



## ACUTE MOUNTAIN SICKNESS MT. KILIMANJARO



### DEFINITION

Acute Mountain Sickness (AMS) or altitude sickness is an effect of high altitude on humans caused by acute exposure to low partial pressure of oxygen at high altitude. The percentage of oxygen in the atmosphere at sea level is about 21%. As altitude increases, the percentage remains the same but the number of oxygen molecules per breath is reduced. At 3600 m (12000 ft) there are roughly 40% fewer oxygen molecules per breath than at sea level so the body must adjust to having less oxygen.

### CAUSES

AMS is caused by the failure of the body to adapt quickly enough to the reduced oxygen at increased altitudes. It commonly occurs above 2400 m (8000 ft), although most people can climb up to 2400 m (8000 ft) without difficulty. Serious symptoms do not usually occur until above 3600 m (12000 ft).

### AVOIDANCE

Ascending slowly is the best way to avoid altitude sickness. Stopping at an intermediate altitude overnight can reduce or eliminate an occurrence of AMS.

Avoiding strenuous activity such as hiking in the first 24 hours at high altitude reduces the symptoms of AMS.

As alcohol and tobacco tend to cause dehydration, avoiding alcohol consumption and tobacco in the first 24-hours at a higher altitude is advisable. Drinking plenty of water will also help in acclimatization.

### MILD AMS SYMPTOMS

The most common mild AMS symptoms acquired at high altitude are:

- Lack of appetite, nausea or vomiting
- Fatigue or weakness
- Dizziness or lightheadedness
- Insomnia
- Pins and needles

- Shortness of breath upon exertion
- Nosebleed
- Persistent rapid pulse
- Drowsiness
- General malaise
- Peripheral edema (swelling of hands, feet and face).
- Diarrhea

Generally, 75% of climbers will experience at least some symptoms of mild AMS.

### SEVERE AMS SYMPTOMS

The severe AMS symptoms are:

- Shortness of breath at rest
- Inability to walk
- Decreasing mental status
- Fluid build-up in the lungs

Severe AMS can progress to high altitude pulmonary edema (HAPE) or high altitude cerebral edema (HACE) which are potentially fatal. Therefore it is essential that you communicate any symptoms of illness immediately to your guide.





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#### PREVENTION AND TREATMENT

The most reliable treatment in these cases is to rest at the same altitude or better, to descend to lower altitudes.

Diamox® is a medication that re-acidifies the blood, balancing the effects of hyperventilation that occurs at altitude in an attempt to breath in more oxygen. Diamox® may be used to treat conditions of moderate to severe metabolic or respiratory alkalosis. Because it takes a while for Diamox® to have an effect, it is advisable to start taking it 24 hours before you go to altitude and continue for at least five days at higher altitude. The recommended dose is between 125 mg and 250 mg twice daily starting one to two days before the trek and continuing for three days

once the highest altitude is reached. Possible side effects include tingling of the lips and finger tips, excessive urination, blurring of vision, allergic reactions and alteration of taste.

Oxygen may be used for mild to moderate AMS symptoms: they will abate in 12-36 hours without the need to descend.

#### GENERAL FITNESS

In order to climb Meru or Kilimanjaro it is necessary to be physically fit. For your own safety, kindly ask your doctor if any preexisting medical conditions or any medications will affect your altitude acclimatization or will cause any other problems during high altitude trekking or climbing.

#### Disclaimer

Dik Dik does not take any responsibility for any negative side effects of high altitude trekking or climbing, including side effects resulting from medications used, and for any injuries sustained from risks inherent in adventure travel such as high altitude, walking safaris and danger from wild animals. Dik Dik has merely included information on AMS and related medicines to inform you and help you prepare for the climb. It is your own responsibility to ensure that you are in proper condition for the climb.

