



fcu & associates

IN TOUCH

a newsletter for our partners and friends

How Safe Are You At Work?

Working in Hot Environments



- **Heat Stroke**

Heat stroke is the most serious of health problems associated with working in hot environments. It occurs when the body's temperature regulatory system fails and sweating becomes inadequate. The body's only effective means of removing excess heat is compromised with little warning to the victim that a crisis stage has been reached.

- **Heat Exhaustion**

Heat exhaustion includes several clinical disorders having symptoms which may resemble the early symptoms of heat stroke. Heat exhaustion is caused by the loss of large amounts of fluid by sweating, sometimes with excessive loss of salt. A worker suffering from heat exhaustion still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. In more serious cases, the victim may vomit or lose consciousness. The skin is clammy and moist, the complexion is pale or flushed, and the body temperature is normal or only slightly elevated.

- **Heat Cramps**

Heat cramps are painful spasms of the muscles that occur among those who sweat profusely in heat, drink large quantities of water, but do not adequately replace the body's salt loss.

Safety Problems

Working in a hot environment lowers the mental alertness and physical performance of an individual. Increased body temperature and physical discomfort promote irritability, anger, and other emotional states which sometimes cause workers to overlook safety procedures or to divert attention from hazardous tasks.

Health Problems

Excessive exposure to a hot work environment can bring about a variety of heat-induced disorders. These include:

See page 4

In this Issue :

Working in Hot Environments	1
In this Issue	1
From the Editor	1
Warning: Hazards (Operating Heavy Equipment)	2
General Shop Safety	3

Welcome to this issue of In Touch. In this issue we are featuring topics related to Safety at Work. This is dedicated to our clients in the Construction Industry. Photos used in this issue are taken from goggle.com

We hope that you find this issue useful and informative.

Thank you and enjoy reading!

CONGRATULATIONS...

To our newly certified clients!

- **ALCON ENGINEERING CONSTRUCTION CORPORATION**
- **D.L. SEBASTIAN CONSTRUCTION**
- **CAVDEAL CAVITE IDEAL INTERNATIONAL CONSTRUCTION CORPORATION**



(Operating Heavy Equipment)
WARNING: Hazards
 (Operating Heavy Equipment)

How to Protect Yourself

Your employer should:

- Allow only trained and experienced operators to operate heavy equipment.
- Be sure operators and mechanics are trained by qualified persons, experienced with the model of the heavy equipment being used.
- Rent or buy only heavy equipment that has rollover protective structures (ROPS) and seat belts.
- Use only flatbed/lowboy trucks and ramps that are suitable for transporting heavy equipment.



- Ensure that a copy of the operating manual is on all machinery or available to the operator.
- Identify the hazards of overhead and underground power lines and utilities and establish procedures for working around them. Before excavation begins, use the one-call system for utility cutoffs.
- Make sure the manufacturer's safety features work.
- Set a limited access zone and/or a swing radius for each piece of equipment.
- Provide training on equipment hand signals.
- Provide trained spotters or signal persons to alert operators to workers or pedestrians in the blind spots of the equipment - including workers in trenches or manholes.

As a heavy-equipment operator, you should:

- Review operating, safety, and shutdown procedures in the operator's manual before you work with a new piece of equipment.
- Check/inspect the equipment and controls every day before you begin work.
- To prevent slips and falls, keep grease and fluids off the walking/working surfaces and use 3 points of contact when entering and exiting equipment (such as 2 hands and 1 foot).
- To prevent rollovers, do not travel or work parallel to steep grades or embankments or on unstable soil.
- If possible, operate heavy equipment that has a ROPS and fasten the seatbelt. (Don't use a seatbelt if you must use equipment that has no ROPS, because you may have to jump clear during a rollover.)
- If equipment is rolling over or out of control, do not jump if it has a ROPS and seatbelt; you have a better chance of riding it out with a ROPS and your seat belt fastened.
- Always put the transmission in park, shut off the motor, set the brakes, and perform any other needed shutdown procedures/lockout of controls and/or attachments before working on or around the equipment.



See page 5

General Shop Safety



Eye Protection

- Always wear safety glasses, goggles, or shields.
- Grinding, cutting and drilling of metal and wood generate airborne particles



Foot Protection

- To protect feet from wood and metal wastes on shop floors, and from heavy objects that can crush feet and toes, always wear sturdy, closed-toed shoes



Hand Protection

- Wear appropriate gloves to prevent cuts, burns, sprains and repetitive motion injuries.
- Remove watches and jewelry before you start work.
- Don't handle shop chemicals or operate machinery with your bare hands, and don't ignore safety guards on machinery
- Always inspect equipment and machinery for wear, dull cutting blades, or broken parts before you begin work.
- Use the correct tool for the job. If you are lifting and carrying heavy objects, be aware of narrow doorways where your hands can get caught and crushed: when stacking heavy objects, keep your hands on either side, not underneath, to avoid crushing your fingers.



Clothing

- Be aware, especially when working with equipment with moving parts, of hair and clothing that could become trapped in machinery.
- Tie back long hair, remove neckties, and roll up long sleeves.
- Wear a safety apron to protect your body from flying particles of metal or wood.



Housekeeping

- Clean up after yourself.
- Put away materials when you are finished with them.
- Roll up power cords and return them to their appropriate storage places.
- Do not leave machines running unattended.

<http://www.chess.cornell.edu/safety/manual/chptr5/sqpmnt.htm>

From page 1... Working in Hot Environments

Shortly thereafter, the low salt level in the muscles causes painful cramps. The affected muscles may be part of the arms, legs, or abdomen, but tired muscles (those used in performing the work) are usually the ones most susceptible to cramps. Cramps may occur during or after work hours and may be relieved by taking salted liquids by mouth.

- **Fainting**

A worker who is not accustomed to hot environments and who stands erect and immobile in the heat may faint. With enlarged blood vessels in the skin and in the lower part of the body due to the body's attempts to control internal temperature, blood may pool there rather than return to the heart to be pumped to the brain. Upon lying down, the worker should soon recover. By moving around, and thereby preventing blood from pooling, the patient can prevent further fainting.

- **Heat Rash**

Heat rash, also known as prickly heat, is likely to occur in hot, humid environments where sweat is not easily removed from the surface of the skin by evaporation and the skin remains wet most of the time. The sweat ducts become plugged, and a skin rash soon appears. When the rash is extensive or when it is complicated by infection, prickly heat can be very uncomfortable and may reduce a worker's performance. The worker can prevent this condition by resting in a cool place part of each day and by regularly bathing and drying the skin.

- **Transient Heat Fatigue**

Transient heat fatigue refers to the temporary state of discomfort and mental or psychological strain arising from prolonged heat exposure. Workers unaccustomed to the heat are particularly susceptible and can suffer, to varying degrees, a decline in task performance, coordination, alertness, and vigilance. The severity of transient heat fatigue will be lessened by a period of gradual adjustment to the hot environment (heat acclimatization).



What to consider?

- **Number and Duration of Exposures**

The following practices can help to reduce heat stress:

1. Postponement of non-essential tasks,
2. Allow only those workers who have acclimatized to heat to perform the more strenuous tasks, or
3. Provide additional workers to perform the tasks keeping in mind that all workers should have the physical capacity to perform the task and that they should be accustomed to the heat.

- **Thermal Conditions in the Workplace**

A variety of engineering controls can be introduced to minimize exposure to heat and the simplest and least expensive methods of reducing heat and humidity can be accomplished by:

1. Opening windows in hot work areas,
2. Using fans, or
3. Using other methods of creating airflow such as exhaust ventilation or air blowers.

- **Rest Areas**

1. Providing cool rest areas in hot work environments considerably reduces the stress of working in those environments.
2. There is no conclusive information available on the ideal temperature for a rest area.
3. The rest area should be as close to the workplace as possible. Individual work periods should not be lengthened in favor of prolonged rest periods.
4. Shorter but frequent work-rest cycles are the greatest benefit to the worker.

See page 5

FCU and Associates welcomes its new clients...



- **Philworks Construction and Supply**
- **Swedish Match Philippines, Inc.**
- **Blue Cross Insurance, Incorporated**
 - **R.D. Interior Jr. Construction**

From page 4... What to consider?

• Drinking Water

1. It is essential that water intake during the workday be about equal to the amount of sweat produced.
2. Most workers exposed to hot conditions drink fewer fluids than needed because of an insufficient thirst drive.
3. There is no optimum temperature of drinking water, but most people tend not to drink warm or very cold fluids as readily as they will cool ones.
4. Whatever the temperature of the water, it must be palatable and readily available to the worker.
5. Individual drinking cups should be provided--never use a common drinking cup.

• Protective Clothing

1. Clothing inhibits the transfer of heat between the body and the surrounding environment.
2. Therefore, in hot jobs where the air temperature is lower than skin temperature, wearing clothing reduces the body's ability to lose heat into the air.
3. When air temperature is higher than skin temperature, clothing helps to prevent the transfer of heat from the air to the body

Source:<http://www.cdc.gov/niosh/hotenvt.html>

From page 2... Warning: Hazards (Operating Heavy Equipment)

How to Protect Others

To protect other workers or pedestrians:

- Do not back up unless you are sure no one is behind you. Use mirrors, where appropriate.
- Do not depend only on backup alarms. They are not always heard on noisy construction sites.
- Use barriers to separate workers on foot, pedestrians, and vehicles from moving equipment, where possible.
- When loading or unloading materials, make sure that only essential workers are in the area and have a spotter/signal person to let you know where they are. No one should be under a suspended load.
- Never allow other workers to ride on equipment.
- Don't speed; be extra careful around other traffic, hills, obstacles, and curves.



Source:<http://www.cdc.gov/eLCOSH/docs/d0600/d000661/d000661.html>

Think ahead before you begin any project: What are the steps necessary to complete it and what are the potential hazards? Consider other people working in your area and let them know if you are doing work that may create a potential safety hazard for them.

FCU and Associates
welcomes its new member in the
family...



JAYLORD L. ALBEOS
Associate

For any comments and suggestions, you may
contact us at:
FCU and Associates
(www.fcuanassociates.com.ph)

Cebu Office:
30 Santa Lucia St.,
Subangdaku, Mandaue City
Tel. No.: (032) 344-7746

Suite 910 West Tower
PSE Building, Ortigas Center
Pasig City, Metro Manila
Tel. No.: (632) 796-5377
(632) 637- 3210

Email: intouch@fcuanassociates.com.ph