

Too little sleep raises risk of type 2 diabetes, suggests study

March 5 2024



Credit: Unsplash/CC0 Public Domain

Adults who sleep only three to five hours a day are at higher risk of developing type 2 diabetes. This is demonstrated in a new study from Uppsala University, published in *JAMA Network Open*. It also shows that

chronic sleep deprivation cannot be compensated by healthy eating alone.

"I generally recommend prioritizing sleep, although I understand it's not always possible, especially as a parent of four teenagers," says Christian Benedict, Associate Professor and sleep researcher at the Department of Pharmaceutical Biosciences at Uppsala University and leading researcher behind the study.

He and a team of researchers have examined the link between type 2 diabetes and sleep deprivation. Type 2 diabetes affects the body's ability to process sugar (glucose), hindering insulin absorption and resulting in high blood sugar levels. A report from 2020 showed that over 462 million people suffer from this disease. Over time, it can cause serious damage, particularly to nerves and [blood vessels](#), and thus represents an escalating public health problem globally.

"Previous research has shown that repeated short daily rest increases the risk of type 2 diabetes, while healthy dietary habits such as regularly eating fruit and vegetables can reduce the risk. However, it has remained unclear whether people who sleep too little can reduce their risk of developing type 2 diabetes by eating healthily," notes Diana Noga, a sleep researcher at the Department of Pharmaceutical Biosciences at Uppsala University.

The researchers therefore used data from one of the largest population databases in the world, the UK Biobank, in which nearly half a million participants from the UK have been genetically mapped and responded to questions on health and lifestyle. They followed the participants for over 10 years and found that a [sleep duration](#) of between three and five hours was linked to a higher risk of developing type 2 diabetes.

In contrast, [healthy eating habits](#) led to a lower risk of developing the

disease, but even people who ate healthily but slept less than six hours a day were still at higher risk of type 2 diabetes.

"Our results are the first to question whether a healthy diet can compensate for lack of sleep in terms of the risk of type 2 [diabetes](#). They should not cause concern, but instead be seen as a reminder that sleep plays an important role in health," explains Benedict.

He also argues that the effects of sleep deprivation vary between individuals, depending on aspects such as genetics and a person's actual need for sleep.

More information: Habitual Short Sleep Duration, Diet, and Development of Type 2 Diabetes in Adults, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2024.1147](https://doi.org/10.1001/jamanetworkopen.2024.1147)

Provided by Uppsala University

Citation: Too little sleep raises risk of type 2 diabetes, suggests study (2024, March 5) retrieved 27 April 2024 from <https://medicalxpress.com/news/2024-03-diabetes.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--