

ALTITUDE ILLNESS (MOUNTAIN SICKNESS) CAUSES, PREVENTION AND TREATMENT.

A guide for hikers and mountain climbers



Altitude illness, is the body's inability to adjust to elevations at or above approximately 2,500m/8,000ft above sea level. As we gain altitude pressure decreases and result to oxygen molecules to spread far apart.

Hydration nutrition, get enough time to rest, slow ascent and consider prophylactic use of 125mg acetazolamide (Diamox) up to twice daily.

1. Acute Mountain Sickness (AMS).

AMS is the most common altitude disorder experienced at elevation. Its symptoms most likely result from swelling in and around the base of the brain, and results from reduced oxygen availability due to atmospheric pressure decreases. Severity of AMS varies tremendously, but when severe, it will lead to death if left unmanaged. The onset is often gradual, and it is easy to confuse with other conditions.

Signs and symptoms of AMS.

1. Headache-often worse in early morning, related to slowed breathing or abnormal nocturnal breathing while breathing
2. Dizziness
3. Loss of appetite, nausea and or vomiting.
4. Fatigue/ lethargy.
5. Poor sleep.
6. Altered LOR
7. Poor coordination and/ or ataxia

2. High Altitude Cerebral Edema (HACE)

HACE is a life-threatening altitude illness that may be caused by signs and symptoms of AMS. HACE is associated with neurological dysfunction. Recently Scientist have found out that minor brain swelling occurs in the majority of newcomers to altitude even as low as 1,500m (5000ft). Susceptible individuals have increased cerebral blood flow and increased intracranial Pressure (ICP) that may lead to leakage of blood vessels and swelling of the brain.

Signs and symptoms of HACE

1. Any signs and symptoms associated with AMS and or HAPE
2. Altered LOR, confusion, abnormal behavior
3. Visual disturbances (e.g. hallucinations, blindness, etc)
4. Unresponsiveness death.

3. High Altitude Pulmonary Edema (HAPE)

HAPE is a life-threatening altitude illness that may be caused by signs and symptoms of AMS. HACE is associated with fluid accumulation in the lungs and respiratory distress. Fluids accumulate in the alveoli and membranes of the lungs due to increased blood flow and pressure throughout the lungs. Therefore, breathing function decreases as fluids accumulate. There is a decrease of area of air exchange. HAPE is sometimes miss diagnosed as pneumonia or lung infection.

Signs and symptoms of HAPE

1. Any signs and symptoms associated with AMS and or HACE.
2. Respiration distress/ shortness of breath (first with activity then at rest)
3. Crackles/riles (sound of fluids in lungs)
4. Coughing, progressively more severe, progressively more productive(wet)
5. Blood or pink sputum
6. Weakness
7. Cyanosis
8. Unresponsiveness death

TREATMENT FOR ALTITUDE ILLNESS

The only true treatment is DESCEND. Descend 300-1,000m (1,000-3,000ft) or more for severe AMS, HACE and HAPE.

Among other means of prevention are mentioned below: -

1. Hydration, nutrition and rest for mild AMS. Monitor these individuals closely for worsening s/s. Do not ascend until symptoms improves. Consider starting Damon as prophylactic or treatment.
2. Pressure breathing-deep breathing may help
3. Supplemental oxygen
4. PAC or Gamow bag
5. Consider medication for severe AMS, HAPE and HACE
6. Acetazolamide 250mg every 12 hours
7. Dexamethasone 8mg then 4mg every 6 hours
8. Nifedipine 30mg every 12 hours until symptoms improve.