Type 2 Diabetes May Be Linked to Low Oxygen Levels in the Body

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A group of scientists who climbed Mount Everest to do research found new clues that show how some people might develop type 2 diabetes, according to new findings published in the journal PLOS ONE and reported by Medical News Today.

Researchers at the University of Southampton and University College London in the United Kingdom went to the world's highest mountain because they wanted to see how the high altitudes and resulting low oxygen levels in the body—called hypoxia—affected the insulin resistance of cells that leads to type 2 diabetes.

For the study, 24 scientists climbed to a base camp on Everest at an altitude of 5,300 meters (which is not the summit). Next, the researchers measured their glucose control, body weight changes and inflammation biomarkers. Then, while half of the group stayed at the base camp, 12 scientists continued climbing the mountain to its summit at 8,848 meters where they purposely exposed themselves to hypoxia. At weeks six and eight of the journey, both groups once again took measurements.

When the study period ended, researchers found that the high-altitude group ended up with increased markers for insulin resistance. (The scientists linked these changes to the high levels of inflammation and low oxygen levels climbers experienced when they attempted to reach the summit.)

"The results suggest possible interventions to reduce progression towards full-blown diabetes, including measures to reduce oxidative stress and inflammation in the body," said Mike Grocott, PhD, a professor at the University of Southampton and co-founder of the study.

Obesity is also connected to the onset of type 2 diabetes. Click here for more information.

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