



US Army Corps of Engineers  
Mobile District

# Safety Bulletin

Mobile District

Volume 5, Issue 13

## Special points of interest:

- August is Eye Safety Month
- The 23rd is Health Unit Coordinator Day

## Dangerous Lightning!

The weather in June, July, August and September months (especially) in the South is represented by very hot, very humid days and nights and severe, quickly-developing thunderstorms with deadly lightning. There are several changes in the 2003 EM 385-1-1, USACE Safety and Health requirements manual related to "Inclement Weather and Environmental Hazards". Refer to Section 06.J and you'll find the following:

**06.J.01** When there are warnings or indications of impending severe weather (heavy rains, damaging winds, tornadoes, hurricanes, floods,



lightning, etc.), weather conditions shall be monitored and appropriate precautions taken to protect personnel and property from the effects of the severe weather.

The Mobile District has recently had several public injuries and fatalities

related to lightning strikes indicating the need to know what to do when hazardous storms with lightning develop. Develop a plan and know when to use it!

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## Dangerous Hot and Humid Conditions

**06.J.02** Employers shall develop a comprehensive written site-specific heat/cold stress monitoring plan.... The plan shall be incorporated in the employer's APP or project safety and health plan **and shall follow the guidelines of 06.J.04 of this manual.**

**06.J.03** discusses the need/requirement for the availability

of cool drinking water.

**06.J.04** In situations where heat stress may impact worker safety and health, worker acclimatization **and workloads** shall be assessed and work/rest regimens shall be established.

While these requirements are not new, many folks tend to

overlook these hazards. While we may think that we are in shape and used to being outside, there are some precautions that should always be taken into account when work is being performed outside during hot, humid weather conditions (or even inside, if the same conditions exist). Supervisors and workers must be educated about the hazards of working in heat and the

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## Dangerous Hot and Humid Conditions, continued from page 1

benefits of implementing proper controls and practices.

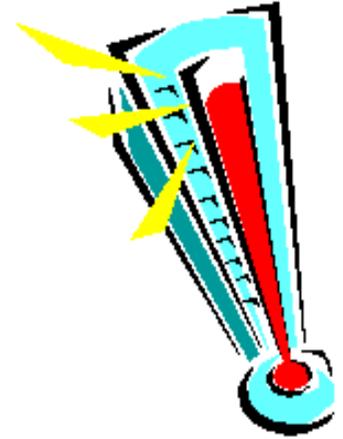
The development of an Activity Hazard Analysis for work activities where these hazards exist will help spotlight this often overlooked hazard. Consider working in early mornings or late evenings instead of during the hottest part of the day and consider the amount and type of PPE that must be worn – PPE can add to our load!

Check out these five tips for ensuring worker safety: (reprinted from *Professional Safety Magazine*, August edition).

- Stay hydrated. Workers should drink at least one cup of cool water every 30 minutes or every 10-15 minutes for extremely hot conditions.
- Know your environment. Conditions with little wind, high humidity and direct sunlight can increase the effect of heat

stress on the body and lower a person's heat tolerance. Workers should be aware of their environment and manage their workload to avoid accidents or unscheduled work stoppages.

- Take a break. OSHA, CDC and the US Department of Health agree that toughing it out to finish a task in hot environments can be dangerous – even deadly. Rest breaks are essential to help workers recover from the heat as breaks allow the heart rate to slow, cooling the body and replacing lost fluids.
- Know the symptoms. If untreated, heat stress can lead to heat stroke and possibly death. Symptoms include headaches; dizziness or light-headedness; weakness; mood changes such as irritability; confusion and disorientation; colored urine; feeling faint or passing out; and pale, clammy skin.
- Stay acclimatized. Acclimatization is the gradual



process where the body adjusts to higher heat levels. Workers in good physical condition will have an easier time adjusting to warmer working conditions. Full adjustment to the heat takes about two weeks, and workers will stay used to the heat as long as they work at least every fourth day in similar conditions. During adjustment periods, it is important to take greater care and follow acclimatization procedures to avoid heat-related injuries.

**...toughing it out to finish a task in hot environments can be dangerous – even deadly.**

## NOAA Weather Radios

The NOAA weather radio (NWR) system is a nationwide network of stations broadcasting continuous weather information direct from the National Weather Service Forecast Office (NWS). These broadcasts include NWS warnings, watches, forecasts and other hazard information 24 hours a day. Working with the Iowa Emergency Alert System, NWR is an “all hazards” radio network, making it a primary source for comprehensive weather and emergency information. NWR broadcasts warning and post event information for all types of hazards, both natural and man-made. Hazards transmitted over the NOAA weather radio may include:

- tornado watch and warnings
- severe thunderstorm watch and warnings

- flash flood watch and warnings
- blizzard warnings
- winter storm warnings
- high wind warnings
- child abduction or Amber alerts
- civil emergency messages
- 911 outages

Keeping a NOAA weather radio in your home and having a portable NWR for when you are outdoors will help keep your family safe from severe weather.



## GFCI Check

When did you last test your ground fault circuit interrupter? If you can't recall, the Electrical Safety Foundation International (ESFI) reminds consumers that it's a good idea to do so at least once a month and after electrical storms.

Ground fault circuit interrupters (GFCIs) are electrical safety devices that trip electrical circuits when they detect leakage currents. A GFCI can be an electrical receptacle, circuit breaker, or portable device. They are especially useful for cord-connected appliances and equipment are used outdoors or near water.

"Power surges and electrical storms may damage GFCIs, preventing them from working properly," noted Anne Mayberry, ESFI Program Manager. "Regularly testing GFCIs is a good safety practice."

The GFCI test is simple. Plug a nightlight into a GFCI-protected outlet and turn it on. Press the "TEST" button; the light should turn off. Press the "RESET" button; the light

should turn on. If the light does not go out when the "TEST" button is pressed, discontinue use of this circuit and contact a qualified electrician to correct the problem.

Leakage currents occur when an electrical appliance is damaged or the electrical parts are wet and electrical current flows outside of the circuit conductors. If a person becomes part of the path for the leakage current, he or she will be shocked or electrocuted. GFCIs look for very small leakage currents and act quickly to shut off the circuit after detecting them. By interrupting the flow of electricity, GFCIs may prevent serious injury or death.



## Sitting Down on the Job: Ergonomic Tips

Often we hear phrases like "sitting down on the job" or "resting on your laurels" where the implication is that the individual is not performing to expectations. For persons doing work with high energy requirements, sitting for a time provides welcome relief. However, as anyone with a desk job will acknowledge, sitting for extended periods can be "hard work."

One of the best ways to combat the fatigue of sitting is to get up and move around. Unfortunately, this is often easier said than done.

What follows are a few tips you can use to make your seated work a bit more comfortable and hopefully more productive as well.

When we stand, our spine assumes a natural curve referred to as lumbar lordosis. With this neutral curvature, pressure on vertebral disks is evenly distributed and the tension, or pull, on our spinal liga-

ments is minimal.

When we sit, our hamstring muscles pull on and rotate our pelvis, which flattens the lumbar spine. Sitting with a straight spine puts additional pressure on the front of the spinal disks and creates additional strain on ligaments.

When sitting unsupported it's a good idea to tilt the pelvis forward to re-establish a "neutral" lumbar spinal posture. Maintaining this posture requires muscle activity and will be easier to sustain if the individual is involved in regular fitness activities.

The classic upright seated position with perfect 90o torso angles is perfectly acceptable, but rarely used. "Good" posture is important, but even the best seated posture should not be solely utilized.

Sitting with "bad" postures for short periods will allow routinely used muscle groups to relax.

Blood flow patterns will also

change and allow recovery of taxed soft tissues.

However, if you find yourself sitting "badly" for extended periods, it may be a sign that your workstation requires adjustment or different equipment.

The use of properly adjusted chair armrests will reduce the strain placed on shoulder muscles and tendons. Comfort of the forearm will likely not be significantly affected through the use of armrests. Armrests however, especially if not optimally adjusted, can interfere with work which may lead to discomfort.

When meeting with colleagues or speaking on the phone, it's a good idea to "unlock" your chair and lean back. This posture significantly reduces pressure on the vertebrae of the low back and allows spine muscle-tendon units to relax. Many chairs currently on the market offer several adjustment features. However, stud-

ies have shown that many workers do not know how to adjust their chairs. Ask yourself this question: "Do I know what every knob and lever on my chair does?" If the answer is no, you owe it to yourself to find out.

A workstation well-suited to a worker will allow the feet to be placed flat on the floor with legs roughly parallel to the floor. The forearms should be more-or-less parallel to the floor. Footrests may cause workers to constrain their movement; however, where worksurfaces cannot be lowered adequately, footrest use is recommended.

Many seating manufacturers now offer chairs in three sizes. When ordering a chair be sure to select one sized correctly for you.



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## Website Update

# Website Update

Don't forget to check out our new and improved website! New PHA's, new resources, checklists, training material, forms, and more!!

[www.sam.usace.army.mil/so/](http://www.sam.usace.army.mil/so/)

## When Lightning Strikes

**Seek a safe shelter immediately!** If you're unable to find shelter in a building or residence that is equipped with a lightning protection system, LPI suggests the following safety guidelines:

### Indoors

- Stand clear from windows, doors and electrical appliances.
- Unplug appliances well before a storm nears - never during.
- Avoid contact with piping including sinks, baths and faucets.
- Do not use the telephone except for emergencies.

### Outdoors

Look for a shelter equipped with a lightning protection system like those found at golf courses, public parks and pools.

If you're caught outside and unprotected:

- Get in a hard topped car.
- Never use a tree as a shelter.
- Avoid areas that are higher than the surrounding landscape.
- Keep away from metal objects including bikes, golf carts, fencing, machinery, etc.



- Avoid standing near tall objects.
- Immediately get out and away from pools, lakes, and other bodies of water.
- Spread out - don't stand in a crowd of people.
- If you feel a tingling sensation or your hair stands on end, lightning may be about to strike! Immedi-

ately crouch down and cover your ears. Do not lie down or place your hands on the ground.

Victims of lightning shock should be administered CPR if necessary, and seek medical attention immediately.