

ACUTE MOUNTAIN SICKNESS (AMS)

WHAT IS ACUTE MOUNTAIN SICKNESS?

Altitude sickness can occur when you ascend rapidly to a high altitude (above 6400 feet or 2000 meters). It is commonly referred to as *Acute Mountain Sickness* (AMS).

AMS is caused by your body's reaction to lower levels of oxygen at high altitudes.

AMS most typically occurs above altitudes of 8200 feet (2500 meters). If you are traveling to high altitudes, you should be prepared to recognize, prevent and treat AMS.

WHERE AM I AT RISK FOR AMS?

Travelers visiting any mountain range over 10,000 feet (3125 meters), such as the Alps, Andes or Himalayas are at risk for altitude sickness.

Visitors to areas of North America (Denali), East Africa (Kilimanjaro) and the polar regions (Mt. Vinson in Antarctica), are also at risk.

AMS symptoms include:

- > Headache
- > Fatigue
- > Sleep disturbance
- > Nausea
- > Loss of appetite
- > Difficulty breathing with exertion

More severe forms of altitude sickness include:

- > High Altitude Cerebral Edema (HACE)
- > High Altitude Pulmonary Edema (HAPE)

AMS PREVENTION

The best prevention for AMS is a gradual ascent.

1. Start with a 2-4 day stay at 8,000-10,000 feet (2500-3125 meters)

2. Ascend slowly at sleeping altitudes of no more than 1600 feet (500 meters) per day above 10,000 feet (3125 meters)
3. Upon arrival at altitude, avoid strenuous activity until you are acclimatized.
4. Prevent dehydration by maintaining fluid intake
5. Avoid alcohol, cigarettes, or sedatives (such as narcotics), which may worsen AMS
6. Medications (see below)

Unfortunately, there is no evidence that consuming coca tea helps prevent AMS.

Acetazolamide (Diamox) 125mg

Dosage

- > 125mg or 250mg twice a day
- > Begin 24 hours before ascent >10,000 feet (3215 meters)
- > Through 24-48 hours after reaching peak altitude

Side effects

Frequent urination, tingling of the lips, fingers, and/or toes, metallic taste when drinking carbonated beverages

Avoid if allergic to sulfa-based antibiotics. Do not use if experiencing liver, kidney or lung disease.

Dexamethasone (Decadron) 2mg

Dosage

- > 2 mg every 6 hours or 4 mg every 12 hours for a maximum of 12 days
- > Begin 24 hours before ascent >10,000 feet (3125 meters) through 24-48 hours after reaching peak altitude.

Side effects

Nausea, headache, dizziness and abdominal pain.

Avoid if previous reactions to steroids or medical conditions such as peptic ulcer disease.

Severe AMS Symptoms (suggestive of HAPE or HACE described above)

- > Shortness of breath while resting
- > Rapid pulse with rest (over 100-110 beats per minute)

- > Decreased urination
- > Visual changes
- > Severe headache
- > Loss of coordination
- > Mental confusion
- > Severe cough

The above symptoms may represent fluid accumulation in the brain (high altitude cerebral edema – HACE) or lungs (high altitude pulmonary edema – HAPE). In these severe cases, the disease can be fatal if not treated rapidly and requires descent to lower altitudes. Luckily, in most travelers, AMS is mild and usually does not progress to HAPE or HACE.

Severe AMS treatment

- > Descend to lower altitude as soon as possible
- > Consult a medical professional
- > Treatment options: acetazolamide, dexamethasone and/or nifedipine
- > Consider supplemental oxygen and/or a hyperbaric chamber

HAPE Prevention for Susceptible Travelers

- > Nifedipine 30mg SR (sustained release)
- > Dosage: 30mg twice a day for prevention. Start 24 hours prior to ascent.

Side effects

Dizziness, headaches and lower extremity swelling

Avoid nifedipine with a history of low blood pressure, heart or liver disease