

# **2011 ABDSM Examination Recommended Reading List**

## **1. Basic Sleep Medicine**

(7% of examination)

### ***Pathophysiology***

Dempsey JA, Veasey SC, Morgan BJ, O'Donnell CP. Pathophysiology of sleep apnea. *Physiol Rev.* Jan;90(1):47-112.

Malhotra A, White DP. Obstructive sleep apnea. *Lancet.* Jul 20 2002;360(9328):237-245.

### ***Mortality***

Marin JM, Carrizo SJ, Vicente E, Agusti AG. Long-term cardiovascular outcomes in men with obstructive sleep apnoea-hypopnoea with or without treatment with continuous positive airway pressure: an observational study. *Lancet.* Mar 19-25 2005;365(9464):1046-1053.

### ***Physiology of Pharynx***

Ayappa I, Rapoport DM. The upper airway in sleep: physiology of the pharynx. *Sleep Med Rev.* Feb 2003;7(1):9-33.

### ***Insomnia***

Beneto A, Gomez-Siurana E, Rubio-Sanchez P. Comorbidity between sleep apnea and insomnia. *Sleep Med Rev.* Aug 2009;13(4):287-293.

Littner M, Hirshkowitz M, Kramer M, et al. Practice parameters for using polysomnography to evaluate insomnia: an update. *Sleep.* Sep 2003;26(6):754-760.

### ***Psychiatry Misdiagnosis***

Stores G. Clinical diagnosis and misdiagnosis of sleep disorders. *J Neurol Neurosurg Psychiatry.* Dec 2007;78(12):1293-1297.

### ***Chronic Pulmonary Disease***

McNicholas WT. Chronic obstructive pulmonary disease and obstructive sleep apnea: overlaps in pathophysiology, systemic inflammation, and cardiovascular disease. *Am J Respir Crit Care Med.* Oct 15 2009;180(8):692-700.

### ***Headache***

Graff-Radford SB, Teruel A. Cluster headache and obstructive sleep apnea: are they related disorders? *Curr Pain Headache Rep.* Apr 2009;13(2):160-163.

Graff-Radford SB, Newman A. Obstructive sleep apnea and cluster headache. *Headache.* Jun 2004;44(6):607-610.

### ***Bruxism***

Abe S, Yamaguchi T, Rompre PH, De Grandmont P, Chen YJ, Lavigne GJ. Tooth wear in young subjects: a discriminator between sleep bruxers and controls? *Int J Prosthodont.* Jul-Aug 2009;22(4):342-350.

Landry-Schonbeck A, de Grandmont P, Rompre PH, Lavigne GJ. Effect of an adjustable mandibular advancement appliance on sleep bruxism: a crossover sleep laboratory study. *Int J Prosthodont.* May-Jun 2009;22(3):251-259.

Lavigne GJ, Khoury S, Abe S, Yamaguchi T, Raphael K. Bruxism physiology and pathology: an overview for clinicians. *J Oral Rehabil.* Jul 2008;35(7):476-494.

Khoury S, Rouleau GA, Rompre PH, Mayer P, Montplaisir JY, Lavigne GJ. A significant increase in breathing amplitude precedes sleep bruxism. *Chest.* Aug 2008;134(2):332-337.

Walters AS, Lavigne G, Hening W, et al. The scoring of movements in sleep. *J Clin Sleep Med.* Mar 15 2007;3(2):155-167.

Landry ML, Rompre PH, Manzini C, Guitard F, de Grandmont P, Lavigne GJ. Reduction of sleep bruxism using a mandibular advancement device: an experimental controlled study. *Int J Prosthodont.* Nov-Dec 2006;19(6):549-556.

Gagnon Y, Mayer P, Morisson F, Rompre PH, Lavigne GJ. Aggravation of respiratory disturbances by the use of an occlusal splint in apneic patients: a pilot study. *Int J Prosthodont.* Jul-Aug 2004;17(4):447-453.

Dube C, Rompre PH, Manzini C, Guitard F, de Grandmont P, Lavigne GJ. Quantitative polygraphic controlled study on efficacy and safety of oral splint devices in tooth-grinding subjects. *J Dent Res.* May 2004;83(5):398-403.

Ohayon MM, Li KK, Guilleminault C. Risk factors for sleep bruxism in the general population. *Chest.* Jan 2001;119(1):53-61.

Sjoholm TT, Lowe AA, Miyamoto K, Fleetham JA, Ryan CF. Sleep bruxism in patients with sleep-disordered breathing. *Arch Oral Biol.* Oct 2000;45(10):889-896.

### ***Pain***

Schutz TC, Andersen ML, Silva A, Tufik S. Distinct gender-related sleep pattern in an acute model of TMJ pain. *J Dent Res*. May 2009;88(5):471-476.

Schutz TC, Andersen ML, Tufik S. The influence of orofacial pain on sleep pattern: a review of theory, animal models and future directions. *Sleep Med*. Sep 2009;10(8):822-828.

Schutz TC, Andersen ML, Tufik S. Influence of temporomandibular joint pain on sleep patterns: role of nitric oxide. *J Dent Res*. Sep 2004;83(9):693-697.

Schutz TC, Andersen ML, Tufik S. Sleep alterations in an experimental orofacial pain model in rats. *Brain Res*. Dec 12 2003;993(1-2):164-171.

Lavigne, Gilles; Cistulli, Peter; Smith, Michael. Sleep Medicine for Dentists: A Practical Overview. *Quintessence Books*. 2009

## **2. Analysis of Polysomnogram Reports**

(5% of examination)

### ***PSG***

Silber MH, Ancoli-Israel S, Bonnet MH, et al. The visual scoring of sleep in adults. *J Clin Sleep Med*. Mar 15 2007;3(2):121-131.

Kushida CA, Littner MR, Morgenthaler T, et al. Practice parameters for the indications for polysomnography and related procedures: an update for 2005. *Sleep*. Apr 1 2005;28(4):499-521.

Ruehland WR, Rochford PD, O'Donoghue FJ, Pierce RJ, Singh P, Thornton AT. The new AASM criteria for scoring hypopneas: impact on the apnea hypopnea index. *Sleep*. Feb 1 2009;32(2):150-157.

Sleep-related breathing disorders in adults: recommendations for syndrome definition and measurement techniques in clinical research. The Report of an American Academy of Sleep Medicine Task Force. *Sleep*. Aug 1 1999;22(5):667-689.

### ***Scoring Hypopneas/RERAs***

Redline S, Budhiraja R, Kapur V, et al. The scoring of respiratory events in sleep: reliability and validity. *J Clin Sleep Med*. Mar 15 2007;3(2):169-200.

Quan SF, Griswold ME, Iber C, et al. Short-term variability of respiration and sleep during unattended nonlaboratory polysomnography--the Sleep Heart Health Study. [corrected]. *Sleep*. Dec 2002;25(8):843-849.

Redline S, Kapur VK, Sanders MH, et al. Effects of varying approaches for identifying respiratory disturbances on sleep apnea assessment. *Am J Respir Crit Care Med.* Feb 2000;161(2 Pt 1):369-374.

### ***Imaging***

Ahmed MM, Schwab RJ. Upper airway imaging in obstructive sleep apnea. *Curr Opin Pulm Med.* Nov 2006;12(6):397-401.

### ***Imaging and OAT – Cephalometry***

Liu Y, Lowe AA, Fleetham JA, Park YC. Cephalometric and physiologic predictors of the efficacy of an adjustable oral appliance for treating obstructive sleep apnea. *Am J Orthod Dentofacial Orthop.* Dec 2001;120(6):639-647.

Liu Y, Park YC, Lowe AA, Fleetham JA. Supine Cephalometric Analyses of an Adjustable Oral Appliance Used in the Treatment of Obstructive Sleep Apnea. *Sleep Breath.* 2000;4(2):59-66.

Enciso R, Nguyen M, Shigeta Y, Ogawa T, Clark GT. Comparison of cone-beam CT parameters and sleep questionnaires in sleep apnea patients and control subjects. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* Feb;109(2):285-293.

Ogawa T, Enciso R, Shintaku WH, Clark GT. Evaluation of cross-section airway configuration of obstructive sleep apnea. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* Jan 2007;103(1):102-108.

Ogawa T, Enciso R, Memon A, Mah JK, Clark GT. Evaluation of 3D airway imaging of obstructive sleep apnea with cone-beam computed tomography. *Stud Health Technol Inform.* 2005;111:365-368.

Tsuiki S, Almeida FR, Bhalla PS, AA AL, Fleetham JA. Supine-dependent changes in upper airway size in awake obstructive sleep apnea patients. *Sleep Breath.* Mar 2003;7(1):43-50.

Tsuiki S, Almeida FR, Lowe AA, Su J, Fleetham JA. The interaction between changes in upright mandibular position and supine airway size in patients with obstructive sleep apnea. *Am J Orthod Dentofacial Orthop.* Oct 2005;128(4):504-512.

Tsuiki S, Lowe AA, Almeida FR, Fleetham JA. Effects of an anteriorly titrated mandibular position on awake airway and obstructive sleep apnea severity. *Am J Orthod Dentofacial Orthop.* May 2004;125(5):548-555.

Tsuiki S, Lowe AA, Almeida FR, Kawahata N, Fleetham JA. Effects of mandibular advancement on airway curvature and obstructive sleep apnoea severity. *Eur Respir J.* Feb 2004;23(2):263-268.

- Tsuiki S, Ryan CF, Lowe AA, Inoue Y. Functional contribution of mandibular advancement to awake upper airway patency in obstructive sleep apnea. *Sleep Breath*. Dec 2007;11(4):245-251.
- Ryan CF, Love LL, Peat D, Fleetham JA, Lowe AA. Mandibular advancement oral appliance therapy for obstructive sleep apnoea: effect on awake calibre of the velopharynx. *Thorax*. Nov 1999;54(11):972-977.
- Johnson LM, Arnett GW, Tamborello JA, Binder A. Airway changes in relationship to mandibular posturing. *Otolaryngol Head Neck Surg*. Feb 1992;106(2):143-148.
- Lowe AA, Fleetham JA, Adachi S, Ryan CF. Cephalometric and computed tomographic predictors of obstructive sleep apnea severity. *Am J Orthod Dentofacial Orthop*. Jun 1995;107(6):589-595.
- Ng AT, Gotsopoulos H, Qian J, Cistulli PA. Effect of oral appliance therapy on upper airway collapsibility in obstructive sleep apnea. *Am J Respir Crit Care Med*. Jul 15 2003;168(2):238-241.
- Sam K, Lam B, Ooi CG, Cooke M, Ip MS. Effect of a non-adjustable oral appliance on upper airway morphology in obstructive sleep apnoea. *Respir Med*. May 2006;100(5):897-902.
- Kyung SH, Park YC, Pae EK. Obstructive sleep apnea patients with the oral appliance experience pharyngeal size and shape changes in three dimensions. *Angle Orthod*. Jan 2005;75(1):15-22.
- Zhao X, Liu Y, Gao Y. Three-dimensional upper-airway changes associated with various amounts of mandibular advancement in awake apnea patients. *Am J Orthod Dentofacial Orthop*. May 2008;133(5):661-668.
- Chan ASL SK, Schwab RJ, Zeng B, Petocz P, Lee RWW, Darendeliler AM, Cistulli PA. The Effect of Mandibular Advancement on Upper Airway Structure in Obstructive Sleep Apnea. *Thorax*. 2010;in press.

### **3. Medical and Sleep Disorder History**

(10% of examination)

#### ***Medical History: Gender***

- Lin CM, Davidson TM, Ancoli-Israel S. Gender differences in obstructive sleep apnea and treatment implications. *Sleep Med Rev*. Dec 2008;12(6):481-496.

#### ***Medical History***

- Lamm J, Poeschel J, Smith S. Obtaining a thorough sleep history and routinely screening for obstructive sleep apnea. *J Am Acad Nurse Pract*. Apr 2008;20(4):225-229.

### ***Metabolic Syndrome***

Levy P, Bonsignore MR, Eckel J. Sleep, sleep-disordered breathing and metabolic consequences. *Eur Respir J*. Jul 2009;34(1):243-260.

### ***Hypertension***

Parati G, Ongaro G, Bonsignore MR, Glavina F, Di Rienzo M, Mancia G. Sleep apnoea and hypertension. *Curr Opin Nephrol Hypertens*. Mar 2002;11(2):201-214.

### ***Cardiovascular***

Somers VK, White DP, Amin R, et al. Sleep apnea and cardiovascular disease: an American Heart Association/American College of Cardiology Foundation Scientific Statement from the American Heart Association Council for High Blood Pressure Research Professional Education Committee, Council on Clinical Cardiology, Stroke Council, and Council on Cardiovascular Nursing. *J Am Coll Cardiol*. Aug 19 2008;52(8):686-717.

Dematteis M, Godin-Ribuot D, Arnaud C, et al. Cardiovascular consequences of sleep-disordered breathing: contribution of animal models to understanding the human disease. *ILAR J*. 2009;50(3):262-281.

Calvin AD, Somers VK. Obstructive sleep apnea and cardiovascular disease. *Curr Opin Cardiol*. Nov 2009;24(6):516-520.

Calvin AD, Albuquerque FN, Lopez-Jimenez F, Somers VK. Obstructive sleep apnea, inflammation, and the metabolic syndrome. *Metab Syndr Relat Disord*. Aug 2009;7(4):271-278.

Garvey JF, Taylor CT, McNicholas WT. Cardiovascular disease in obstructive sleep apnoea syndrome: the role of intermittent hypoxia and inflammation. *Eur Respir J*. May 2009;33(5):1195-1205.

McNicholas WT. Obstructive sleep apnea and inflammation. *Prog Cardiovasc Dis*. Mar-Apr 2009;51(5):392-399.

### **QUESTIONNAIRES:**

#### ***Epworth***

Johns MW. A new method for measuring daytime sleepiness: the Epworth sleepiness scale. *Sleep*. Dec 1991;14(6):540-545.

#### ***Berlin***

Netzer NC, Stoohs RA, Netzer CM, Clark K, Strohl KP. Using the Berlin Questionnaire to identify patients at risk for the sleep apnea syndrome. *Ann Intern Med*. Oct 5 1999;131(7):485-491.

### ***SF36***

3McCallum J. The SF-36 in an Australian sample: validating a new, generic health status measure. *Aust J Public Health*. Apr 1995;19(2):160-166.

### ***FOSQ***

Weaver TE, Laizner AM, Evans LK, et al. An instrument to measure functional status outcomes for disorders of excessive sleepiness. *Sleep*. Oct 1997;20(10):835-843.

### ***Quality of Life***

Flemons WW. Measuring health related quality of life in sleep apnea. *Sleep*. Jun 15 2000;23 Suppl 4:S109-114.

Flemons WW, Reimer MA. Development of a disease-specific health-related quality of life questionnaire for sleep apnea. *Am J Respir Crit Care Med*. Aug 1998;158(2):494-503.

## **4. Research and Literature Review of Various Treatment Options, Oral Appliances and Surgical Therapy (as well as alternative procedures for initiating CPAP)**

(7% of examination)

### ***CPAP***

McDaid C, Duree KH, Griffin SC, et al. A systematic review of continuous positive airway pressure for obstructive sleep apnoea-hypopnoea syndrome. *Sleep Med Rev*. Dec 2009;13(6):427-436.

McDaid C, Griffin S, Weatherly H, et al. Continuous positive airway pressure devices for the treatment of obstructive sleep apnoea-hypopnoea syndrome: a systematic review and economic analysis. *Health Technol Assess*. Jan 2009;13(4):iii-iv, xi-xiv, 1-119, 143-274.

Kushida CA, Littner MR, Hirshkowitz M, et al. Practice parameters for the use of continuous and bilevel positive airway pressure devices to treat adult patients with sleep-related breathing disorders. *Sleep*. Mar 1 2006;29(3):375-380.

Littner M, Hirshkowitz M, Davila D, et al. Practice parameters for the use of auto-titrating continuous positive airway pressure devices for titrating pressures and treating adult patients with obstructive sleep apnea syndrome. An American Academy of Sleep Medicine report. *Sleep*. Mar 15 2002;25(2):143-147.

Barnes M, Houston D, Worsnop CJ, et al. A randomized controlled trial of continuous positive airway pressure in mild obstructive sleep apnea. *Am J Respir Crit Care Med*. Mar 15 2002;165(6):773-780.

### ***Pharmacological***

Abad VC, Guilleminault C. Pharmacological management of sleep apnoea. *Expert Opin Pharmacother.* Jan 2006;7(1):11-23.

### ***Weight Loss***

Barnes M, Goldsworthy UR, Cary BA, Hill CJ. A diet and exercise program to improve clinical outcomes in patients with obstructive sleep apnea--a feasibility study. *J Clin Sleep Med.* Oct 15 2009;5(5):409-415.

### ***Positional***

Cartwright R, Ristanovic R, Diaz F, Caldarelli D, Alder G. A comparative study of treatments for positional sleep apnea. *Sleep.* Dec 1991;14(6):546-552.

Cartwright RD, Diaz F, Lloyd S. The effects of sleep posture and sleep stage on apnea frequency. *Sleep.* Aug 1991;14(4):351-353.

Cartwright RD, Lloyd S, Lilie J, Kravitz H. Sleep position training as treatment for sleep apnea syndrome: a preliminary study. *Sleep.* 1985;8(2):87-94.

Cartwright RD. Effect of sleep position on sleep apnea severity. *Sleep.* 1984;7(2):110-114.

### ***Nonprescription***

Meoli AL, Rosen CL, Kristo D, et al. Nonprescription treatments of snoring or obstructive sleep apnea: an evaluation of products with limited scientific evidence. *Sleep.* Aug 1 2003;26(5):619-624.

### ***Surgery***

Caples SM, Rowley JA, Prinsell JR, Pallanch JF, Katz SG, Harwick JD. Surgical modifications of the upper airway for obstructive sleep apnea in adults: a systematic review and meta-analysis (submitted for publication in *Sleep*) (Lit review)

Practice parameters for the treatment of obstructive sleep apnea in adults: the efficacy of surgical modifications of the upper airway. Report of the American Sleep Disorders Association. *Sleep* 1996;19(2):152-155.

Sher AE, Schechtman KB, Piccirillo JF. The efficacy of surgical modifications of the upper airway in adults with obstructive sleep apnea syndrome. *Sleep* 1996;19(2):156-177. (Lit review)

- Won CH, Li KK, Guilleminault C. Surgical treatment of obstructive sleep apnea: upper airway and maxillomandibular surgery. *Proceedings of the American Thoracic Society* 2008;5:193-199. (Lit review)
- Franklin KA, Antilla H, Axelsson S, Gisiason T, Maasilta P, Myhe KI, Rehnqvist N. Effects and side-effects of surgery for snoring and obstructive sleep apnea – a systematic review. *Sleep* 2009;32(1):27-36. (Lit review)
- Prinsell JR. Surgical treatment: Maxillomandibular advancement for obstructive sleep apnea in adults (chapter 119 in textbook *Current Therapy in Oral & Maxillofacial Surgery*, submitted for publication by Elsevier) (Lit review)
- Prinsell JR. Maxillomandibular advancement (MMA) in a site-specific treatment approach for obstructive sleep apnea: a surgical algorithm. *Sleep Breath* 2000;4(4):147-154.
- Prinsell JR. Telegnathic surgery for obstructive sleep apnea syndrome. *AAOMS Oral & Maxillofacial Surgery Update* 2006;4:88-97.
- Riley RW, Powell NB, Guilleminault C. Obstructive sleep apnea syndrome: a review of 306 consecutively treated surgical patients. *Otolaryngol Head Neck Surg* 1993;108(2):117-125.
- Prinsell JR. Maxillomandibular advancement surgery in a site-specific treatment approach for obstructive sleep apnea in 50 consecutive patients. *Chest* 1999;116(6):1519-1529.
- Hochban W, Conradt R, Bradenburg U, Heitmann J, Peter JH. Surgical maxillofacial treatment of obstructive sleep apnea. *Plast Reconstr Surg* 1997;99:619-626.
- Dekeister C, Lacassagne L, Tiberge M, Montemayor T, Migureres M, Paoli JR. Mandibular advancement surgery in patients with severe obstructive sleep apnea uncontrolled by continuous positive airway pressure. A retrospective review of 25 patients between 1998 and 2004. *Rev Mal Respir* 2006;23:430-437. (German)
- Conradt R, Hochban W, Heitmann J, et al. Sleep fragmentation and daytime vigilance in patients with OSA treated by surgical maxillomandibular advancement compared to CPAP therapy. *J Sleep Res* 1998;7(3):217-223.
- Goh YH, Lim KA. Modified maxillomandibular advancement for the treatment of obstructive sleep apnea: A preliminary report *Laryngoscope* 2003;113:1577-1582.
- Kessler P, Ruberg F, Obbarius H, Iro H, Neukam FW. Surgical management of obstructive sleep apnea. *Mund Kiefer GesichtsChir* 2007;11(2):81-88. (German)

- Waite PD, Wooten V, Lachner J, Guyette RF. Maxillomandibular advancement surgery in 23 patients with obstructive sleep apnea syndrome. *J Oral Maxillofac Surg* 1989;47:1256-1261.
- Smatt Y, Ferri J. Retrospective study of 18 patients treated by maxillomandibular advancement with adjunctive procedures for obstructive sleep apnea syndrome. *J Craniofac Surg* 2005;16(5):770-777.
- Lye KW, Waite PD, Meara D, Wang D. Quality of life evaluation of maxillomandibular advancement surgery for treatment of obstructive sleep apnea. *J Oral Maxillofac Surg* 2008;66:968-972.
- Li KK, Riley RW, Powell NB, Guilleminault. Maxillomandibular advancement for persistent obstructive apnea after phase I surgery in patients without maxillomandibular deficiency. *Laryngoscope* 2000;110:1684-1688.
- Li KK, Powell NB, Riley RW, Zonato A, Gervacio L, Guilleminault C. Morbidly obese patients with severe obstructive sleep apnea: is airway reconstructive surgery a viable treatment option? *Laryngoscope* 2000;110:982-987.
- Bettega, G, Pepin JL, Veal D, Deschaux C, Raphael B, Levy P. Obstructive sleep apnea syndrome. Fifty-one consecutive patients treated by maxillofacial surgery. *Am J Respir Crit Care Med* 2000;162:641-649.
- Dattilo DJ, Drooger SA. Outcome assessment of patients undergoing maxillofacial procedures for the treatment of sleep apnea: comparison of subjective and objective results. *J Oral Maxillofac Surg* 2004;62:164-168.
- Lee NR, Givens CD, Wilson J, Robins RB. Staged surgical treatment of obstructive sleep apnea syndrome: a review of 35 patients. *J Oral Maxillofac Surg* 1999;57:382-385.
- Hendler BH, Costello BJ, Silverstein K, Yen D, Goldberg A. A protocol for uvulopalatopharyngoplasty, mortised genioplasty, and maxillomandibular advancement in patients with obstructive sleep apnea: an analysis of 40 cases. *J Oral Maxillofac Surg* 2001;59:892-897.
- Hoekema A, Lange J, Stegenga B, de Bont LG. Oral appliances and maxillomandibular advancement surgery: an alternate treatment protocol for the obstructive sleep apnea-hypopnea syndrome. *J Oral Maxillofac Surg* 2006;64:886-891.
- Prinsell JR. Maxillomandibular advancement surgery for obstructive sleep apnea surgery. *JADA* 2002;133:1489-1497 (Lit review).

- Elshaug AG, Moss JR, et al Redefining success in airway surgery for obstructive sleep apnea: a meta analysis and synthesis of the evidence. *Sleep* 2007;30:461-467. (Lit review)
- Sundaram S, Lim J, Lasserson TJ. Surgery for obstructive sleep apnoea in adults. The Cochrane Collaboration published in *The Cochrane Library* by John Wiley & Sons, Ltd. 2009. (Lit review)
- Kezirian EJ, Goldberg AN. Hypopharyngeal surgery in obstructive sleep apnea. *Arch Otolaryngol Head Neck Surg* 2006;32:206-213. (Lit review)
- Verse T, Baisch A, Maurer JT, Stuck BA, Hormann K, Multilevel surgery for obstructive sleep apnea: short-term results. *Otolaryngol Head Neck Surg* 2006;134(4):571-577.
- Hsu PP, Brett RH. Multiple level pharyngeal surgery for obstructive sleep apnoea. *Singapore Med J* 2001;42(4):160-164.
- Neruntarat C. Genioglossus advancement and hyoid myotomy: short-term and long-term results. *J Laryngol Otol* 2003;117(6):482-486.
- Ramirez SG, Loube DI. Inferior sagittal osteotomy with hyoid bone suspension for obese patients with sleep apnea. *Arch Otolaryngol Head Neck Surg* 1996;122:953-957.
- Bowden MT, Kezirian EJ, Utley D, Goode RL. Outcomes of hyoid suspension for the treatment of obstructive sleep apnea. *Arch Otolaryngol Head Neck Surg* 2005;131(5):440-445.
- Vilaseca I, Morello A, Montserrat JM, Santamaria J, Iranzo A. Usefulness of uvulopalatopharyngoplasty with genioglossus and hyoid advancement in the treatment of obstructive sleep apnea. *Arch Otolaryngol Head Neck Surg* 2002;128:435-440.
- Chabolle F, Wagner I, Blumen MB, Sequert C, Fleury B, DeDieuleveult, T. Tongue base reduction with hyoepiglottoplasty: A treatment for severe obstructive sleep apnea. *Laryngoscope*. 1999;109(8):1273-1280.
- Jacobowitz O. Palatal and tongue base surgery for surgical treatment of obstructive sleep apnea: a prospective study. *Otolaryngol Head Neck Surg*. 2006;135(2):258-264.
- Richard W, Kox D, Herder C, Tinteren H, Vries N. One stage multilevel surgery (uvulopalatopharyngoplasty, hyoid suspension, radiofrequency ablation of tongue base with/without genioglossus advancement) in obstructive sleep apnea syndrome. *European Arch Oto-Rhino-Laryngology* 2007;264:439-444.

- Baisch A, Maurer JT, Hormann K. The effect of hyoid suspension in a multilevel surgery concept for obstructive sleep apnea. *Otolaryngol Head Neck Surg* 2006;134(5):856-861.
- Nelson LM. Combined temperature-controlled radiofrequency tongue reduction and UPPP in apnea surgery. *Ear Nose Throat J* 2001;80(9):640-644.
- Friedman M, Ibrahim H, Lee G, Joseph NJ. Combined uvulopalatopharyngoplasty and radiofrequency tongue base reduction for treatment of obstructive sleep apnea/hypopnea syndrome. *Otolaryngol Head Neck Surg* 2003;129(6):611-621.
- 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* 2006;116(7):1223-1227.
- Sorrenti G, Piccin O, Latini G, Scaramuzzino G, Mondini S, Ceroni R. Tongue base suspension technique in obstructive sleep apnea: personal experience. *Arch Otorhinolaryngol Ital* 2003;23:274-280.
- Miller FR, Watson D, Malis D. Role of the tongue base suspension suture with the Repose system bone screw in the multilevel surgical management of obstructive sleep apnea. *Otolaryngol Head Neck Surg* 2002;126:392-398.
- Johnson NT, Chinn J. Uvulopalatopharyngoplasty and inferior sagittal mandibular osteotomy with genioglossus advancement for treatment of obstructive sleep apnea. *Chest* 1994;101(1):278-283.
- Miller FR, Watson D, Boseley M. The role of the genial bone advancement trephine system in conjunction with uvulopalatopharyngoplasty in the multilevel management of obstructive sleep apnea. *Otolaryngol Head Neck Surg* 2004;130:73-79.
- Li HY, Wang PC, Hsu CY, Lee SW, Chen NH, Liu SA. Combined nasal-palatopharyngeal surgery for obstructive sleep apnea: simultaneous or staged? *Acta Otolaryngol* 2005;125(3):298-303.
- Li HY, Wang PC, Hsu CY, Chen NH, Lee LA, Fang TJ. Same-stage palatopharyngeal and hypopharyngeal surgery for severe obstructive sleep apnea. *Acta Otolaryngol* 2004;124(7):820-826.
- Elasfour A, Miyazaki S, Itasaka Y, Yamakawa K, Ishikawa K, Togawa K. Evaluation of uvulopalatopharyngoplasty in treatment of obstructive sleep apnea syndrome. *Acta Otolaryngol suppl* 1998;537:52-56.
- Mickelson SA, Rosenthal L. Midline glossectomy and epiglottidectomy for obstructive sleep apnea syndrome. *Laryngoscope* 1997;107(5):614-619.

Cohen SR, Simms C, Burstein FD. Mandibular distraction osteogenesis in the treatment of upper airway obstruction in children with craniofacial deformities. *Plast Reconstr Surg* 1998;101:312-318.

Li KK, Powell NB, Riley RW, Guilleminault C. Distraction osteogenesis in adult obstructive sleep apnea surgery: a preliminary report. *J Oral Maxillofac Surg* 2002;60: 6-10.

Thompson SH, Quinn M, Helman JI, Baur DA. Maxillomandibular distraction osteogenesis advancement for the treatment of obstructive apnea. *J Oral Maxillofac Surg* 2007;65:1427-1429.

Kushida CA, Morgenthaler TI, Littner MR, et al. Practice parameters for the treatment of snoring and obstructive sleep apnea with oral appliances: an update for 2005. *Sleep* 2006;29:240-243.

Ferguson KA, Cartwright R, Rogers R, Schmidt-Nowara W. Oral appliances for snoring and obstructive sleep apnea: A review. *Sleep* 2006;29:244-262. (Lit review)

Institute of Medicine Report. Sleep disorders and sleep deprivation: an unmet public health problem. ([://nap.edu](http://nap.edu)) April 2006.

Young T, Palta M, Dempsey J, Skatrud J, Weber S, Badr S. The occurrence of sleep-disorder breathing among middle-aged adults. *N Engl J Med* 1993;29(328):1230-1235.

Kapur V, Blough DK, Sandblom RE, et al. The medical cost of undiagnosed sleep apnea. *Sleep* 1999;22:749-755.

## **5. Selection of Oral Appliances for Patients, Oral Appliances vs. CPAP on Various Anatomic, Behavioral and Physiological Parameters**

(11% of examination)

Gagnon Y, Mayer P, Morisson F, Rompre PH, Lavigne GJ. Aggravation of respiratory disturbances by the use of an occlusal splint in apneic patients: a pilot study. *Int J Prosthodont*. Jul-Aug 2004;17(4):447-453.

Ohayon MM, Li KK, Guilleminault C. Risk factors for sleep bruxism in the general population. *Chest*. Jan 2001;119(1):53-61.

Sjoholm TT, Lowe AA, Miyamoto K, Fleetham JA, Ryan CF. Sleep bruxism in patients with sleep-disordered breathing. *Arch Oral Biol*. Oct 2000;45(10):889-896.

Hoekema A, Stegenga B, De Bont LG. Efficacy and co-morbidity of oral appliances in the treatment of obstructive sleep apnea-hypopnea: a systematic review. *Crit Rev Oral Biol Med.* 2004;15(3):137-155.

#### **APPLIANCE SELECTION:**

##### ***OA Designs***

Barthlen GM, Brown LK, Wiland MR, Sadeh JS, Patwari J, Zimmerman M. Comparison of three oral appliances for treatment of severe obstructive sleep apnea syndrome. *Sleep Med.* Oct 1 2000;1(4):299-305.

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Gauthier L, Laberge L, Beaudry M, Laforte M, Rompre PH, Lavigne GJ. Efficacy of two mandibular advancement appliances in the management of snoring and mild-moderate sleep apnea: a cross-over randomized study. *Sleep Med.* Mar 2009;10(3):329-336.

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Vanderveken OM, Devolder A, Marklund M, et al. Comparison of a custom-made and a thermoplastic oral appliance for the treatment of mild sleep apnea. *Am J Respir Crit Care Med.* Jul 15 2008;178(2):197-202.

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Lamont J, Baldwin DR, Hay KD, Veale AG. Effect of two types of mandibular advancement splints on snoring and obstructive sleep apnoea. *Eur J Orthod.* Jun 1998;20(3):293-297.

Lawton HM, Battagel JM, Kotecha B. A comparison of the Twin Block and Herbst mandibular advancement splints in the treatment of patients with obstructive sleep apnoea: a prospective study. *Eur J Orthod*. Feb 2005;27(1):82-90.

### ***Differences between Appliances***

Bloch KE, Iseli A, Zhang JN, et al. A randomized, controlled crossover trial of two oral appliances for sleep apnea treatment. *Am J Respir Crit Care Med*. Jul 2000;162(1):246-251.

Gauthier L, Laberge L, Beaudry M, Laforte M, Rompre PH, Lavigne GJ. Efficacy of two mandibular advancement appliances in the management of snoring and mild-moderate sleep apnea: a cross-over randomized study. *Sleep Med*. Mar 2009;10(3):329-336.

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Hans MG, Nelson S, Luks VG, Lorkovich P, Baek SJ. Comparison of two dental devices for treatment of obstructive sleep apnea syndrome (OSAS). *Am J Orthod Dentofacial Orthop*. May 1997;111(5):562-570.

### ***Vertical Opening***

Pitsis AJ, Darendeliler MA, Gotsopoulos H, Petocz P, Cistulli PA. Effect of vertical dimension on efficacy of oral appliance therapy in obstructive sleep apnea. *Am J Respir Crit Care Med*. Sep 15 2002;166(6):860-864.

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### ***OAT versus CPAP***

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- Hoekema A, Voors AA, Wijkstra PJ, et al. Effects of oral appliances and CPAP on the left ventricle and natriuretic peptides. *Int J Cardiol*. Aug 18 2008;128(2):232-239.

## **6. Proper Fitting Techniques for Oral Appliances**

(15% of examination)

### ***Proper Fitting Techniques***

Almeida FR, Lowe AA. Principles of oral appliance therapy for the management of snoring and sleep disordered breathing. *Oral Maxillofac Surg Clin North Am.* Nov 2009;21(4):413-420.

Kushida CA, Morgenthaler TI, Littner MR, et al. Practice parameters for the treatment of snoring and Obstructive Sleep Apnea with oral appliances: an update for 2005. *Sleep.* Feb 1 2006;29(2):240-243.

## **7. Treatment Plan and Informed Consent for Patients as well as Indications, Contraindications, Possible Complications and Side Effects Associated with Appliance Use**

(14% of examination)

### ***Indications***

Kushida CA, Morgenthaler TI, Littner MR, et al. Practice parameters for the treatment of snoring and Obstructive Sleep Apnea with oral appliances: an update for 2005. *Sleep.* Feb 1 2006;29(2):240-243.

### ***Severe***

Henke KG, Frantz DE, Kuna ST. An oral elastic mandibular advancement device for obstructive sleep apnea. *Am J Respir Crit Care Med.* Feb 2000;161(2 Pt 1):420-425.

### ***Contraindications***

de Almeida FR, Bittencourt LR, de Almeida CI, Tsuiki S, Lowe AA, Tufik S. Effects of mandibular posture on obstructive sleep apnea severity and the temporomandibular joint in patients fitted with an oral appliance. *Sleep.* Aug 1 2002;25(5):507-513.

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#### **APPLIANCE SELECTION:**

##### ***OA Designs***

Barthlen GM, Brown LK, Wiland MR, Sadeh JS, Patwari J, Zimmerman M. Comparison of three oral appliances for treatment of severe obstructive sleep apnea syndrome. *Sleep Med.* Oct 1 2000;1(4):299-305.

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Lamont J, Baldwin DR, Hay KD, Veale AG. Effect of two types of mandibular advancement splints on snoring and obstructive sleep apnoea. *Eur J Orthod.* Jun 1998;20(3):293-297.

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Hans MG, Nelson S, Luks VG, Lorkovich P, Baek SJ. Comparison of two dental devices for treatment of obstructive sleep apnea syndrome (OSAS). *Am J Orthod Dentofacial Orthop.* May 1997;111(5):562-570.

### ***Vertical Opening***

Pitsis AJ, Darendeliler MA, Gotsopoulos H, Petocz P, Cistulli PA. Effect of vertical dimension on efficacy of oral appliance therapy in obstructive sleep apnea. *Am J Respir Crit Care Med.* Sep 15 2002;166(6):860-864.

### ***Boil and Bite***

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### ***TMJ and OAT***

Ferguson KA, Cartwright R, Rogers R, Schmidt-Nowara W. Oral appliances for snoring and obstructive sleep apnea: a review. *Sleep.* Feb 1 2006;29(2):244-262.

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Marklund M. Predictors of long-term orthodontic side effects from mandibular advancement devices in patients with snoring and obstructive sleep apnea. *Am J Orthod Dentofacial Orthop*. Feb 2006;129(2):214-221.

### ***Side Effects***

de Almeida FR, Bittencourt LR, de Almeida CI, Tsuiki S, Lowe AA, Tufik S. Effects of mandibular posture on obstructive sleep apnea severity and the temporomandibular joint in patients fitted with an oral appliance. *Sleep*. Aug 1 2002;25(5):507-513.

Giannasi LC, Almeida FR, Magini M, et al. Systematic assessment of the impact of oral appliance therapy on the temporomandibular joint during treatment of obstructive sleep apnea: long-term evaluation. *Sleep Breath*. Nov 2009;13(4):375-381.

de Almeida FR, Lowe AA, Tsuiki S, et al. Long-term compliance and side effects of oral appliances used for the treatment of snoring and obstructive sleep apnea syndrome. *J Clin Sleep Med*. Apr 15 2005;1(2):143-152.

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- Marklund M, Franklin KA, Persson M. Orthodontic side-effects of mandibular advancement devices during treatment of snoring and sleep apnoea. *Eur J Orthod*. Apr 2001;23(2):135-144.
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- Ghazal A, Jonas IE, Rose EC. Dental side effects of mandibular advancement appliances - a 2-year follow-up. *J Orofac Orthop*. Nov 2008;69(6):437-447.

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**AADSM Consent Form** – can be found on the AADSM website at [.aadsm.org](http://.aadsm.org) under the ‘Members Only’ section.

## **8. Long-term Follow-Up Care Including Compliance, Appliance Stability and Care, Effectiveness of Therapy and Side Effects**

(13% of examination)

Cartwright RD. Effect of sleep position on sleep apnea severity. *Sleep.* 1984;7(2):110-114.

Meoli AL, Rosen CL, Kristo D, et al. Nonprescription treatments of snoring or obstructive sleep apnea: an evaluation of products with limited scientific evidence. *Sleep.* Aug 1 2003;26(5):619-624.

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### *Side effects*

de Almeida FR, Bittencourt LR, de Almeida CI, Tsuiki S, Lowe AA, Tufik S. Effects of mandibular posture on obstructive sleep apnea severity and the temporomandibular joint in patients fitted with an oral appliance. *Sleep.* Aug 1 2002;25(5):507-513.

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Chen H, Lowe AA, de Almeida FR, Fleetham JA, Wang B. Three-dimensional computer-assisted study model analysis of long-term oral-appliance wear. Part 2. Side effects of oral appliances in obstructive sleep apnea patients. *Am J Orthod Dentofacial Orthop.* Sep 2008;134(3):408-417.

Chen H, Lowe AA, de Almeida FR, Wong M, Fleetham JA, Wang B. Three-dimensional computer-assisted study model analysis of long-term oral-appliance wear. Part 1: Methodology. *Am J Orthod Dentofacial Orthop.* Sep 2008;134(3):393-407.

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- Robertson C, Herbison P, Harkness M. Dental and occlusal changes during mandibular advancement splint therapy in sleep disordered patients. *Eur J Orthod*. Aug 2003;25(4):371-376.
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Marklund M. Predictors of long-term orthodontic side effects from mandibular advancement devices in patients with snoring and obstructive sleep apnea. *Am J Orthod Dentofacial Orthop*. Feb 2006;129(2):214-221.

## **9. Portable Monitoring Devices in Oral Appliance Therapy**

(3% of examination)

### ***Portable Monitors***

Almeida FR, Lowe AA. Principles of oral appliance therapy for the management of snoring and sleep disordered breathing. *Oral Maxillofac Surg Clin North Am*. Nov 2009;21(4):413-420.

Fleury B, Rakotonanahary D, Petelle B, et al. Mandibular advancement titration for obstructive sleep apnea: optimization of the procedure by combining clinical and oximetric parameters. *Chest*. May 2004;125(5):1761-1767.

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- Ayappa I, Norman RG, Seelall V, Rapoport DM. Validation of a self-applied unattended monitor for sleep disordered breathing. *J Clin Sleep Med*. Feb 15 2008;4(1):26-37.
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- Popovic D, King C, Guerrero M, Levendowski DJ, Henninger D, Westbrook PR. Validation of forehead venous pressure as a measure of respiratory effort for the diagnosis of sleep apnea. *J Clin Monit Comput*. Feb 2009;23(1):1-10.
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## **10. Oral Appliance Titration**

(10% or examination)

### ***Clinical***

Ferguson KA, Cartwright R, Rogers R, Schmidt-Nowara W. Oral appliances for snoring and obstructive sleep apnea: a review. *Sleep*. Feb 1 2006;29(2):244-262.

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### ***Overnight***

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Tsai WH, Vazquez JC, Oshima T, et al. Remotely controlled mandibular positioner predicts efficacy of oral appliances in sleep apnea. *Am J Respir Crit Care Med.* Aug 15 2004;170(4):366-370.

Kuna ST, Giarraputo PC, Stanton DC, Levin LM, Frantz D. Evaluation of an oral mandibular advancement titration appliance. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* May 2006;101(5):593-603.

### ***Clinical and Overnight***

Krishnan V, Collop NA, Scherr SC. An evaluation of a titration strategy for prescription of oral appliances for obstructive sleep apnea. *Chest.* May 2008;133(5):1135-1141.

Almeida FR, Parker JA, Hodges JS, Lowe AA, Ferguson KA. Effect of a titration polysomnogram on treatment success with a mandibular repositioning appliance. *J Clin Sleep Med.* Jun 15 2009;5(3):198-204.

## **11. Children**

(5% of examination)

### ***Diagnosis***

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### ***Craniofacial***

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Ozdemir H, Altin R, Sogut A, et al. Craniofacial differences according to AHI scores of children with obstructive sleep apnoea syndrome: cephalometric study in 39 patients. *Pediatr Radiol*. May 2004;34(5):393-399.

Schiffman PH, Rubin NK, Dominguez T, et al. Mandibular dimensions in children with obstructive sleep apnea syndrome. *Sleep*. Aug 1 2004;27(5):959-965.

### ***Treatments***

Schechter MS. Technical report: diagnosis and management of childhood obstructive sleep apnea syndrome. *Pediatrics*. Apr 2002;109(4):e69.

Lipton AJ, Gozal D. Treatment of obstructive sleep apnea in children: do we really know how? *Sleep Med Rev*. Feb 2003;7(1):61-80.

Marcus CL, Ward SL, Mallory GB, et al. Use of nasal continuous positive airway pressure as treatment of childhood obstructive sleep apnea. *J Pediatr*. Jul 1995;127(1):88-94.

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### ***Orthodontics/OAT***

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