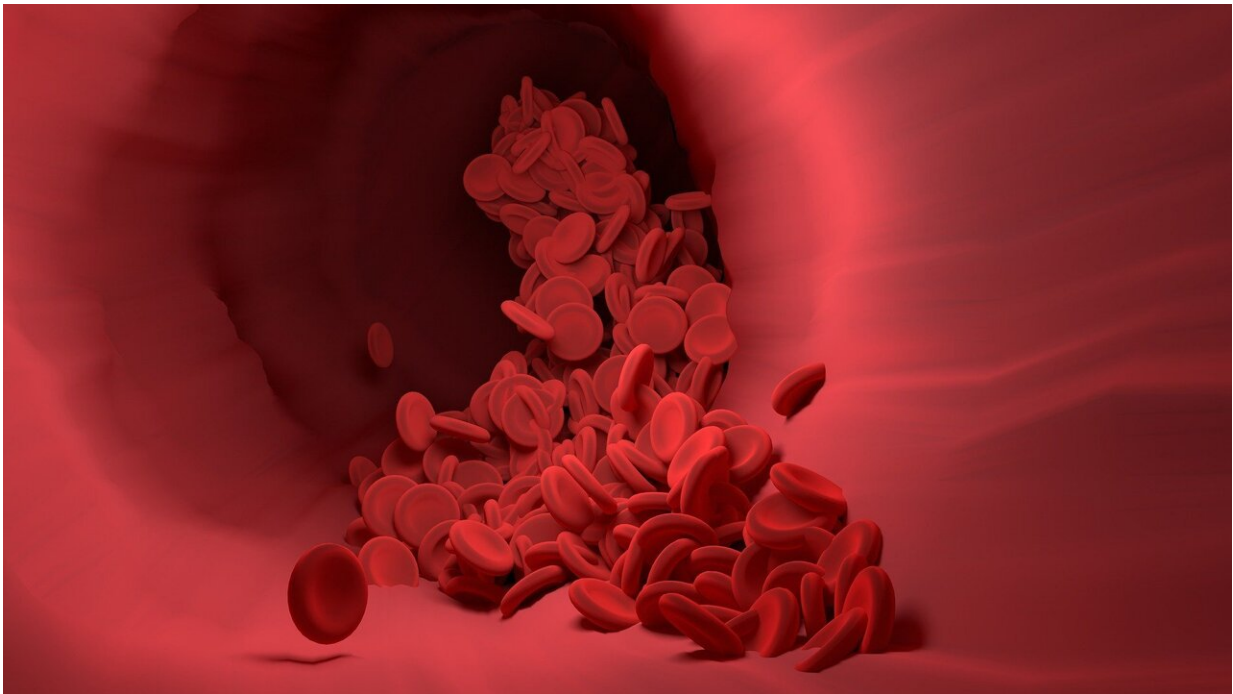


A nighttime whey protein snack increases morning blood sugar level in healthy people

July 10 2020



Credit: CC0 Public Domain

Consuming protein at night increases blood sugar level in the morning for healthy people, according to new research presented this week at The Physiological Society's virtual early career conference called Future Physiology 2020.

Having high [blood sugar levels](#) after eating is linked to [health problems](#),

such as diabetes, heart disease and obesity. Previous research has shown that a snack a few hours before a meal can help control [blood](#) sugar levels, which may partly explain why the first thing we eat each day (i.e., breakfast) tends to increase blood sugars more than other later meals.

This study investigated whether waking up at night to consume some protein might keep blood sugars lower the next morning. Surprisingly, the blood sugar response to breakfast was higher when participants had consumed protein rather than plain water at 4 a.m.

These unexpected findings may be informative for people trying to improve their control of blood sugar levels.

One explanation for the result is that the body does not expect or need much food to be consumed during the night and so the protein itself was turned into sugar. This may result in the body having more carbohydrate already available upon waking such that the energy in the breakfast can less easily be used or stored, so it builds up more in the blood.

The researchers at the University of Bath studied 15 healthy young men and women (eight females and seven males). The participants were awakened at 4 a.m. to drink 300 ml of a water solution, either with or without 63 grams of whey protein.

They then went back to sleep, and at 9 a.m., were provided with a standard amount of porridge for breakfast, with [blood samples](#) collected for two hours afterwards to check the blood glucose response.

The participants then returned to the lab to do the same again a week or so later, but were provided with the other drink at night (4 a.m.) so that the researchers could compare the glucose response to the same [breakfast](#) in the same person and see the effects of the night-time protein.

Eleanor Smith, who presented the work, said, "Future research will look at whether this applies to older and overweight people who tend to have more problems controlling their blood [sugar](#) levels. It would also be interesting to know to what extent our findings are due to eating at an unusual time or the type of [protein](#) consumed."

More information: Smith, Eleanor. Nocturnal whey protein ingestion impairs postprandial glucose tolerance at breakfast. *Future Physiology* (2020).

Provided by The Physiological Society

Citation: A nighttime whey protein snack increases morning blood sugar level in healthy people (2020, July 10) retrieved 26 June 2024 from <https://medicalxpress.com/news/2020-07-nighttime-whey-protein-snack-morning.html>

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.