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Climbers at risk set to benefit from altitude sickness study

Climbers and skiers who suffer from a potentially deadly condition called altitude sickness could be treated more effectively thanks to new insights into the illness.

Researchers have shown for the first time that the condition, which occurs at heights above 2,500 metres, is in fact two distinct illnesses.

The condition, triggered by falling oxygen levels, causes symptoms such as mild sickness, headaches and also life-threatening problems affecting the heart, lungs and brain.

Scientists say that the findings should inform how doctors diagnose and treat patients.

Using a computer analysis method for grouping genes together, researchers studied patterns of symptoms among people in high altitude areas in Bolivia and Kilimanjaro in Tanzania.

One group experienced disrupted sleep but minimal headache, while another group only reported headaches and little disruption to sleep. Others meanwhile experienced a mixture of symptoms.

For more than 20 years, the condition has been diagnosed using a symptom score called the Lake Louise consensus.

A score for each symptom - including headache, fatigue and sleep disturbance – is added up and a diagnosis reached.

The findings, which have been published in the *PLOS One* journal, will also be presented at an international altitude sickness meeting later this year.

Dr Ken Baillie, of The Roslin Institute at the University of Edinburgh, said: “For more than two decades we have thought of altitude sickness as a single disease. We have now shown that it is at least two separate syndromes that happen to occur in the same people at a similar time. Studying these syndromes in isolation will make it easier to understand the cause of each one, and to test new treatments.”

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