

It's not just what you eat that matters, it's when

August 4 2015, by Sarah Keenihan, The Lead



The saying goes you shouldn't snack after dinner if you want to lose weight.

Now this idea is supported by growing [scientific evidence](#).

A new study based at the University of Adelaide in South Australia will assess how important the timing of what you eat is for setting up the right biological processes to maintain optimal [metabolism](#) and healthy body weight.

"Studies in mice show that restricting the timing of what is eaten rather than necessarily the content can lead to maintaining a healthy metabolism," said Associate Professor Leonie Heilbronn, who is leading the research.

"But in people there's not yet a lot of evidence. We're doing this study to see whether the timing factor also has an impact on health in humans."

Professor Heilbronn recently published a review of the relevant studies underpinning this growing field of science.

Her current research aims to expand these findings, and in particular to determine whether eating at [night](#) is detrimental on health.

Many of our body's biological functions show differences in activity between night and day: this disparity is called a circadian rhythm, and operates roughly on a 24-hour cycle linked to sunlight.

When the system gets out of whack, our health can suffer – it's why we feel so awful when we're jetlagged.

Like sleep/wake cycles, metabolism may also have a circadian rhythm.

"Our gut, fat cells and liver all function differently during the night compared to the day," explained Professor Heilbronn.

"Maybe you're just not supposed to see nutrients during the night time."

Professor Heilbronn's upcoming study will compare three groups of subjects to investigate how the [timing](#) of eating can change metabolism.

Participants will alter their food intake to take place from 7am-3pm, or 1pm-9pm, or maintain a more regular eating pattern of 3 meals a day.

"We will assess diabetes risk factors through assessing [blood glucose levels](#), as well as cholesterol and triglycerides," said Professor Heilbronn.

"We're currently looking to recruit overweight men as volunteers."

More information: "Metabolic impacts of altering meal frequency and timing – Does when we eat matter?," *Biochimie*, Available online 29 July 2015, ISSN 0300-9084, [dx.doi.org/10.1016/j.biochi.2015.07.025](https://doi.org/10.1016/j.biochi.2015.07.025)

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