

## Education

### Altitude Sickness

What is altitude sickness?

Altitude sickness is a problem that can occur when you travel to a high altitude, usually over 8,000 feet above sea level. It is also called mountain sickness.

Especially serious types of altitude sickness are:

- high-altitude pulmonary edema (fluid in the lungs)
- high-altitude cerebral edema (swelling of the brain).

How does it occur?

The air at high altitudes contains less oxygen than at sea level. Your body has to work harder to get the oxygen it needs. Over several days at high altitude, your body adjusts to the lower amount of oxygen in the air.

Many people travel from sea level to mountain altitudes of 6,000 to 10,000 feet and start vigorous physical activity right away. Not giving the body time to adjust to the higher elevation can cause altitude sickness.

Certain health factors increase the risk of altitude sickness. These include:

- dehydration
- smoking
- anemia
- chronic lung problems such as asthma or emphysema
- drinking too much alcohol.
- a history of previous altitude sickness.

Many people who are physically fit assume they won't get altitude sickness because they are in good shape. However, being in good shape does not protect against altitude sickness.

Pulmonary or cerebral altitude edema may start out as a milder form of altitude sickness. It may then worsen into one of these more serious problems. But sometimes the edema occurs without the usual symptoms of mountain sickness.

What are the symptoms?

With altitude sickness, you may first feel like you have the flu or a hangover. You may have:

- headache
- tiredness
- loss of appetite
- nausea or vomiting
- dizziness
- trouble sleeping
- trouble breathing during exercise.

If you have pulmonary edema, excess fluid builds up in your lungs. You may become short of breath and start coughing. It may become very hard for you to breathe. You may cough up pink mucous.

When you have high-altitude cerebral edema, your brain swells. You may become confused and disoriented. You may feel weak, lose your sense of balance, or have trouble seeing.

How is it diagnosed?

Your health care provider will ask about your medical history and do a physical exam. If you do not have one of the more serious types of altitude sickness, the results of your exam will probably be normal. If you have fluid in your lungs, your health care provider will hear the sounds it makes. If you have brain swelling, your provider will probably see that you are having problems with your balance, vision, or ability to think clearly.

How is it treated?

The most important treatment for altitude sickness is to return to a lower elevation. For example, if you are at an altitude of 8,000 to 9,000 feet, you may need to travel down to an elevation of 5,000 feet or lower to help your symptoms go away. If this is not possible, you may be given oxygen. Your health care provider may prescribe medicine. Two commonly prescribed medicines are acetazolamide (Diamox) and dexamethasone.

If your symptoms go away at a lower altitude, you may try to return to a higher elevation after your body adjusts. This may take 1 to 3 days.

Both types of high-altitude edema are very serious and can be fatal. If you have had fluid in your lungs or brain swelling, you should not go back to the higher altitude.

How can I prevent altitude sickness?

To prevent altitude sickness:

- Begin your climb into the mountains a little at a time. Spend the first night at an altitude of 5,000 to 6,000 feet if possible.
- Ease into your physical activity by taking it easy the first day or two.
- Drink plenty of fluids such as water or sports drinks.
- Avoid drinking a lot of alcohol, coffee, or tea. They will cause you to urinate more often and become dehydrated.
- Avoid smoking. Smoking makes it more difficult for your body to get oxygen.
- Avoid sleeping pills. They may cause shallow breathing at night, making it more difficult for your body to absorb oxygen while you sleep.

Your health care provider may prescribe medicines, such as acetazolamide and dexamethasone, to help prevent altitude sickness. Take the medicine before you get to a high altitude. Continue to take it while you are at high altitude.

Adult Health Advisor 2006.4; Copyright © 2006 McKesson Corporation and/or one of its subsidiaries. All Rights Reserved. Written by Pierre Rouzier, M.D., for McKesson Provider Technologies. This content is reviewed periodically and is subject to change as new health information becomes available. The information is intended to inform and educate and is not a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional.