



भारत सरकार
Government of India
श्रम एवं रोजगार मंत्रालय
Ministry of Labour & Employment
खान सुरक्षा महाविदेशालय
Directorate General of Mines Safety



No. DGMS (Tech) Circular (MAMID)/ 01

Dhanbad, dated : 06/05/2015

To

The Owner, Agent and Manager of all Mines

Subject : Accidents/incidences due to exposure to high atmospheric temperature.

Sir,

During peak summer every year, many incidences of mine-workers getting exposed to high atmospheric temperature get reported. Some such cases had turned into fatalities. Opencast mines during summer are most vulnerable in this regard. In some cases, persons got affected due to heat in underground mines also, where ventilation was inadequate. Inquiries revealed that in most of the cases "Heat Stroke" was the major contributory cause. Heat stroke generally occurs when the body stops adjusting to the hot temperature by sweating, and can't keep up with the heat. It is characterized by hot, dry, red skin that is warm or hot to touch and immediate medical attention is needed in such cases. The other heat related disorders could be,

Heat Exhaustion

Heat exhaustion is caused by loss of large amounts of fluid from the body. A worker with heat exhaustion continues to sweat, but their body can't keep up with the heat. The worker may have a headache, fatigue, or flu like symptoms. In most cases the worker needs to rest, cool down, and drink plenty of fluid.

Heat Cramps

Workers may suffer from cramps and painful muscle spasms. This happens when workers drink water to replace the fluids they lose from sweating, but don't replace the body's loss of salt. Drinking fluids with electrolyte replacement ingredients are recommended in such cases.

Heat Syncope

Heat syncope is a fainting episode or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and lack of acclimatization.

Heat Rash

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather.

Neurological Effects

Excessive heat may also lower mental alertness and ability to work. Workers in extreme environments may make more mistakes and may have more injuries.

Contributing Causes

Heat can increase the risk of suffering from other illnesses and health problems.

The following precautions will go a long way in overcoming such incidences/accidents,

1. Slowing down the pace of work should be allowed, especially if the worker feels even slight heat strain,
2. Rest areas should be located as near to the workplace as practicable,
3. Ensure that adequate quantity of cool water and electrolyte supplements are easily available,
4. In really hot conditions, workers should drink at least a glass of water every 15-20 minutes,
5. Different schedules may be negotiated to let workers do the hardest work during the coolest parts of the day,
6. Rest timings may be re-scheduled to avoid work during high/extremely hot temperatures. Where this is not possible, a two-person crew should be assigned to perform work during extremely hot temperatures,
7. Ensure that worker do not enter/work in an atmosphere having no ventilation or inadequate ventilation in underground mines,
8. Workers must be made aware of the dangers from excessive heat and humidity and remedial measures.

Yours faithfully,



(Rahul Guha) 6-5-15

Director General of Mines Safety