Acute Mountain Sickness Notes

These notes apply to our Tours in Ladakh and Tibet only. Acute Mountain Sickness (AMS) is an illness that can affect mountain climbers, hikers, skiers, or travellers at high altitude (typically above 10,000 feet or 3,050 meters).

Causes, Incidence And Risk Factors

AMS is due to a combination of reduced air pressure and lower oxygen levels at higher altitudes.

The faster you climb to a high altitude, the more likely you are to experience AMS. Your symptoms will also depend on the speed of your climb and how hard you push or exert yourself.

You may be more likely to experience AMS if:

- You live at or near sea level
- You have had the illness before

Symptoms of AMS
Symptoms range from mild to life-threatening and can affect the nervous system, lungs, muscles, and heart. In most cases, the symptoms are mild. The symptoms generally associated with mild to moderate AMS include:

- Difficulty sleeping
- Dizziness or light-headedness
- Fatigue
- Headache
- Loss of appetite
- Nausea or vomiting
- Rapid pulse (heart rate)
- Shortness of breath with exertion
- Symptoms generally associated with more severe AMS include:
- Bluish discoloration of the skin (cyanosis)
- Chest tightness or congestion
- Confusion
- Cough
- Coughing up blood
- Decreased consciousness or withdrawal from social interaction
- Gray or pale complexion
- Inability to walk in a straight line, or to walk at all
- Shortness of breath at rest

Treatment

Early diagnosis is important, AMS is easier to treat in the early stages.

The main treatment for all forms of mountain sickness is to climb down (descend) to a lower altitude as rapidly and safely as possible. You should not continue climbing if you develop symptoms. Extra oxygen should be given, if available. People with severe mountain sickness may need to be admitted to a hospital.

Acetazolamide (Diamox) may be given to help improve breathing and reduce mild symptoms. This drug can cause increased urination. Make sure you drink plenty of fluids and avoid alcohol when taking this drug.

If you have fluid in your lungs (pulmonary edema), treatment may include:
Oxygen

- A high blood pressure medicine called nifedipine
- A type of drug called a phosphodiesterase inhibitor (such as sildenafil)
- Lung inhalers beta agonists
- A breathing machine, in severe cases

We will carry a Portable Hyperbaric Chamber (PHC) which allows us to simulate conditions at lower altitudes without actually moving from their location on the mountain.

Expectations (prognosis)

Most cases are mild, and symptoms improve promptly when you climb down the mountain to a lower altitude.

Note that in severe cases AMS may result in death due to lung problems or brain swelling.

In remote locations, emergency evacuation may not be possible, in which case we will use oxygen or the PHC.

If a Rider has any of the following symptoms:

- Severe breathing problems
- Altered level of alertness
- Coughing up blood

We will send them down the mountain immediately to safely to obtain medical aid.

Prevention

Keys to preventing acute mountain sickness include:

- Increase your altitude gradually
- Stop for a day and rest for every 2,000 feet (500 meters) above 10,000 feet (3,050 meters)
- Sleep at a lower altitude when possible.
- Recognizing early symptoms of mountain sickness

We will carry an adequate supply of Diamox if riders suffer the discomfort of AMS. This is usually sufficient to counter the symptoms felt on our Tibet and Ladakh Tour routes.

If you are at risk for anemia, ask your doctor if an iron supplement is right for you. Anemia lowers the amount of oxygen in your blood.

While increasing altitude, it is advisable to:

- Drink plenty of fluids
- Avoid alcohol
- Eat regular meals, high in carbohydrates

You should avoid high altitudes if you have heart or lung disease.