

Treatment for problematic snoring can also reduce night-time heartburn and respiratory symptoms

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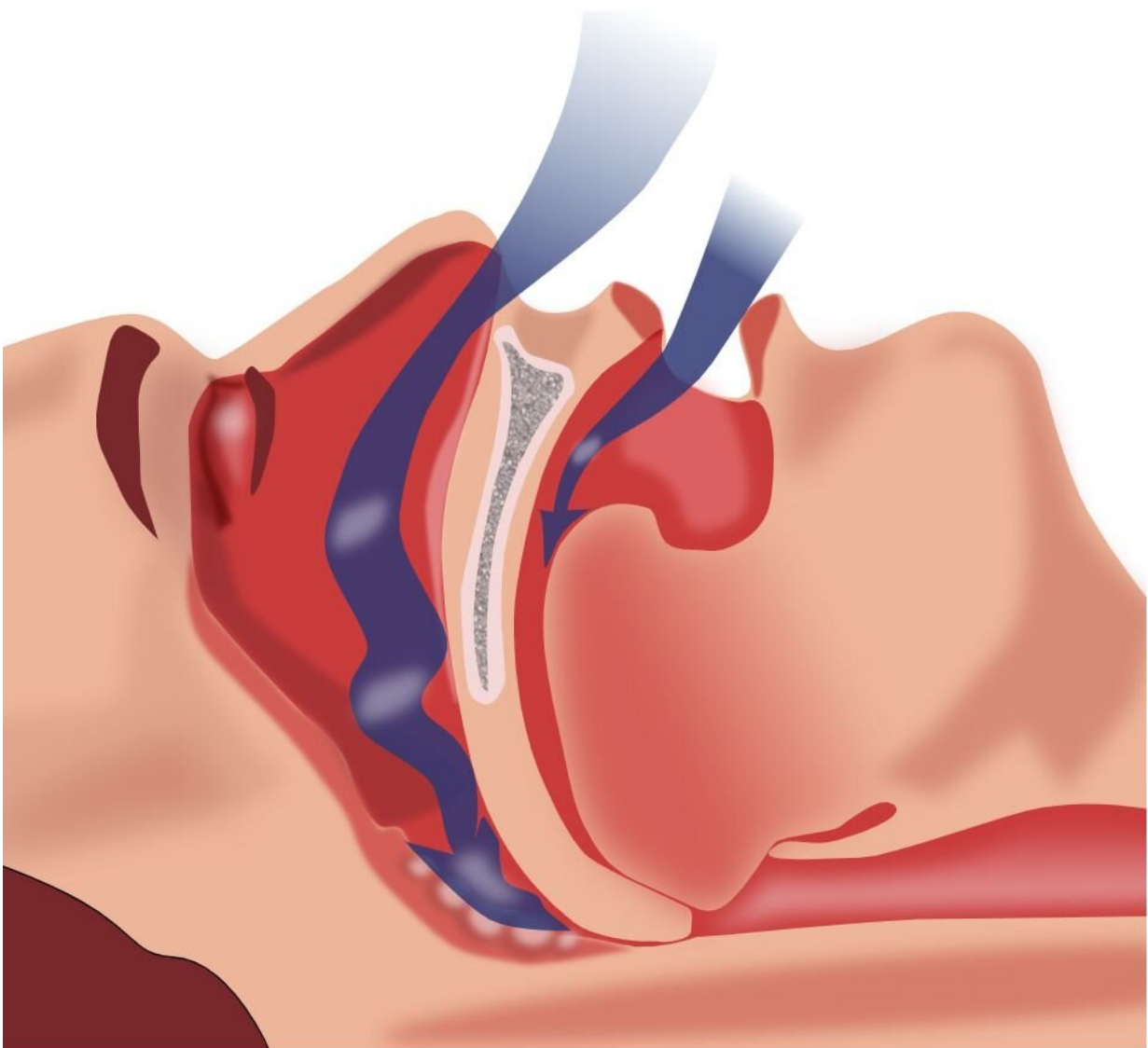


Illustration of obstruction of ventilation. Credit: Habib M'henni / public domain

A treatment for obstructive sleep apnea (OSA) can also reduce night-time heartburn, coughing and wheezing according to a study published in *ERJ Open Research*.

People with OSA often snore loudly, their breathing starts and stops during the night, and they may wake up several times. Not only does this cause tiredness, but it can also increase the risk of high blood pressure, stroke, heart disease and type 2 diabetes.

Continuous positive airway pressure (CPAP) machines work by blowing air through a [face mask](#) throughout the night to prevent the user's airway from closing. CPAP is offered to people with OSA to help them sleep better, but the new research suggests that the treatment may bring extra benefits.

The study was led by Professor Thorarinn Gislason, from the department of sleep at Landspítali—The National University Hospital of Iceland in Reykjavík. He said, "When we experience heartburn or acid reflux, we are feeling stomach acid traveling up toward the throat. People with obstructive sleep apnea are three times more likely to suffer regularly with night-time heartburn. Respiratory symptoms, such as coughing and wheezing, are also more common."

Professor Gislason and his colleagues used data from the Icelandic Sleep Apnea Cohort study, including 822 patients diagnosed with moderate to severe OSA. Before starting CPAP treatment, the patients took part in an overnight sleep study and answered detailed sleep questionnaires, including whether they had heartburn or belching at night.

Two years after beginning CPAP treatment, participants returned for a follow-up visit with new evaluation. Researchers were also able to measure how regularly each person used CPAP via data stored by the CPAP machines.

The study showed that people who were regularly using the CPAP machines were around 42% less likely to suffer with night-time heartburn, compared to those who used the machines a little or not at all. This decrease in reflux among CPAP users seemed to result in more than a four-fold decrease in the risk of productive morning cough and almost a four-fold decrease in the risk of chronic bronchitis.

Regular CPAP users were also less likely to suffer with wheezing, but the data suggests this was a direct result of the treatment, rather than being caused by the reduction in night-time reflux.

Researchers say that because CPAP treatment keeps the upper airway open during sleep, this probably helps the valve between the stomach and the food pipe to keep closed, which could stop acid from leaking out of the stomach.

Professor Gislason said, "Obstructive sleep apnea is a common condition and, although we have good ways to diagnose and treat it, many people do not realize they have this problem."

"I'm 71 years old and I have been a specialist lung doctor all my working life. I have seen many patients with recurrent [respiratory symptoms](#) who have been diagnosed with OSA and recovered when they got CPAP treatment."

"Snoring, frequent waking and day-time tiredness are established signs of OSA. This study suggests that coughing and wheezing that do not get better with the usual treatments and night-time reflux should also be

considered as possible signs of OSA that may require CPAP treatment."

Professor Winfried Randerath, Head of the European Respiratory Society's Assembly on sleep disordered breathing, who was not involved in the research said, "OSA may manifest as loud snoring at night and [daytime sleepiness](#), but research is showing that its effects can be widespread and serious. This study adds to our understanding of the risks of OSA, but it also shows how using CPAP treatment can help to reduce those risks."

"People who think they may have OSA should speak to their doctor. Those who have been diagnosed and offered CPAP treatment should try to use the machine regularly as we are learning more and more about the health benefits that CPAP can bring."

More information: Thorarinn Gislason et al, Positive airway pressure treatment affect respiratory symptoms and gastroesophageal reflux, *ERJ Open Research* (2023). [DOI: 10.1183/23120541.00387-2023](https://doi.org/10.1183/23120541.00387-2023)

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