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ALTITUDE

High altitude is defined as heights between 1,550m and 3,500m above sea level, very high altitude ranges from 3,500m to 5,500 and extreme altitude is 5,500m and above.

What happens at altitude?

As we gain altitude air pressure reduces and oxygen content reduces, this makes it harder for us to take oxygen into our body.

In addition to this barometric pressure is higher at the equator than the poles so ascending Kilimanjaro near the equator will seem easier than Mt Vinson in the Antarctic.

The effect of altitude begins at around 1,500 to 2,000m and altitude sickness can develop with rapid ascent of 2,500m or more. No medical examination can determine a person's aptitude to height, and there is no difference in sex or age.

The first stage of altitude sickness (Acute Mountain Sickness AMS), will often start within the first 12 hours of ascent and mild

There ate 3 types on Altitude Sickness:

Mild Acute Mountain Sickness
Acute Mountain Sickness (AMS)

Severe Acute Mountain Sickness
High Altitude Pulmonary Edema (HAPE)
High Altitude Cerebral Edema (HACE)

Edema = Excessive accumulation of fluid in the body tissues

AMS symptoms include:

Headache

Fatigue and weakness

Loss of Appetite, nausea or vomiting

Dizziness or light headedness

Poor sleep, frequent waking

Periodic breathing (Cheyne Stokes)

It is important to be honest about the feelings being experienced and if Mild AMS is suspected then you should stop ascending, ensure adequate fluid intake, take pain killers for the headache. Most symptoms should settle after a good nights rest.

If symptoms worsen or there is no improvement the DECENT is the only Option.

HAPE symptoms include:

Physical/mental weariness; lack of energy (Lassitude)

Severe headache

Mental dullness

Shaky movements and unsteady gait (Ataxia)

Focal defects – Paralysis – Abnormal sensations including, but not limited to,

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tingling, constriction and discomfort (Paresthesias)

HAPE symptoms include:

Shortness of breath (dyspnoea) at rest

Fatigue, weakness

Breathlessness prevents patient from lying down (orthopnoea).

Cough which may produce blood-tinged sputum
(hemoptysis)

Bluish discolouration of skin and mucus membranes (cyanosis) due to inadequate oxygen in the blood

Crackling sound from lungs (crepitation/ rale)

HAPE / HACE treatment:

Descend without delay minimum1000m & seek medical aid!

Give oxygen/use Pressure Bag

Minimize exertion

Rest – semi reclining position

Preventing AMS

Acclimatization is the best option, above 3,000m you should make a gradual ascent of not more that 300m per day and sleep at a lower altitude to the days climb 'CLIMB HIGH, SLEEP LOW'.

Make sure you drink plenty of water 4-6 litres per day, but don't binge drink 'little and often' is the best strategy, and drink in the evening to allow you body to rehydrate before the next day.

Eat well keep you energy reserves topped up and go for high calorie low glycemic index (GI) foods giving you a slow energy release.

Give yourself the best chance of sleeping with a good sleeping bag and sleeping mat (insulated mats will keep you warmer and more comfortable)

Before you go get a check up at your doctor's, you may want to ask them about the use of DIAMOX (Accetazolomide) which is a drug prescribed to help with AMS, however this not an immediate cure for acute mountain sickness; rather, it speeds up part of the acclimatization process which in turn helps to relieve symptoms.

Typical summit heights for treks

Machu Picchu 2,430m

Mt Toubkal 4,167m

Mont Blanc 4,810m

Everest Base Camp 5,364m

Kilimanjaro 5,895m