

Combination of therapies presents a new way to treat sleep apnea

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Professor Danny Eckert, Director at the Adelaide Institute for Sleep Health: Flinders Health and Medical Research Institute Sleep Health Research Program, says his research team has examined shortcomings in



some people's response to the popular continuous positive airway pressure machine (CPAP) and found that adding combinations of therapies gets impressive results in those who are unable to tolerate CPAP.

Oral appliance therapy (OAT) is an effective treatment for many people with obstructive sleep apnea (OSA) but does not fully control OSA in about 50% of cases.

This study aimed to control OSA in individuals who have an incomplete response to using only OAT, with the solution being to use additional targeted therapies informed by each individual's specific causes of OSA known as "endotype" characterization. The research, "Stepwise Add-on and Endotype-informed Targeted Combination Therapy to Treat Obstructive Sleep apnea: A Proof-of-Concept Study," has been published by *Annals of the American Thoracic Society*.

"Rather than everyone first trying CPAP—for whom we know at least 50% will fail—we flipped the model on its head and gave everyone a dental split in the first instance," explains Professor Eckert. "This tends to be much better tolerated than CPAP, though it is less efficacious overall, as it works in about 50% of people."

"However, we found that if the dental device alone was insufficient, we added extra treatments—and this combination of therapies fixed almost all the 50% of the remaining patients.

"We then added alternate and emerging therapies such as oxygen therapy, and novel medications informed by the findings of a detailed sleep study that we did which tells us exactly why each person gets their OSA.

"If this combination approach didn't fully work, we then gave CPAP, but



only as a last resort.

"Using this new approach, we were able to treat almost all participants and only a few required CPAP.

"Essentially, we believe this outlines a whole new way of treating sleep apnea."

More information: Atqiya Aishah et al, Stepwise Add-on and Endotype-informed Targeted Combination Therapy to Treat Obstructive Sleep Apnea: A Proof-of-Concept Study, *Annals of the American Thoracic Society* (2023). DOI: 10.1513/AnnalsATS.202210-892OC

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