



RIP & SHARE SAFETY HANDOUT

Prepare for a Safe Summer

As most of us are starting to feel the heat of the summer months, it's important that mine operators and miners understand the impact that heat stress can have on miner safety and health as well as mine productivity.

What is Heat Stress?

Heat stress refers to a variety of physical conditions that occur when the body overheats. It is determined by four environmental factors (air temperature, humidity, air velocity and radiant heat) and physical stress (work activity, fitness, age, weight, medical condition and heat acclimatization). Radiant heat includes direct sunlight, reflected light and heat radiating from surfaces. ■

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NATIONAL STONE, SAND & GRAVEL ASSOCIATION



Natural building blocks for quality of life

Signs and Symptoms

Heat Stress

- There are three increasingly dangerous phases of heat stress:
1. heat cramps: painful cramps resulting from hydration without adequate electrolyte replacement;
 2. heat exhaustion: sweating without adequate fluid replacement, including electrolytes (calcium, potassium and magnesium), leading to exhaustion, nausea, headache, often with clammy skin and a pale or flushed complexion;
 3. heat stroke: failure of the body's ability to regulate core temperature resulting in hot dry skin (bluish, red or mottled), body temperature of 106°F or higher, mental confusion, delirium, loss of consciousness, convulsions or coma. Death can occur without medical treatment.

How Can it be Prevented?

- Educate miners and managers regarding heat stress and its signs and symptoms, the importance of fluid and electrolyte replacement.
 - Require supervisors to check on their miners during the shift to ensure they do not become heat stressed.
 - Acclimatize miners to work in heat by gradually increasing their workload, and watch for signs of heat stress.
 - Allow for adequate rest periods during work so miners can hydrate and cool off.
 - Schedule the hardest/heaviest work for the coolest part of the day.
 - Provide adequate cool water and/or electrolyte drinks for hydration.
 - Implement engineering controls such as air conditioning, heat shields, cooling fans, personal cooling devices and evaporative cooling systems, where appropriate.
- More information about heat stress is available from NIOSH, MSHA, your health and safety professional and your medical care provider. Remember, at a minimum, heat stress can make most people less productive, but it can also be life threatening. Take it seriously!