

# Pre-diabetic patients who sleep poorly at much greater risk of developing the condition, according to new research

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Researchers at the University of Hertfordshire have found a significant link between poor sleep and a greater risk of pre-diabetic patients

developing type two diabetes.

Published in the *Journal of Diabetes and Vascular Disease Research*, the study asked 40 patients referred to the NHS-funded Healthier You: National Diabetes Prevention Programme to complete a Pittsburgh Sleep Quality Index questionnaire to evaluate their sleeping patterns, including the quality and duration of their sleep. Somebody who experiences [poor sleep](#) might have difficulty falling asleep, wake up during the night or struggle with their breathing.

All the study's participants had been clinically diagnosed with pre-[diabetes](#), which means their blood sugar is higher than normal and they are already at greater risk of developing the condition. The research team found a significant link between poor sleep and an elevated hemoglobin A1c (HbA1c) level, which indicates high blood sugar. The higher the HbA1c level, the higher the risk of developing diabetes.

Diabetes is one of the most common chronic illnesses in the UK and treatment costs to the NHS amount to £10 billion annually. According to Diabetes UK, 13.6 million people are at increased risk of developing the condition and it is predicted that 1-in-10 people in the UK will have the disease by 2030.

The study was led by Dr. Lindsay Kass, a sports and nutrition scientist from the University of Hertfordshire. She said: "There is now more of an emphasis on preventing disease, particularly long-term chronic conditions like diabetes. Although the link between poor sleep and diabetes is well known, we know less about how poor sleep could trigger the disease in patients who have been clinically diagnosed as pre-diabetic.

"For pre-[diabetic patients](#) a lifestyle change including diet, more [physical activity](#) and weight loss, can reduce the risk of developing type

two diabetes. According to our own research, improving your sleep could also help prevent this serious condition. Therefore, understanding the patient's quality of sleep, alongside existing measures such as [body mass index](#), will allow clinicians to make better informed choices when treating pre-diabetic patients."

**More information:** Lindsay Kass et al, The relationship between the elevation of haemoglobin A1c level, sleep quality and sleep duration in clinically diagnosed pre-diabetic patients in a nationally representative sample, *Diabetes and Vascular Disease Research* (2022). [DOI: 10.1177/14791641211067421](#)

Provided by University of Hertfordshire

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