

Untreated Obstructive Sleep Apnea (OSA) has Severe Consequences

OSA severity greatly affects mortality and morbidity. The all-cause mortality risk for patients with untreated severe OSA is nearly four times that for patients without OSA.¹ Untreated severe OSA increases the risk of fatal and non-fatal cardiovascular events by nearly three times or more compared with healthy individuals.²

Modern Tongue Suspension is Highly Effective for Reducing OSA Severity

Literature supporting tongue suspension as a treatment for OSA was first published in 2000. The success rates of tongue suspension have improved over the early experience and so a comprehensive literature review looking at all publications from 2005 and onward found ten published studies for tongue suspension with 280 patients were found.^{3,4,5,6,7,8,9,10,11,12} A summary of results, broken down for tongue base treatment only and for tongue suspension performed with an uvulopalatopharyngoplasty (UPPP):

	N	AHI reduction	Surgical Success ¹³	ESS reduction
Tongue Suspension w/ UPPP	204	65%	73%	6.4
Tongue Suspension	76	48%	61%	3.8

Long-term (studies with follow up of one year or greater) surgical success was 75%. Tongue suspension, performed on a standalone basis or combined with a UPPP consistently achieves strong objective and subjective results for patients, comparable or better than effects seen with more invasive and morbid interventions.

Conclusion

Nearly ten years of evidence consistently demonstrates that tongue suspension with and without a UPPP has high surgical success rates, is very effective at reducing OSA severity, and positively impacts a patient’s quality of life.

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Catalog No.	Description
FG0002	Encore Suspension System (USA)

References

- ¹ Young T, Finn L, Peppard PE, Szklo-Coxe M, Austin D, Nieto FJ, Stubbs R, Hla KM. Sleep disordered breathing and mortality: eighteen-year follow-up of the wisconsin sleep cohort. *SLEEP* 2008;31(8):1071-1078.
- ² Marin JM, Carrizo SJ, Vicente E, Agusti AGN. Long-term cardiovascular outcomes in men with obstructive sleep apnoea-hypopnoea with or without treatment with continuous positive airway pressure: an observational study. *Lancet* 2005; 365: 1046–53.
- ³ Fernández-Julián E, Muñoz N, Achiques MT, García-Pérez MA, Orts M, Marco J Randomized study comparing two tongue base surgeries for moderate to severe obstructive sleep apnea syndrome. *Otolaryngol Head Neck Surg.* 2009; 140(6):917-23.
- ⁴ Fibbi A, Ameli F, Brocchetti F, Mignosi S, Cabano ME, Semino L. Tongue base suspension and radiofrequency volume reduction: a comparison between 2 techniques for the treatment of sleep-disordered breathing. *Am J Otolaryngol.* 2009; 30(6):401-406.
- ⁵ Huang TW, Su HW, Wang CT, Cheng PW. Transsubmental tongue base suspension in treating patients with severe obstructive sleep apnea after failed uvulopalatopharyngoplasty. *Clin Otolaryngol.* 2014 Feb 26. doi: 10.1111/coa.12230. [Epub ahead of print].
- ⁶ Kühnel TS, Schurr C, Wagner B, Geisler P. Morphological changes of the posterior airway space after tongue base suspension. *Laryngoscope.* 2005; 115(3):475-80.
- ⁷ Li S, Wu D, Shi H. Treatment of obstructive sleep apnea hypopnea syndrome caused by glossoptosis with tongue-base suspension. *Eur Arch Otorhinolaryngol.* 2013 Nov; 270(11):2915-20.
- ⁸ Omur M, Ozturan D, Elez F, Unver C, Derman S. Tongue Base Suspension Combined With UPPP in Severe OSA Patients. *Otolaryngology–Head and Neck Surgery*, 133:218-223, 2005.
- ⁹ Sezen OS, Aydin E, Eraslan G, Haytoglu S, Coskuner T, Unver S. Modified tongue base suspension for multilevel or single level obstructions in sleep apnea: Clinical and radiologic results. *Auris Nasus Larynx* 38 (2011) 487–494.
- ¹⁰ Tuncel U, Inanlı HM, Kürkçüoğlu SS, Enoz M. A comparison of unilevel and multilevel surgery in obstructive sleep apnea syndrome. *ENT Journal* 2012 Aug; 91(8):E13-8.
- ¹¹ Turhan M, Bostanci A, Akdag M. The impact of modified tongue base suspension on CPAP levels in patients with severe OSA. *Eur Arch Otorhinolaryngol* 2014 Apr 11. [Epub ahead of print].
- ¹² Vicente E, Marin JM, Carrizo S, Naya MJ. Tongue-Base Suspension in Conjunction with Uvulopalatopharyngoplasty for Treatment of Severe Obstructive Sleep Apnea: Long-Term Follow-Up Results. *Laryngoscope*, 116:1223–1227, 2006.
- ¹³ Sher AE, Schechtman KB, Piccirillo JF. The efficacy of surgical modifications of the upper airway in adults with obstructive sleep apnea syndrome. *Sleep.* 1996 Feb;19(2):156-77.