



Cripple Creek and Victor Gold Mining Company

High Altitude Induction Training

Cripple Creek & Victor Gold Mining Company

Mining and Processing work at CC&V generally occurs at altitudes from 9,500 to 10,400 feet above sea level.

Report altitude sickness symptoms to your supervisor. The company can arrange prompt medical care through local emergency services.

Altitude Sickness Overviewⁱ

Altitude sickness (mountain sickness) is an illness that ranges from a mild headache and weariness to a life-threatening build-up of fluid in the lungs or brain at high altitudes.

Acute altitude sickness is the mildest and most common form. Because more people are traveling to areas of high elevation for skiing and mountain climbing, acute altitude sickness has become a greater public health concern. Roughly one fourth of Colorado ski area vacationers develop acute altitude sickness.

A more serious form of altitude sickness is high altitude pulmonary edema (HAPE). This illness occurs when fluid builds up within the lungs, a condition that can make breathing extremely difficult. Usually, this happens after the second night spent at a high altitude, but it can happen earlier or later. HAPE often comes on quickly. If left untreated, it can progress to respiratory collapse and ultimately to death. HAPE is the number one cause of death from altitude sickness.

Another severe form of altitude sickness is high altitude cerebral edema (HACE), in which fluid builds up within the brain. As the brain swells with fluid, the person's mental state changes. Loss of coordination, coma, and, finally, death can follow unless the problem is recognized and treated promptly.

Altitude Sickness Causes

Altitude sickness develops when the rate of ascent into higher altitudes outpaces the body's ability to adjust to those altitudes.

Altitude sickness generally develops at elevations higher than 8,000 feet (about 2,400 meters) above sea level and when the rate of ascent exceeds 1,000 feet (300 meters) per day.

The following actions can trigger altitude sickness:

- Ascending too rapidly
- Overexertion within 24 hours of ascent
- Inadequate fluid intake
- Hypothermia
- Consumption of alcohol or other sedatives

One way to avoid altitude sickness is allowing the body to get used to the altitude slowly. Acclimatization is the process by which the body adjusts to high altitudes. The goal of acclimatization is to increase ventilation (breathing) to compensate for lower oxygen content in the air.

Altitude Sickness Symptoms

Acute altitude sickness may be associated with any combination of the following symptoms:

- Fatigue
- Headache
- Dizziness
- Insomnia
- Shortness of breath during exertion
- Nausea
- Decreased appetite
- Swelling of extremities
- Social withdrawal

People with acute altitude sickness often attribute their symptoms to other causes such as an uncomfortable bed, bad food, or a hangover. However, it is important to recognize that these symptoms may indicate a high altitude illness.

High altitude pulmonary edema (HAPE), an advanced form of acute altitude sickness, causes the following progression of symptoms:

- Shortness of breath at rest
- Gurgling respirations
- Wet cough with frothy sputum
- Possible fever
- Respiratory failure

Onset of HAPE can be gradual or sudden. HAPE typically occurs after more than 1 day spent at high altitude.

High altitude cerebral edema (HACE) can begin with confusion.

A person developing HACE begins having trouble keeping up with the group. Next, walking and coordination become impaired. As the brain continues to swell, lethargy and then coma will develop. If left untreated, HACE will ultimately result in death.

When to Seek Medical Care

If symptoms such as headache or shortness of breath do not improve promptly with simple changes, visiting a doctor may be helpful if descent is inconvenient and a doctor is available.

Descend immediately if shortness of breath at rest, mental confusion or lethargy, or loss of muscle coordination develop. Symptoms of most people with acute altitude sickness improve by the time they reach a medical facility, which is usually located at a lower altitude.

Prevention

Altitude sickness is preventable. The body needs time to adjust to high altitude. Physical conditioning has no bearing on this.

For people who do not know the rate at which their bodies adjust to high altitude, the following preventive measures are recommended.

Avoid physical exertion for the first 24 hours. Drink plenty of fluids, and avoid alcoholic beverages.

Consume a high-carbohydrate diet.

If traveling to the mine from an altitude of less than 8,250 feet (2,500 meters), incorporate a layover of 1-2 days at an intermediate altitude.

If mountain climbing or hiking, ascend gradually once past 8,000 feet (2,400 meters) above sea level

Increase the sleeping altitude by no more than 1,000 feet (300 meters) per 24 hours. The mountaineer's rule is "climb high, sleep low." This means that on layover days, a climber can ascend to a higher elevation during the day and return to a lower sleeping elevation at night. This helps to hasten acclimatization.

The doctor may prescribe medication that could provide assistance .

Prevention of high altitude cerebral edema (HACE) is the same as for acute altitude sickness

ⁱ Ref: http://www.emedicinehealth.com/mountain_sickness/article_em.htm

High Altitude Induction Training Confirmation

I confirm that I have received a copy of Cripple Creek & Victor Gold Mining Company's high altitude induction training and will read it. I understand that if symptoms of altitude sickness occur, I will promptly report them to my supervisor.

Printed Name

Date

Signature