



WEST MICHIGAN  
**CPAP Alternatives**  
Customized Sleep Apnea Solutions  
— Dr. Vandervelden —

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616-741-9035

**For PCP's: References to patient hand out titled "Treating sleep apnea benefits your whole body/Untreated sleep apnea harms the whole body"**

*Lowers high blood pressure; Eliminates loud snoring; Wake up feeling more rested; Improves memory and alertness; improves quality of life; More comfortable than a CPAP, most patients strongly prefer a custom oral appliance over CPAP; Improved sleep; Wake up feeling more rested; Less tired during the day (decreases Excessive Day Time Sleepiness); Effective in treating primary snoring; - See below reference with included meta-analysis:*

Clinical Practice Guideline for the Treatment of Obstructive Sleep Apnea and Snoring with Oral Appliance Therapy: An Update for 2015. An American Academy of Sleep Medicine and American Academy of Dental Sleep Medicine Clinical Practice Guideline

Kannan Ramar, MBBS, MD, Leslie C. Dort, DDS, Sheri G. Katz, DDS, Christopher J. Lettieri, MD, Christopher G. Harrod, MS, Sherene M. Thomas, PhD, Ronald D. Chervin, MD

*Men with OSA moderate to severe have 3 times higher chance of stroke\_ See article in NHLBI news release April 7<sup>th</sup> 2010 titled "sleep apnea tied to increased risk of stroke"- attached link below: <https://www.nhlbi.nih.gov/news/2010/sleep-apnea-tied-increased-risk-stroke#:~:text=Researchers%20from%20the%20Sleep%20Heart,or%20with%20mild%20sleep%20apnea.>*

*5x more likely to die from heart disease with untreated sleep apnea. Reference Harvard.health.edu article published February 2013 titled "How Sleep Apnea Affects The Heart".*

*Decreases coronary artery disease; Decreased chance of stroke; Decreases stress on the heart - see below references on increased incidence of MI, coronary artery disease, and cardiovascular disease with OSA. – See below references:*

#### Severe Obstructive Sleep Apnea and Outcomes Following Myocardial Infarction

Chi-Hang Lee, M.D., See-Meng Khoo, MB.BS., Mark Y. Chan, MB.BS., Hwee-Bee Wong, Ph.D., Adrian F. Low, MB.BS., Qian-Hui Phua, B.Sc., A. Mark Richards, M.D., Huay-Cheem Tan, MB.BS., Tiong-Cheng Yeo, MB.BS.

#### Obstructive Sleep Apnea and Cardiovascular Disease: Role of the Metabolic Syndrome and Its Components

Girardin Jean-Louis, Ph.D., Ferdinand Zizi, M.B.A., Luther T. Clark, M.D., Clinton D. Brown, M.D., Samy I. McFarlane, M.D., M.P.H.

*See below reference on long-term cardiovascular outcomes in treated vs untreated OSA:*

Long-term cardiovascular outcomes in men with obstructive sleep apnoea-hypopnoea with or without treatment with continuous positive airway pressure: an observational study

DrJose M Marin M.D., Santiago J Carrizo M.D., Eugenio Vicente M.D., Alvar GN Agusti M.D.

*Fewer headaches-* See reference below showing association of increased incidence of headaches in OSA patients- See below reference:

#### Do Patients With Obstructive Sleep Apnea Wake Up With Headaches?

N. K. Loh, MMED (INT MED), MRCP (UK); D. S. Dinner, MD; N. Foldvary, DO; F. Skobieranda, MD; W. W. Yew, MBBS (Singapore)

Arch Intern Med. 1999;159(15):1765-1768.

*Decreased depression and anxiety; Improves mood-* see article on AASM.org titled “CPAP therapy reduces symptoms of depression in adults with sleep apnea” Also see below reference showing association between OSA and affective mood disorders- See below reference:

#### Association of Obstructive Sleep Apnea With the Risk of Affective Disorders

Jong-Yeup Kim, MD, PhD<sup>1,2</sup>; Inseok Ko, MS<sup>2</sup>; Dong-Kyu Kim, MD, PhD<sup>3,4</sup>

JAMA Otolaryngol Head Neck Surg. 2019;145(11):1020-1026.

*Improves type 2 diabetes- Specifically improves insulin resistance in type 2 diabetes. Note-does not affect HbA1c levels. - See below reference:*

Effects of continuous positive airway pressure treatment on glycaemic control and insulin sensitivity in patients with obstructive sleep apnoea and type 2 diabetes: a meta-analysis

Liang Chen,corresponding author Jian-Hao Pei, and Hong-Mei Chen

*Improves motivation, attention span, mood, and judgment. - See below reference:*

Attention deficit hyperactivity disorder in adults and obstructive sleep apnea

S Naseem 1, B Chaudhary, N Collop

*Less frequent nighttime trips to the bathroom. – See below reference:*

See article in sleepapnea.org “nighttime urination and sleep apnea”. link to article:  
<https://www.sleepapnea.org/learn/sleep-apnea/nighttime-urination-and-sleep-apnea/>

*Improves male sexual function- See below reference:*

Sleep apnea is an independent correlate of erectile and sexual dysfunction

Stephan Budweiser 1, Stefan Enderlein, Rudolf A Jörres, Andre P Hitzl, Wolf F Wieland, Michael Pfeifer, Michael Arzt

*Decreases acid reflux- See below reference:*

See AASM Article Titled “Study Finds that CPAP therapy reduces acid reflux in people with sleep apnea”. Link: <https://aasm.org/study-finds-that-cpap-therapy-reduces-acid-reflux-in-people-with-sleep-apnea/#:~:text=Results%20show%20that%2062%20of,were%20adherent%20to%20CPAP%20therapy.>

*Helps you lose weight- high quality sleep decreases food cravings- see below reference showing correlation with OSA and high calorie food cravings: - See below reference:*

The Association Between Obstructive Sleep Apnea and Dietary Choices among Obese Individuals during Middle to Late Childhood

Dean W. Beebe, Ph.D.,<sup>1,2</sup> Nate Miller,<sup>3</sup> Shelley Kirk, Ph.D., R.D.,<sup>1</sup> Stephen R. Daniels, M.D., Ph.D.,<sup>4</sup> and Raouf Amin, M.D.<sup>1,2</sup>

*Saves health care costs for the health care system and **reduces medical costs** - Recent study showed a \$20,000 savings per patient in health care costs in just the first year after a patient had their sleep apnea treated. patients who treat their sleep apnea require half the amount of doctor office visits per year than patients who do not treat their sleep apnea. Patients who do not treat their sleep apnea spend twice as much on healthcare than patients who treat their sleep apnea*

Older adult US Medicare beneficiaries with untreated obstructive sleep apnea are heavier users of health care than matched control patients

Emerson M Wickwire 1 2, Sarah E Tom 3, Aparna Vadlamani 4, Montserrat Diaz-Abad 2, Liesl M Cooper 5, Abree M Johnson 6, Steven M Scharf 2, Jennifer S Albrecht 4

The medical cost of undiagnosed sleep apnea

V Kapur 1, D K Blough, R E Sandblom, R Hert, J B de Maine, S D Sullivan, B M Psaty

Utilization of healthcare resources in obstructive sleep apnea syndrome: a 5-year follow-up study in men using CPAP

Mohammed Albarrak 1, Katsuhisa Banno, Ahmed Al Sabbagh, Kenneth Delaive, Randy Walld, Jure Manfreda, Meir H Kryger

\*Note, most studies look at treatment of sleep apnea using CPAP therapy. However, studies have found that custom oral appliance is just as effective therapeutically at treating mild to moderate sleep apnea as CPAP when adherence is taken into consideration. Studies have shown similar health benefits and symptom control with custom oral appliance therapy vs CPAP. Therefore, in my opinion, the same benefits that the above studies showed when sleep apnea is treated with CPAP can be expected when sleep apnea is treated with custom oral appliance therapy especially when effectiveness of custom oral appliance therapy is verified with home sleep testing with the patient using their custom oral appliance. At West Michigan CPAP Alternatives, every patient is set up to complete a home sleep study with their custom oral appliance. This home sleep test is interpreted by a board-certified sleep physician to verify effectiveness. Ideally, more studies should be performed looking specifically at treatment with custom oral appliance therapy to confirm the above health benefits.



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