

Altitude sickness

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What is altitude sickness?

Altitude sickness, often called acute mountain sickness (AMS) is a reaction to decreases in pressure at high altitude (usually above 2,500 metres). This means you take in less oxygen, making breathing more difficult. Anyone going to a high altitude must try and get used to it slowly.

AMS can be uncomfortable, but if you recognise symptoms quickly and follow the right advice, it usually does not cause serious problems. Remember - even if you are careful, AMS can still develop.

What are the symptoms?

AMS typically occurs at altitudes between 2,500 to 3,500 metres, but can occasionally happen at lower altitudes. Symptoms appear about 6 to 12 hours after you climb to a high altitude, but can take more than 24 hours to develop.

Symptoms include:

- Headache
- Disturbed sleep
- Loss of appetite and nausea
- Tiredness
- Shortness of breath
- Upset stomach

If you get any of these, do not climb higher. If your symptoms do not improve in about a day, you must go down to a lower altitude (at least 500 -1000 metres lower) to let your body adjust.

About 10% of people with AMS will develop a much more serious altitude illness, called high altitude cerebral oedema (HACE). This uncommon condition is caused by swelling of the brain and can be very dangerous.

Symptoms of HACE include:



- Confusion or irrational behaviour
- Exhaustion
- Loss of muscle co-ordination

Fluid can also build up in your lungs. This is known as high altitude pulmonary oedema (HAPE) and is also very dangerous. HAPE normally develops two to four days after you arrive at an altitude above 2,500 metres. With HAPE you do not always have AMS first.

Symptoms of HAPE include:

- Breathlessness
- Bubbling sounds from your chest
- Cough
- Pink spit

HACE and HAPE can develop very quickly - you need to go down to a lower elevation immediately and get urgent medical aid - you can die if you remain at a high altitude.

What is my risk?

It is difficult to predict who will get AMS and being physically fit does not prevent it. If you had problems before at a high altitude, you may get ill again.

Risk is increased by:

- Climbing very quickly, without gradually getting used to higher altitudes.
- Going to very high elevations (3,000 metres and above).

Research shows that approximately 50% of trekkers in Nepal who walked up to heights of between 4,500 and 5,000 metres developed AMS. In another study, 84% of trekkers who flew directly to about 4,000 metres got AMS.

Can it be treated?

AMS:

Although mild AMS is unpleasant, it usually improves without treatment over several hours or days, as long as you **DO NOT** climb any higher.

- Take over the counter remedies like paracetamol for headaches and anti-sickness drugs like promethazine for nausea and vomiting.
- If your symptoms get worse or do not improve you **MUST** go rapidly (or be taken) to a lower altitude (at least 500 to 1,000 metres).



NEVER leave anyone with AMS on their own - they may suddenly become very ill.

HACE and HAPE are both medical emergencies. If you experience any symptoms: YOU MUST IMMEDIATELY GO DOWN TO A LOW ALTITUDE AND GET URGENT MEDICAL HELP.

How do I reduce my risk?

You can adapt to high altitudes (called acclimatisation) by following this advice:

- Avoid going immediately to altitudes above 3,500 metres from sea level.
- Try not to fly directly to high altitudes.
- Spend a few days getting used to altitude before you go above 3,000 metres.
- Climb gradually and do not sleep more 300 to 500 metres higher than you did the previous night.
- Avoid dehydration.
- Have regular rest days – a full day of complete rest every three days is best.
- If any signs of AMS develop, do not go any higher until you have fully recovered.
- Go down to a lower altitude immediately and get medical help if you get **ANY** severe symptoms.

Photograph courtesy of Dr Vanessa Field

A drug called acetazolamide (Diamox®) can be prescribed to try and prevent AMS. This is not an alternative to acclimatising properly and going up slowly to high altitudes. If your doctor thinks acetazolamide might be appropriate, a trial period is recommended to check you will not experience side effects.

Links:

[NHS Choices: Altitude Sickness](#)