate personal protective equipment for your job. If you don't wear it, it can't protect you.
- Your organization may have its own specific precautions and procedures for preventing heat-related ailments and may include scheduling hot jobs for the cooler parts of the day or reducing the duration of exposure for employees working in hot conditions.
- Many organizations establish a work schedule with mandatory rest periods and water breaks when certain temperature and humidity conditions exist.