

Practice Guidelines for the Perioperative Management of Patients with Obstructive Sleep Apnea: An Updated Report

American Society of Anesthesiologists

Bibliography in Alphabetical Order

1. Ahmad S, Nagle A, McCarthy RJ, Fitzgerald PC, Sullivan JT, Prystowsky J: Postoperative hypoxemia in morbidly obese patients with and without obstructive sleep apnea undergoing laparoscopic bariatric surgery. *Anesth Analg* 2008; 107:138-143
2. Ahmadi N, Chung SA, Gibbs A, Shapiro CM: The Berlin questionnaire for sleep apnea in a sleep clinic population: relationship to polysomnographic measurement of respiratory disturbance. *Sleep Breath* 2008; 12:39-45
3. Akashiba T, Minemura H, Yamamoto H, Itoh D, Kosaka N, Saitoh O, Horie T: Effects of nasal continuous positive airway pressure on pulmonary haemodynamics and tissue oxygenation in patients with obstructive sleep apnoea. *Respirology* 1999; 4:83-87
4. Alchanatis M, Paradellis G, Pini H, Tourkhoriti G, Jordanoglou J: Left ventricular function in patients with obstructive sleep apnoea syndrome before and after treatment with nasal CPAP. *Respiration* 2000; 67:367-371
5. Alchanatis M, Tourkhoriti G, Kakouros S, Kosmas E, Podaras S, Jordanoglou JB: Daytime pulmonary hypertension in patients with obstructive sleep apnea: the effect of continuous positive airway pressure on pulmonary hemodynamics. *Respiration* 2001; 68:566-572
6. Anand VK, Ferguson PW, Schoen LS: Obstructive sleep apnea: a comparison of continuous positive airway pressure and surgical treatment. *Otolaryngol Head Neck Surg* 1991; 105:382-390
7. Andersson L, Brattstrom V: Cephalometric analysis of permanently snoring patients with and without obstructive sleep apnoea syndrome. *Int J Oral Maxillofac Surg* 1991; 20:159-162
8. Arai YCP, Nakayama M, Kato N, Wakao Y, Ito H, Komatsu T: The effects of jaw thrust and the lateral position on heart rate variability in anesthetized children with obstructive sleep apnea syndrome. *Anesth Analg* 2007; 104:1352-1355
9. Arens R, McDonough JM, Corbin AM, Rubin NK, Carroll ME, Pack AI, Liu J, Udupa JK: Upper airway size analysis by magnetic resonance imaging of children with obstructive sleep apnea syndrome. *Am J Respir Crit Care Med* 2003; 167:65-70
10. Arens R, McDonough JM, Costarino AT, Mahboubi S, Tayag-Kier CE, Maislin G, Schwab RJ, Pack AI: Magnetic resonance imaging of the upper airway structure of children with obstructive sleep apnea syndrome. *Am J Respir Crit Care Med* 2001; 164:698-703
11. Arisaka H, Sakuraba S, Kobayashi R, Kitahama H, Nishida N, Furuya M, Yoshida K: Perioperative management of obstructive sleep apnea with nasal continuous positive airway pressure. *Anesth Prog* 2008; 55:121-123
12. Bacon WH, Krieger J, Turlot JC, Stierle JL: Craniofacial characteristics in patients with obstructive sleep apneas syndrome. *Cleft Pal J* 1988; 25:374-378
13. Bacon WH, Turlot JC, Krieger J, Stierle J-L: Cephalometric evaluation of pharyngeal obstructive factors in patients with sleep apnoeas syndrome. *Angle Orthod* 1990; 60:115-122

14. Baik UB, Suzuki M, Ikeda K, Sugawara J, Mitani H: Relationship between cephalometric characteristics and obstructive sites in obstructive sleep apnea syndrome. *Angle Orthod* 2002; 72:124-134
15. Ballester E, Badia JR, Hernandez L, Carrasco E, de Pablo J, Fornas C, Rodriguez-Roisin R, Montserrat JM: Evidence of the effectiveness of continuous positive airway pressure in the treatment of sleep apnea/hypopnea syndrome. *Am J Respir Crit Care Med* 1999; 159:495-501
16. Bartall HZ, Tye KH, Roper P, Desser KB, Benchimol A: Atrial flutter associated with obstructive sleep apnea syndrome: a case report. *Arch Intern Med* 1980; 140:121-122
17. Battagel JM, L'Estrange PR: The cephalometric morphology of patients with obstructive sleep apnoea (OSA). *Eur J Orthod* 1996; 18:557-569
18. Becker H, Brandenburg U, Peter JH, Peter JH, Von Wichert P: Reversal of sinus arrest and atrioventricular conduction block in patients with sleep apnea during nasal continuous positive airway pressure. *Am J Respir Crit Care Med* 1995; 151:215-218
19. Becker HF, Koehler U, Stammnitz A, Peter JH: Heart block in patients with sleep apnoea. *Thorax* 1998; 53:S29-S32
20. Behbehani K, Yen FC, Lucas EA, Burk JR: A sleep laboratory evaluation of an automatic positive airway pressure system for treatment of obstructive sleep apnea. *Sleep* 1998; 21:485-491
21. Berend KR, Ajluni AF, Núñez-García LA, Lombardi AV, Adams JB: Prevalence and management of obstructive sleep apnea in patients undergoing total joint arthroplasty. *J Arthroplasty* 2010; 25:54-57
22. Biavati MJ, Manning SC, Phillips DL: Predictive factors for respiratory complications after tonsillectomy and adenoidectomy in children. *Arch Otolaryngol Head Neck Surg* 1997; 123:517-521
23. Biddle C: Comparative aspects of the airway during general anesthesia in obese sufferers of sleep apnea and matched normals. *Adv Pract Nurs Q* 1996; 2:14-19
24. Biddle C: Orocephalometry and airway control in obese sleep-disordered breathers, obese normals, and matched controls undergoing general anesthesia. *CRNA* 1994; 5:97-103
25. Biro P, Kaplan V, Bloch KE: Anesthetic management of a patient with obstructive sleep apnea syndrome and difficult airway access. *J Clin Anesth* 1995; 7:417-421
26. Bloch KE, Iseli A, Zhang JN, Xie X, Kaplan V, Stoeckli PW, Russi EW: A randomized, controlled crossover trial of two oral appliances for sleep apnea treatment. *Am J Respir Crit Care Med* 2000; 162:246-251
27. Bolden N, Smith CE, Auckley D, Makarski J, Avula R: Perioperative complications during use of an obstructive sleep apnea protocol following surgery and anesthesia. *Anesth Analg* 2007; 105:1869-1870
28. Bolden N, Smith CE, Auckley D: Avoiding adverse outcomes in patients with obstructive sleep apnea (OSA): development and implementation of a perioperative OSA protocol. *J Clin Anesth* 2009; 21:286-293
29. Bonham PE, Currier GF, Orr WC, Othman J, Nanda RS: The effect of a modified functional appliance on obstructive sleep apnea. *Am J Orthod Dentofacial Orthop* 1988; 94:384-392
30. Bonnet F, Bourgain JL, Mastamis D, Tesseire B, Viars P: The influence of position on ventilation-perfusion distribution after abdominal surgery. *Acta Anaesth Scand* 1988; 32:585-589

31. Boroweicki B, Pollak CP, Weitzman ED, Rakoff S, Imperato J: Fibro-optic study of pharyngeal airway during sleep in patients with hypersomnia obstructive sleep syndrome. *Laryngoscope* 1978; 88:1310-1313
32. Bradley TD, Brown IG, Grossman RF, Zamel N, Martinez D, Phillipson EA, Hoffstein V: Pharyngeal size in snorers, nonsnorers, and patients with obstructive sleep apnea. *N Engl J Med* 1986; 315:1327-1331
33. Brodsky JB, Lemmens HJ, Brock-Utne JG, Vierra M, Saidman LJ: Morbid obesity and tracheal intubation. *Anesth Analg* 2002; 95:732-736
34. Browman CP, Sampson MG, Yolles SF, Gujavarty KS, Weiler SJ, Walsleben JA, Hahn PM, Mitler MM: Obstructive sleep apnea and body weight. *Chest* 1984; 85:435-436
35. Brown IB, McClean PA, Boucher R, Zamel N, Hoffstein V: Changes in pharyngeal cross-sectional area with posture and application of continuous positive airway pressure in patients with obstructive sleep apnea. *Am Rev Respir Dis* 1987; 136:628-632
36. Brown KA, Laferriere A, Lakheeram I, Moss IR: Recurrent hypoxemia in children is associated with increased analgesic sensitivity to opiates. *Anesthesiology* 2006; 105:665-669
37. Brown KA, Laferriere A, Moss IR: Recurrent hypoxemia in young children with obstructive sleep apnea is associated with reduced opioid requirement for analgesia. *Anesthesiology* 2004; 100:806-810
38. Buckley FP, Robinson NB, Simonwitz DA, Dellinger EP: Anaesthesia in the morbidly obese: a comparison of anaesthetic and analgesic regimens for upper abdominal surgery. *Anaesthesia* 1983; 38:840-851
39. Camu F, Debucquoy F: Alfentanil infusion for postoperative pain: A comparison of epidural and intravenous routes. *Anesthesiology* 1991, 75:171-178
40. Carrera M, Barbe F, Sauleda J, Tomas M, Gomez C, Agusti AG: Patients with obstructive sleep apnea exhibit genioglossus dysfunction that is normalized after treatment with continuous positive airway pressure. *Am J Respir Crit Care Med* 1999; 159:1960-1966
41. Carroll JL, McCollley SA, Marcus CL, Curtis S, Loughlin GM: Inability of clinical history to distinguish primary snoring from obstructive sleep apnea syndrome in children. *Chest* 1995; 108:610-618
42. Cartwright RD, Diaz F, Lloyd S: The effects of sleep posture and sleep stage on apnea frequency. *Sleep* 1991; 14:351-353
43. Cartwright RD, Samelson CF: The effects of a nonsurgical treatment for obstructive sleep apnea. *JAMA* 1982; 248:705-709
44. Cartwright RD: Effect of sleep position on sleep apnea severity. *Sleep* 1984; 7:110-114
45. Catley DM, Thornton C, Jordan C, Lehane JR, Royston D, Jones JG: Pronounced, episodic oxygen desaturation in the postoperative period: its association with ventilatory pattern and analgesic regimen. *Anesthesiology* 1985; 63:20-28
46. Chauvin M, Hongnat JM, Mourgeon E, Lebrault C, Bellenfant P, Alfonsi P: Equivalence of postoperative analgesia with patient-controlled intravenous or epidural alfentanil. *Anesth Analg* 1993, 76:1251-1258
47. Christensen V: Respiratory depression after epidural morphine. *Br J Anaesth* 1980; 52:841
48. Chung F, Subramanyam R, Liao P, Sasaki E, Shapiro C, Sun Y: High STOP-Bang score indicates a high probability of obstructive sleep apnoea. *Br J Anaesth* 2012; 108:768-775

49. Chung F, Ward B, Ho J, Yuan H, Kayumov L, Shapiro C: Preoperative identification of sleep apnea risk in elective surgical patients using the Berlin questionnaire. *J Clin Anesth* 2007; 19:130-134
50. Chung F, Yegneswaran B, Herrera F, Shenderey A, Shapiro CM: Patients with difficult intubation may need referral to sleep clinics. *Anesth Analg* 2008; 107:915-920
51. Chung F, Yegneswaran B, Liao P, Chung SA, Vairavanathan S, Islam S, Khajehdehi A, Shapiro CM: Validation of the Berlin questionnaire and American Society of Anesthesiologists checklist as screening tools for obstructive sleep apnea in surgical patients. *Anesthesiology* 2008; 108:822-830
52. Chung R, Yegneswaran B, Liao P, Chung SA, Vairavanathan S, Islam S, Khajehdehi A, Shapiro CM: STOP questionnaire: a tool to screen patients for obstructive sleep apnea. *Anesthesiology* 2008; 108:812-821
53. Clark GT, Arand D, Chung E, Tong D: Effect of anterior mandibular positioning on obstructive sleep apnea. *Am Rev Respir Dis* 1993; 147:624-629
54. Clark GT, Blumenfeld I, Yoffe N, Peled E, Lavie P: A crossover study comparing the efficacy of continuous positive airway pressure with anterior mandibular positioning devices on patients with obstructive sleep apnea. *Chest* 1996; 109:1477-1483
55. Clyburn PA, Rosen M, Vickers MD: Comparison of the respiratory effects of i.v. infusions of morphine and regional analgesia by extradural block. *Br J Anaesth* 1990; 64:446-449
56. Collop NA, Block AJ, Hellard D: The effect of nightly nasal CPAP treatment on underlying obstructive sleep apnea and pharyngeal size. *Chest* 1991; 99:855-860
57. Colmenero C, Esteban R, Albarino AR, Colmenero B: Sleep apnoea syndrome associated with maxillofacial abnormalities. *J Laryngol Otol* 1991; 105:94-100
58. Coté CJ, Posner KL, Domino KB: Death or neurologic injury after tonsillectomy in children with a focus on Obstructive Sleep Apnea: Houston, We Have a Problem! *Anesth Analg*. 2013 Jul 10. [Epub ahead of print]
59. Craig DB, Wahba WM, Don HF, Couture JG, Becklake MR: "Closing volume" and its relationship to gas exchange in seated and supine positions. *J Appl Physiol* 1971; 31:717-721
60. Croft CB, Brockbank MJ, Wright A, Swanston AR: Obstructive sleep apnoea in children undergoing routine tonsillectomy and adenoidectomy. *Clin Otolaryngol* 1990; 15:307-314
61. Cullen DJ: Obstructive sleep apnea and postoperative analgesia - a potentially dangerous combination. *J Clin Anesth* 2001; 13:83-85
62. Dahlqvist J, Dahlqvist A, Marklund M, Berggren D, Stenlund H, Franklin KA: Physical findings in the upper airways related to obstructive sleep apnea in men and women. *Acta Otolaryngol* 2007; 127:623-630
63. Daley MD, Sandler AN, Turner KE, Vosu H, Slavchenko P: A comparison of epidural and intramuscular morphine in patients following cesarean section. *Anesthesiology* 1990, 72:289-294
64. Davies CW, Crosby JH, Mullins RL, Barbour C, Davies RJ, Stradling JR: Case-control study of 24 hour ambulatory blood pressure in patients with obstructive sleep apnoea and normal matched control subjects. *Thorax* 2000; 55:736-740
65. Davies RJ, Vardi-Visy K, Clarke M, Stradling JR: Identification of sleep disruption and sleep disordered breathing from the systolic blood pressure profile. *Thorax* 1993; 48:1242-1247

66. Davies RJO, Ali NJ, Stradling JR: Neck circumference and other clinical features in the diagnosis of the obstructive sleep apnoea syndrome. *Thorax* 1992; 47:101-105
67. Davies RJO, Stradling JR: The relationship between neck circumference, radiographic pharyngeal anatomy, and obstructive sleep apnoea syndrome. *Eur Respir J* 1990; 3:509-514
68. Dawson PJ, Libreri FC, Jones DJ, Libreri G, Bjorkstein AR, Royse CF: The efficacy of adding a continuous intravenous morphine infusion to patient-controlled analgesia (PCA) in abdominal surgery. *Anaesth Intensive Care* 1995, 23:453-458
69. DeBerry-Borowiecki BD, Kukwa K, Blanks RHI: Cephalometric analysis for diagnosis and treatment of obstructive sleep apnea. *Laryngoscope* 1988; 98:226-234
70. Deegan PC, McNicolas WT: Predictive value of clinical features for the obstructive sleep apnoea syndrome. *Eur Respir J* 1996; 9:117-124
71. Dempsey JA, Skatrud JB, Jacques AJ, Ewanowski SJ, Woodson BT, Hanson PR, Goodman B: Anatomic determinants of sleep-disordered breathing across the spectrum of clinical and nonclinical male subjects. *Chest* 2002; 122:840-851
72. Dhonneur G, Combes X, Leroux B, Duvaldestin P: Postoperative obstructive apnea. *Anesth Analg* 1999; 89:762-767
73. Dixon BJ, Dixon JB, Carden JR, Burn AJ, Schachter LM, Playfair JM, Laurie CP, O'Brien PE: Preoxygenation is more effective in the 25° head-up position than in the supine position in severely obese patients: a randomized controlled study. *Anesthesiology* 2005; 102:1110-1115
74. Dixon JB, Schachter LM, O'Brien PE: Predicting sleep apnea and excessive day sleepiness in the severely obese: indicators for polysomnography. *Chest* 2003; 123:1134-1141
75. Do KL, Ferreyra H, Healy JF, Davidson TM: Does tongue size differ between patients with and without sleep-disordered breathing? *Laryngoscope* 2000; 110:1552-1555
76. Dominguez-Cherit G, Gonzalez R, Borunda D, Pedroza J, Gonzalez-Barranco J, Herrera MF: Anesthesia for morbidly obese patients. *World J Surg* 1998; 22:969-973 Erratum in: *World J Surg* 1998 Nov;22(11):1182
77. Doyle E, Harper I, Morton NS: Patient-controlled analgesia with low dose background infusions after lower abdominal surgery in children. *Br J Anaesth* 1993, 71:818-822
78. Doyle E, Robinson D, Morton NS: Comparison of patient-controlled analgesia with and without a background infusion after lower abdominal surgery in children. *Br J Anaesth* 1993, 71:670-673
79. Duran J, Esnaola S, Rubio R, Iztueta A: Obstructive sleep apnea-hypopnea and related clinical features in a population-based sample of subjects aged 30 to 70 yr. *Am J Respir Crit Care Med* 2001; 163:685-689
80. Dyken ME, Lin-Dyken DC, Poulton S, Zimmerman MB, Sedars E: Prospective polysomnographic analysis of obstructive sleep apnea in down syndrome. *Arch Pediatr Adolesc Med* 2003; 157:655-560
81. Dyken ME, Somers VK, Yamada T, Ren ZY, Zimmerman MB: Investigating the relationship between stroke and obstructive sleep apnea. *Stroke* 1996; 27:401-407
82. Ebeo CT, Benotti PN, Byrd RP, Elmaghraby Z, Lui J: The effect of bi-level positive pressure airway pressure on postoperative pulmonary function following gastric surgery for obesity. *Respir Med* 2002; 96:672-676
83. El-Baz N, Goldin M: Continuous epidural infusion of morphine for pain relief after cardiac operations. *J Thorac Cardiovasc Surg* 1987, 93:878-883

84. Ellis DJ, Millar WL, Reisner LS: A randomized double-blind comparison of epidural versus intravenous fentanyl infusion for analgesia after cesarean section. *Anesthesiology* 1990; 72:981-986
85. Engleman HM, Martin SE, Deary IJ, Douglas NJ: Effect of continuous positive airway pressure treatment on daytime function in sleep apnoea/hypopnoea syndrome. *Lancet* 1994; 343:572-575
86. Engleman HM, Martin SE, Deary IJ, Douglas NJ: Effect of CPAP therapy on daytime function in patients with mild sleep apnoea/hypopnoea syndrome. *Thorax* 1997; 52:114-119
87. Engleman HM, Martin SE, Kingshott RN, Mackay TW, Deary IJ, Douglas NJ: Randomised placebo controlled trial of daytime function after continuous positive airway pressure (CPAP) therapy for the sleep apnoea/hypopnoea syndrome. *Thorax* 1998; 53:341-345
88. Erdamar B, Suoglu Y, Cuhadaroglu C, Katircioglu S, Guven M: Evaluation of clinical parameters in patients with obstructive sleep apnea and possible correlation with the severity of the disease. *Eur Arch Otorhinolaryngol* 2001; 258:492-495
89. Etches RC: Respiratory depression associated with patient-controlled analgesia: a review of eight cases. *Can J Anaesth* 1994; 41:125-132
90. Eveloff SE, Rosenberg CC, Carlisle C, Millman RP: Efficacy of a Herbst mandibular advancement device in obstructive sleep apnea. *Am Rev Crit Care Med* 1994; 149:905-909
91. Ezri T, Medalion B, Weisenberg M, Szmuk P, Warters RD, Charuzi I: Increased body mass index per se is not a predictor of difficult laryngoscopy. *Can J Anaesth* 2003; 50:179-183
92. Faccenda JF, Mackay TW, Boon NA, Douglas NJ: Randomized placebo-controlled trial of continuous positive airway pressure on blood pressure in the sleep apnea-hypopnea syndrome. *Am J Respir Crit Care Med* 2001; 163:344-348
93. Ferguson KA, Ono T, Lowe AA, al-Majed S, Love LL, Fleetham JA: A short-term controlled trial of an adjustable oral appliance for the treatment of mild to moderate obstructive sleep apnoea. *Thorax* 1997; 52:362-368
94. Ferguson KA, Ono T, Lowe AA, Keenan SP, Fleetham JA: A randomized crossover study of an oral appliance vs nasal-continuous positive airway pressure in the treatment of mild-moderate obstructive sleep apnea. *Chest* 1996; 109:1269-1275
95. Ferguson KA, Ono T, Lowe AA, Ryan F, Fleetham JA: The relationship between obesity and craniofacial structure in obstructive sleep apnoea. *Chest* 1995; 108:375-381
96. Fernandes do Prado LB, Li X, Thompson R, Marcus CL: Body position and obstructive sleep apnea in children. *Sleep* 2002; 25:66-71
97. Fletcher EC, De Behnke RD, Lovoi MS, Gorin AB: Undiagnosed sleep apnea in patients with essential hypertension. *Ann Intern Med* 1985; 103:190-195
98. Fogel RB, Malhotra A, Dalagiorgou G, Robinson MK, Jakab M, Kikinis R, Pittman SD, White DP: Anatomic and physiologic predictors of apnea severity in morbidly obese subjects. *Sleep* 2003; 26:150-155
99. Fogel RB, Malhotra A, Pillar G, Pittman SD, Dunaif A, White DP: Increased prevalence of obstructive sleep apnea syndrome in obese women with polycystic ovary syndrome. *J Clin Endocrinology Metabolism* 2001; 86:1175-1180

100. Fregosi RF, Quan SF, Karmingk KL, Morgan WJ, Goodwin JL, Caberera R, Gmitro A: Sleep-disordered breathing, pharyngeal size and soft tissue anatomy in children. *J Appl Physiol* 2003; 95:2030-2038
101. Frey WC, Pilcher J: Obstructive sleep-related breathing disorders in patients evaluated for bariatric surgery. *Obes Surg* 2003; 13:676-683
102. Friedman M, Tanyeri H, La Rosa M, Landsberg R, Vaidyanathan K, Pieri S, Caldarelli D: Clinical predictors of obstructive sleep apnea. *Laryngoscope* 1999; 109:1901-1907
103. Gali B, Whalen FX Jr, Gay PC, Olson EJ, Schroeder DR, Plevak DJ, Morgenthaler TI: Management plan to reduce risks in perioperative care of patients with presumed obstructive sleep apnea syndrome. *J Clin Sleep Med* 2007; 3:582-588
104. Gali B, Whalen FX, Schroeder DR, Gay PC, Plevak DJ: Identification of patients at risk for postoperative respiratory complications using a preoperative obstructive sleep apnea screening tool and postanesthesia care assessment. *Anesthesiology* 2009; 110:869-877
105. Galvin JR, Rooholamini SA, Stanford W: Obstructive sleep apnea: diagnosis with ultrafast CT. *Radiology* 1989; 171:775-778
106. Gaszynski T, Tokarz A, Piotrowski D, Machala W: Boussignac CPAP in the postoperative period in the morbidly obese patients. *Obes Surg* 2007; 17:452-456
107. Gay PC, Herold DL, Olson EJ: A randomized, double-blind clinical trial comparing continuous positive airway pressure with a novel bilevel pressure system for treatment of obstructive sleep apnea syndrome. *Sleep* 2003; 26:864-869
108. Gentil B, de Larminat JM, Boucherez C, Lienhart A: Difficult intubation and obstructive sleep apnoea syndrome. *Br J Anaesth* 1994; 72:368
109. Gentil B, Lienhart A, Fleury B: Enhancement of postoperative desaturation in heavy snorers. *Anesth Analg* 1995; 81:389-392
110. George CF, Millar TW, Kryger MH: Sleep apnea and body position during sleep. *Sleep* 1988; 11:90-99
111. Goldstein NA, Sculerati N, Walsleben JA, Bhatia N, Friedman DM, Rapoport DM: Clinical diagnosis of pediatric obstructive sleep apnea validated by polysomnography. *Otolaryngol Head Neck Surg* 1994; 111:611-617
112. Gonçalves SC, Martinez D, Gus M, de Abreu-Silva EO, Bertoluci C, Dutra I, Branchi T, Moreira LB, Fuchs SC, de Oliveira AC, Fuchs FD: Obstructive sleep apnea and resistant hypertension: A case controlled study. *Chest* 2007; 132:1858-1862
113. Grunstein R, Stenlof K, Hedner J, Sjostrom L: Impact of obstructive sleep apnea and sleepiness on metabolic and cardiovascular risk factors in the Swedish Obese Subjects (SOS) Study. *Int J Obes Relat Metab Disord* 1995; 19:410-418
114. Grunstein R, Wilcox I, Yang TS, Gould Y, Hedner J: Snoring and sleep apnoea in men: association with central obesity and hypertension. *Int J Obes Relat Metab Disord* 1993; 17:533-540
115. Guilleminault C, Connolly S, Winkle R: Cardiac arrhythmia and conduction disturbances during sleep in 400 patients with sleep apnea syndrome. *Am J Cardiol* 1983; 52:490-494
116. Guilleminault C, Li K, Chen NH, Poyares D: Two-point palatal discrimination in patients with upper airway resistance syndrome, obstructive sleep apnea syndrome, and normal control subjects. *Chest* 2002; 122:866-870
117. Guilleminault C, Philip P, Robinson A: Sleep and neuromuscular disease: bilevel positive airway pressure by nasal mask as a treatment for sleep disordered breathing in patients with neuromuscular disease. *J Neurol Neurosurg Psychiatry* 1998; 65:225-232

118. Guinard JP, Mavrocordatos P, Chiolero R, Carpenter RL: A randomized comparison of intravenous versus lumbar and thoracic epidural fentanyl for analgesia after thoracotomy. *Anesthesiology* 1992, 77:1108-1115
119. Gupta RM, Gay PC: Postoperative complications in patients with undiagnosed obstructive sleep apnea. *Sleep* 1999; 22(suppl):691
120. Gupta RM, Parvizi J, Hanssen AD, Gay PC: Postoperative complications in patients with obstructive sleep apnea syndrome undergoing hip or knee replacement: a case-control study. *Mayo Clin Proc* 2001; 76:897-905
121. Gurubhagavatula I, Maislin G, Pack AI: An algorithm to stratify sleep apnea risk in a sleep disorders clinic population. *Am J Respir Crit Care Med* 2001; 164:1904-1909
122. Gust R, Gottschalk A, Schmidt H, Bottiger BW, Bohrer H, Martin E: Effects of continuous (CPAP) and bi-level positive airway pressure (BiPAP) on extravascular lung water after extubation of the trachea in patients following coronary artery bypass grafting. *Intensive Care Med* 1996; 22:1345-1350
123. Gustafsson LL, Friberg-Nielsen S, Garle M, Mohall A, Rane A, Schildt B, Symreng T: Extradural and parenteral morphine: Kinetics and effects in postoperative pain. A controlled clinical study. *Br J Anaesth* 1982, 54:1167-1174
124. Haraldsson PO, Carefelt C, Knutsson E, Persson HE, Rinder J: Preliminary report: validity of symptom analysis and daytime polysomnography in diagnosis of sleep apnea. *Sleep* 1992; 15:261-263
125. Harbison J, O'Reilly P, McNicholas WT: Cardiac rhythm disturbances in the obstructive sleep apnea syndrome: effects of nasal continuous positive airway pressure therapy. *Chest* 2000; 118:591-595
126. Harman EM, Wynne JW, Block AJ: The effect of weight loss on sleep-disordered breathing and oxygen desaturation in morbidly obese men. *Chest* 1982; 82:291-294
127. Hartzell CW: Sleeping beauty: a case of pickwickian syndrome. *J Emerg Nurs* 1989; 15:8-11
128. Hasenbos M, Simon M, van Egmond J, Folgering H, van Hoorn P: Postoperative analgesia by nicomorphine intramuscularly versus high thoracic epidural administration. Effects on ventilatory and airway occlusion pressure responses to CO₂. *Acta Anaesth Scand* 1986, 30:426-430
129. Hasenbos M, van Egmond J, Gielen M, Crul JF: Post-operative analgesia by epidural versus intramuscular nicomorphine after thoracotomy. Part II. *Acta Anaesth Scand* 1985, 29:577-582
130. Hasenbos M, van Egmond J, Gielen M, Crul JF: Post-operative analgesia by high thoracic epidural versus intramuscular nicomorphine after thoracotomy. Part III. The effects of per- and post-operative analgesia on morbidity. *Acta Anaesth Scand* 1987, 31:608-615
131. Hattori H, Hattori C, Yonekura A, Nishimura T: Two cases of sleep apnea syndrome caused by primary hypothyroidism. *Acta Otolaryngol Suppl* 2003; 550:59-64
132. Henke KG, Grady JJ, Kuna SI: Effect of nasal continuous positive airway pressure on neuropsychological function in sleep apnea-hypopnea syndrome: a randomized, placebo-controlled trial. *Am J Respir Crit Care Med* 2001; 163:911-917
133. Hierl T, Humpfner-Hierl H, Frerich B, Heisgen U, Bosse-Henck A, Hemprich A: Obstructive sleep apnea syndrome: results and conclusions of a principal component analysis. *J Craniomaxillofac Surg* 1997; 25:181-185

134. Hiremath AS, Hillman DR, James AL, Noffsinger WJ, Platt PR, Singer SL: Relationship between difficult tracheal intubation and obstructive sleep apnea. *Br J Anaesth* 1998; 80:606-611
135. Hla KM, Young TB, Bidwell T, Palta M, Skatrud JB, Dempsey J: Sleep apnea and hypertension. A population-based study. *Ann Intern Med* 1994; 120:382-388
136. Hochban W, Brandenburg U: Morphology of the viscerocranium in obstructive sleep apnoea syndrome - cephalometric evaluation of 400 patients. *J Craniomaxillofac Surg* 1994; 22:205-213
137. Hoffman C, Nakamoto D, Okal R, Clochesy JM: Effect of transport time and FiO₂ on SpO₂ during transport from the OR to the PACU. *Nurse Anesth* 1991; 2:119-125
138. Hoffstein V, Mateika S: Cardiac arrhythmias, snoring, and sleep apnea. *Chest* 1994; 106:466-471
139. Hoffstein V, Mateika S: Differences in abdominal and neck circumferences in patients with and without sleep apnoea. *Eur Resp J* 1992; 5:377-381
140. Hoffstein V, Szalai JP: Predictive value of clinical features in diagnosing obstructive sleep apnea. *Sleep* 1993; 16:118-122
141. Horner RL, Mohiaddin RH, Lowell DG, Shea SA, Burman ED, Longmore DB, Guz A: Sites and sizes of fat deposits around the pharynx in obese patients with obstructive sleep apnoea and weight matched controls. *Eur Respir J* 1989; 2:613-622
142. Hsu HO, Hickey RF: Effect of posture on functional residual capacity postoperatively. *Anesthesiology* 1976; 44:520-521
143. Huerta S, DeShields S, Shpiner R, Li Z, Liu C, Sawicki M, Arteaga J, Livingston EH: Safety and efficacy of postoperative continuous positive airway pressure to prevent pulmonary complications after Roux-en-Y gastric bypass. *J Gastrointest Surg* 2002; 6:354-358
144. Hung J, Whitford EG, Parsons RW, Hillman DR: Association of sleep apnoea with myocardial infarction in men. *Lancet* 1990; 336:261-264
145. Ichioika M, Tojy N, Yoshizawa M, Chida M, Miyazato I, Taniyai S, Marumo F, Nakazawa K, Hasegawa M: A dental device for the treatment of obstructive sleep apnea: a preliminary study. *Otolaryngol Head Neck Surg* 1991; 104:555-558
146. Inagaki Y, Mashimo T, Yoshiya I: Segmental analgesic effect and reduction of halothane MAC from epidural fentanyl in humans. *Anesth Analg* 1992; 74:856-864
147. Ingman T, Nieminen T, Hurmerinta K: Cephalometric comparison of pharyngeal changes in subjects with upper airway resistance syndrome or obstructive sleep apnoea in upright and supine positions. *Eur J Orthod* 2004; 26:321-326
148. Ishii L, Godoy A, Ishman SL, Gourin CG, Ishii M: The nasal obstruction symptom evaluation survey as a screening tool for obstructive sleep apnea, *Arch Otolaryngol Head Neck Surg* 2011; 137:119-123
149. Isono S, Remmers JE, Tanaka A, Sho Y, Sato J, Nishino T: Anatomy of pharynx in patients with obstructive sleep apnea and in normal subjects. *J Appl Physiol* 1997; 82:1319-1326
150. Isono S, Shimada A, Utsugi M, Konno A, Nishino T: Comparison of static mechanical properties of the passive pharynx between normal children and children with sleep-disordered breathing. *Am J Respir Crit Care Med* 1998; 157:1204-1212
151. Isono S, Suzukawa M, Sho Y, Ohmura A, Kudo Y, Misawa K, Inaba S, Nishino T: Preoperative nocturnal desaturations as a risk factor for late postoperative nocturnal desaturations. *Br J Anaesth* 1998; 80:602-605

152. Isono S, Tanaka A, Ishikawa T, Tagaito Y, Nishino T: Sniffing position improves pharyngeal airway patency in anesthetized patients with obstructive sleep apnea. *Anesthesiology* 2005; 103:489-494
153. Isono S, Tanaka A, Nishino T: Lateral position decreases collapsibility of the passive pharynx in patients with obstructive sleep apnea. *Anesthesiology* 2002; 97:780-785
154. Isono S, Tanaka A, Sho Y, Konno A, Nishino T: Advancement of the mandible improves velopharyngeal airway patency. *J Appl Physiol* 1995; 79:2132-2138
155. Issa FG, Sullivan CE: The immediate effects of nasal continuous positive airway pressure treatment on sleep pattern in patients with obstructive sleep apnea syndrome. *Electroencephalogr Clin Neurophysiol* 1986; 63:10-17
156. Itasaka Y, Miyazaki S, Ishikawa K, Togawa K: The influence of sleep position and obesity on sleep apnea. *Psychiatry Clin Neurosci* 2000; 54:340-341
157. Iyer US, Koh KF, Chia NC, Macachor J, Cheng A: Perioperative risk factors in obese patients for bariatric surgery: a Singapore experience. *Singapore Med J* 2011; 52:94-99
158. Jacobson L, Phillips PD, Hull CJ, Conacher ID: Extradural versus intramuscular diamorphine. A controlled study of analgesic and adverse effects in the postoperative period. *Anaesthesia* 1983; 38:10-18
159. James AL, Runciman M, Burton MJ, Freeland AP: Investigation of cardiac function in children with suspected obstructive sleep apnea. *J Otolaryngol* 2003; 32:151-154
160. Jamieson A, Guilleminault C, Partinin M, Quera-Salva MA: Obstructive sleep apneic patients have craniomandibular abnormalities. *Sleep* 1986; 9:469-477
161. Jenkinson C, Davies RJO, Mullins R, Stradling JR: Comparison of therapeutic and subtherapeutic nasal continuous positive airway pressure for obstructive sleep apnoea: a randomised prospective parallel trial. *Lancet* 1999; 353:2100-2105
162. Jenkinson C, Stradling J, Petersen S: How should we evaluate health status? A comparison of three methods in patients presenting with obstructive sleep apnoea. *Qual Life Res* 1998; 7:95-100
163. Joris JL, Sottiaux TM, Chiche JD, Desaive CJ, Lamy ML: Effect of bi-level positive airway pressure (BiPAP) nasal ventilation on the postoperative pulmonary restrictive syndrome in obese patients undergoing gastroplasty. *Chest* 1997; 111:665-670
164. Kapuniaie LE, Andrew DJ, Crowell DH, Pearce JW: Identifying sleep apnea from self-reports. *Sleep* 1988; 11:430-436
165. Katsumata K, Okada T, Miyao M, Katsumata Y: High incidence of sleep apnea syndrome in a male diabetic population. *Diabetes Res clin Pract* 1991; 13:45-51
166. Katz I, Stradling J, Slutsky AS, Zamel N, Hoffstein V: Do patients with obstructive sleep apnea have thick necks? *Am Rev Respir Dis* 1990; 141:1228-1231
167. Kaw R, Pasupuleti V, Walker E, Ramaswamy A, Foldvary-Schafer N: Postoperative complications in patients with obstructive sleep apnea. *Chest* 2012; 141:436-441
168. Keamy MF, Cadieux RJ, Kofke WA, Kales A: The occurrence of obstructive sleep apnea in a recovery room patient. *Anesthesiology* 1987; 66:232-234
169. Kiely JL, Murphy M, McNicholas WT: Subjective efficacy of nasal CPAP therapy in obstructive sleep apnoea syndrome: a prospective controlled study. *Eur Respir J* 1999; 13:1086-1090
170. Kiil C, Rosenberg J: Hemodynamic effects of nasal continuous positive airway pressure after abdominal surgery. *J Anesth* 2003; 17:136-138

171. Kim JA, Lee JJ, Jung HH: Predictive factors of immediate postoperative complications after uvulopalatopharyngoplasty. *Laryngoscope* 2005; 115:1837-1840
172. Kim JA, Lee JJ: Preoperative predictors of difficult intubation in patients with obstructive sleep apnea syndrome. *Can J Anaesth* 2006; 53:393-397
173. Kindgen-Milles D, Muller E, Buhl R, Bohner H, Ritter D, Sandmann W, Tarnow J: Nasal-continuous positive airway pressure reduces pulmonary morbidity and length of stay following thoracoabdominal aortic surgery. *Chest* 2005; 128:821-828
174. Knill RL, Clement JL, Thompson WR: Epidural morphine causes delayed and prolonged ventilatory depression. *Can Anaesth Soc J* 1981; 28:537-543
175. Koehler U, Fus E, Grimm W, Pankow W, Schafer H, Stammnitz A, Peter JH: Heart block in patients with obstructive sleep apnea: pathogenetic factors and effects of treatment. *Eur Respir J* 1998; 11:434-439
176. Koehler U, Schafer H: Is obstructive sleep apnea a risk factor for myocardial infarction and cardiac arrhythmias in patients with coronary heart disease? *Sleep* 1996; 19:283-286
177. Konermann M, Sanner BM, Vyleta M, Laschewski F, Groetz J, Sturm A, Zidek W: Use of conventional and self-adjusting nasal continuous positive airway pressure for treatment of severe obstructive sleep apnea syndrome: a comparative study. *Chest* 1998; 113:714-718
178. Koziej M, Cieslicki JK, Gorzelak K, Sliwinski P, Zielinski J: Hand-scoring of MESAM 4 recordings is more accurate than automatic analysis in screening for obstructive sleep apnoes. *Eur Respir J* 1994; 7:1771-1775
179. Kraiczi H, Peker Y, Caidahl K, Samuelsson A, Hedner J: Blood pressure, cardiac structure and severity of obstructive sleep apnea in a sleep clinic population. *J Hypertens* 2001; 19:2071-2078
180. Kramer MF, de la Chaux R, Fintelmann R, Rasp G: NARES: a risk factor for obstructive sleep apnea? *Am J Otolaryngol* 2004; 25:173-177
181. Krieger J, Sforza E, Apprill M, Lampert E, Weitzenblum E, Ratomaharo J: Pulmonary hypertension, hypoxemia and hypercapnea in obstructive sleep apnea patients. *Chest* 1989; 96:729-737
182. Krieger JE, Weitzenblum E, Monassier JP: Dangerous hypoxemia during continuous positive airways pressure treatment of obstructive sleep apnea. *Lancet* 1983; 2:1429-1430
183. Kump K, Whalen C, Tishler PV, Browner I, Ferrette V, Strohl KP, Rosenberg C, Redline S: Assessment of the validity and the utility of a sleep-symptom questionnaire. *Am J Respir Crit Care Med* 1994; 150:735-741
184. Kurrek MM, Cobourn C, Wojtasik Z, Kiss A, Dain SL: Morbidity in patients with or at high risk for obstructive sleep apnea after ambulatory laparoscopic gastric banding. *Obes Surg* 2011; 21:1494-1498
185. Kushida CA, Efron B, Guilleminault C: A predictive morphometric model for the obstructive sleep apnea syndrome. *Ann Int Med* 1997; 127:581-587
186. Laaban JP, Cassuto D, Orvoen-Frija E, Iliou M-C, Mundler O, Leger D, Oppert J-M: Cardiorespiratory consequences of sleep apnea syndrome in patients with massive obesity. *Eur Respir J* 1998; 11:20-27
187. Lakdawala L: Creating a safer perioperative environment with an obstructive sleep apnea screening tool. *J Perianesth Nurs* 2011; 26:15-24
188. Laks L, Lehrhaft B, Grunstein RR, Sullivan CE: Pulmonary hypertension in obstructive sleep apnoea. *Eur Respir J* 1995; 8:537-541

189. Lamarche Y, Martin R, Reiher J, Blaise G: The sleep apnoea syndrome and epidural morphine. *Can Anaesth Soc J* 1986; 33:231-233
190. Lamphere J, Roehrs T, Wittig R, Zorick F, Conway WA, Roth T: Recovery of alertness after CPAP in apnea. *Chest* 1989; 1364-1367
191. Laursen SB, Dreijer B, Hemmingsen C, Jacobsen E: Bi-level positive airway pressure treatment of obstructive sleep apnoea syndrome. *Respiration* 1998; 65:114-119
192. Lavie P, Herrer P, Hoffstein V: Obstructive sleep apnea syndrome as a risk factor for hypertension: population study. *BMJ* 2000; 320:479-482
193. Levine OR, Simpser M. Alveolar hypoventilation and cor pulmonale associated with chronic airway obstruction in infants with Down syndrome. *Clin Pediatr* 1982; 21:25-29
194. Levy P, Pepin JL, Deschaux-Blanc C, Paramelle B, Brambilla C: Accuracy of oximetry for detection of respiratory disturbances in sleep apnea syndrome. *Chest* 1996; 109:395-399
195. Liao P, Yegneswaran B, Vairavanathan S, Zilberman P, Chung F: Postoperative complications in patients with obstructive sleep apnea: a retrospective matched cohort study. *Can J Anaesth* 2009; 56:819-828
196. Liistro G, Rombaux P, Belge C, Dury M, Aubert G, Rodenstein DO: High Mallampati score and nasal obstruction are associated risk factors for obstructive sleep apnoea. *Eur Respir J* 2003; 21:248-252
197. Liston R, Deegan P, McCreery C, McNicholas WT: Role of respiratory sleep disorders in the pathogenesis of nocturnal angina and arrhythmias. *Postgrad Med J* 1994; 70:275-280
198. Lofaso F, Coste A, d'Ortho MP, Zerah-Lancner F, Delclaux C, Goldenberg F, Harf A: Nasal obstruction as a risk factor for sleep apnoea syndrome. *Eur Respir J* 2000; 16:639-643
199. Logan AG, Perlikowski SM, Mente A, Tisler A, Niroumand M, Leung RS, Bradley TD: High prevalence of unrecognized sleep apnea in drug-resistant hypertension. *J Hypertens* 2001; 19:2271-2277
200. Lopez PP, Stefan B, Schulman CI, Byers PM: Prevalence of sleep apnea in morbidly obese patients who present for weight loss surgery evaluation: more evidence for routine screening for obstructive sleep apnea before weight loss surgery. *Am Surg* 2008; 74:834-838
201. Lorch DG, Sahn SA: Post-extubation pulmonary edema following anesthesia induced by upper airway obstruction. Are certain patients at increased risk? *Chest* 1986; 90:802-805
202. Loreda JS, Ancoli-Israel S, Dimsdale JE: Effect of continuous positive airway pressure vs placebo continuous positive airway pressure on sleep quality in obstructive sleep apnea. *Chest* 1999; 116:1545-1549
203. Lowe AA, Ono T, Ferguson KA, Pae EK, Ryan CF, Fleetham JA: Cephalometric comparisons of craniofacial and upper airway morphology by skeletal subtype and gender in patients with obstructive sleep apnea. *Am J Orthod Dentofacial Orthop* 1996; 110:653-654
204. Lowe AA, Santamaria JD, Fleetham JA, Price C: Facial morphology and obstructive sleep apnoea. *Am J Orthod Dentofac Orthop* 1986; 90:484-491
205. Lyberg T, Krogstad O, Djupesland G: Cephalometric analysis in patients with obstructive sleep apnoea syndrome: I. Skeletal morphology. *J Laryngol Otol* 1989; 103:287-292
206. Lyberg T, Krogstad O, Djupesland G: Cephalometric analysis in patients with obstructive sleep apnoea syndrome: II. Soft tissue morphology. *J Laryngol Otol* 1989; 103:293-297

207. Magalang UJ, Domochowski J, Veeramachaneni S, Draw A, Mador MJ, El Solh A, Grant BJB: Prediction of the Apnea-Hypopnea Index From Overnight Pulse Oximetry. *Chest* 2003; 124:1694-1701
208. Marcus CL, Keens TG, Bautista DB, von Pechmann WS, Ward Davidson SL: Obstructive sleep apnea in children with Down syndrome. *Pediatrics* 1991; 88:132-139
209. Marcus CL, Ward SLD, Mallory GB, Rosen CL, Beckerman RC, Weese-Mayer DE, Brouillette RT, Trant HT. Use of nasal continuous positive airway pressure as treatment of childhood obstructive sleep apnea. *J Pediatr* 1995; 127:88-94
210. Mathes DD, Conaway MR, Ross WT: Ambulatory surgery: room air versus nasal cannula oxygen during transport after general anesthesia. *Anesth Analg* 2001; 93:917-921
211. Mayer P, Pepin JL, Bettega G, Veale D, Ferretti G, Deschaux C, Levy P: Relationship between body mass index, age and upper airway measurements in snorers and sleep apnoea patients. *Eur Respir J* 1996; 9:1801-1809
212. Mcevoy RD, Sharp DJ, Thornton AT: The effects of posture on obstructive sleep apnea. *Am Rev Respir Dis* 1986; 133:662-666
213. McNeely JK, Trentadue NC: Comparison of patient-controlled analgesia with and without nighttime morphine infusion following lower extremity surgery in children. *J Pain Symptom Manage.* 1997, 13:268-273.
214. Mehta A, Qian J, Petocz P, Darendeliler MA, Cistulla PA: A randomized, controlled study of a mandibular advancement splint for obstructive sleep apnea. *Am J Respir Crit Care Med* 2001; 163:1457-1461
215. Meng L: Postoperative nausea and vomiting with application of postoperative continuous positive airway pressure after laparoscopic gastric bypass. *Obes Surg* 2010; 20:876-880
216. Meurice JC, Marc I, Carrier G, Series F: Efficiency of auto-CPAP in the treatment of obstructive sleep apnea/hypopnea syndrome. *Am J Respir Crit Care Med* 1996; 153:794-798
217. Meyer RJ: Obesity and difficult intubation. *Anaesth Intens Care* 1994; 22:314-315
218. Miller WP: Cardiac arrhythmias and conduction disturbances in the sleep apnea syndrome: prevalence and significance. *Am J Med* 1982; 73:317-321
219. Minemura H, Akashiba T, Yamamoto H, Akahoshi T, Kosaka N, Horie T: Acute effects of nasal continuous positive airway pressure on 24-hour blood pressure and catecholamines in patients with obstructive sleep apnoea. *Int Med* 1998; 37:1009-1013
220. Montserrat JM, Ferrer M, Hernandez L, Farre R, Vilagut G, Navajas D, Badia JR, Carrasco E, De Pablo J, Ballester E: Effectiveness of CPAP treatment in daytime function in sleep apnea syndrome: a randomized controlled study with an optimized placebo. *Am J Respir Crit Care Med* 2001; 164:608-613
221. Mortimore IL, Marshall I, Wraith PK, Sellar RJ, Douglas NJ: Neck and total body fat deposition in nonobese and obese patients with sleep apnea compared with that in control subjects. *Am J Resp Crit Care Med* 1998; 157:280-283
222. Moura SM, Bittencourt LR, Bagnato MC, Lucas SR, Tufik S, Nery LE: Acute effect of nasal continuous positive air pressure on the ventilatory control of patients with obstructive sleep apnea. *Respiration* 2001; 68:243-249
223. Mynster T, Jensen LM, Jensen FG, Kehlet H, Rosenberg J: The effect of posture on late postoperative oxygenation. *Anaesthesia* 1996; 51:225-227

224. Naganuma H, Okamoto M, Woodson BT, Hirose H: Cephalometric and fiberoptic evaluation as a case-selection technique for obstructive sleep apnea syndrome (OSAS). *Acta Otolaryngol* 2002 (Suppl); 547:57-63
225. Nakazawa K, Ikeda D, Ishikawa S, Makita K: A case of difficult airway due to lingual tonsillar hypertrophy in a patient with Down's syndrome. *Anesth Analg* 2003; 97:704-705
226. Nakazawa Y, Sakamoto T, Sasutake R, Yamaga K, Kotorii T, Miyahara Y, Ariyoshi Y, Kameyama T: Treatment of sleep apnea with prosthetic mandibular advancement (PMA). *Sleep* 1992; 15:499-514
227. Neill AM, Angus SM, Sajkov D, McEvoy D: Effects of sleep posture on upper airway stability in patients with obstructive sleep apnea. *Am J Respir Crit Care Med* 1997; 155:1999-2004
228. Neligan PJ, Malhotra G, Fraser M, Williams N, Greenblatt EP, Cereda M, Ochroch EA: Continuous positive airway pressure via the Boussignac system immediately after extubation improves lung function in morbidly obese patients with obstructive sleep apnea undergoing laparoscopic bariatric surgery. *Anesthesiology* 2009; 110:878-884
229. Neligan PJ, Porter S, Max B, Malhotra G, Greenblatt EP, Ochroch EA: Obstructive sleep apnea is not a risk factor for difficult intubation in morbidly obese patients. *Anesth Analg* 2009; 109:1182-1186
230. 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* 1999; 131:485-491
231. Nieminen P, Tolonen U, Lopponen H: Snoring and obstructive sleep apnea in children: a 6-month follow-up study. *Arch Otolaryngol Head Neck Surg* 2000; 126:481-486
232. Nieto FJ, Young TB, Lind SK, Shahar E, Samet JM, Redline S, D'Agostino RB, Newman AB, Lebowitz M, Pickering TG: Association of sleep-disordered breathing, sleep apnea, and hypertension in a large community-based study. *Sleep Heart Health Study. JAMA* 2000; 283:1829-1836
233. Oliven A, Aspandiarov E, Gankin I, Gaitini L, Tov N: Collapsibility of the relaxed pharynx and risk of sleep apnoea. *Eur Respir J* 2008; 32:1309-1315
234. Olson LG, Ambrogetti A, Gyulay SG: Prediction of sleep-disordered breathing by unattended overnight oximetry. *J Sleep Res* 1999; 8:51-55
235. Ostermeier AM, Roizen MF, Hautkappe M, Klock PA, Klafta JM: Three sudden postoperative respiratory arrests associated with epidural opioids in patients with sleep apnea. *Anesth Analg* 1997; 85:452-460
236. O'Sullivan RA, Hillman DR, Mateljan R, Pantin C, Finucane KE: Mandibular advancement splint: an appliance to treat snoring and obstructive sleep apnea. *Am J Respir Crit Care Med* 1995; 151:194-198
237. Owen H, Kluger MT, Ilsley AH, Baldwin AM, Fronsco RR, Plummer JL: The effect of fentanyl administered epidurally by patient-controlled analgesia, continuous infusion, or a combined technique of oxyhaemoglobin saturation after abdominal surgery. *Anaesthesia* 1993, 48:20-25
238. Pae E, Lowe AA, Sasaki K, Price C, Tsuchiya M, Fleetham JA: A cephalometric and electromyographic study of upper airway structures in the upright and supine position. *Am J Orthod Dentofac Orthop* 1994; 106:52-59
239. Pae EK, Lowe AA, Fleetham JA: Shape of the face and tongue in obstructive sleep apnoea patients - Statistical analysis of coordinate data. *Clin Orthod Res* 1999; 2:10-18

240. Paoli JR, Lauwers F, Lacassagne L, Tiberge M, Dodart L, Boutault F: Craniofacial differences according to the body mass index of patients with obstructive sleep apnoea syndrome: cephalometric study in 85 patients. *Br J Oral Maxillofac Surg* 2001; 39:40-45
241. Papageorge MB, Hunter MJ, Norris LH, Rosenberg MB: Supplemental oxygen after outpatient oral and maxillofacial surgery. *Anesth Prog* 1993; 39:24-27
242. Parikh SN, Stuchin SA, Maca C, Fallar E, Steiger D: Sleep apnea syndrome in patients undergoing total joint arthroplasty. *J Arthroplasty* 2002; 17:635-642
243. Parker RK, Holtman B, White PF: Effects of a night-time opioid infusion with PCA therapy on patient comfort and analgesic requirements after abdominal hysterectomy. *Anesthesiology* 1992; 76:362-367
244. Partinen M, Guilleminault C, Salva Ma Quera, Jamieson A: Obstructive sleep apnea and cephalometric roentgenograms. The role of anatomic upper airway abnormalities in the definition of abnormal breathing during sleep. *Chest* 1998; 93:1199-1205
245. Patel R, Norden J, Hannallah RS: Oxygen administration prevents hypoxemia during post-anesthetic transport in children. *Anesthesiology* 1988; 69:616-618
246. Peiser J, Ovnat A, Uwyed K, Lavie P, Charuzi I: Cardiac arrhythmias during sleep in morbidly obese sleep-apneic patients before and after gastric bypass surgery. *Clin Cardiol* 1985; 8:519-521
247. Pellecchia DJ, Bretz KA, Barnette RE: Postoperative pain control by means of epidural narcotics in a patient with obstructive sleep apnea. *Anesth Analg* 1987; 66:280-282
248. Penzel T, Moller M, Becker HF, Knaack L, Peter JH: Effect of sleep position and sleep stage on the collapsibility of the upper airways in patients with sleep apnea. *Sleep* 2001; 24:90-95
249. Pepin JL, Leger P, Veale D, Langevin B, Robert D, Levy P: Side effects of nasal continuous positive airway pressure in sleep apnea syndrome. *Chest* 1995; 107:375-381
250. Peppard PE, Young TB, Palta M, Skatrud J: Prospective study of the association between sleep-disordered breathing and hypertension. *N Engl J Med* 2000; 342:1378-1384
251. Pevernagie DA, Shepard JW: Relations between sleep stage, posture and effective nasal CPAP levels in OSA. *Sleep* 1992; 15:162-167
252. Pevernagie DA, Stanton AW, Sheedy PF 2nd, Daniels BK, Shepard JW Jr: Effects of body position on the upper airway of patients with obstructive sleep apnea. *Am J Respir Crit Care Med* 1995; 152:179-185
253. Phillips BA, Okeson J, Pawsani D, Gilmore R: Effect of sleep position on sleep apnea and parafunctional activity. *Chest* 1986; 90:424-429
254. Piper JG, Dirks BA, Traynelis VC, VanGilder JC: Perioperative management and surgical outcome of the acromegalic patient with sleep apnea. *Neurosurgery* 1995; 36:70-74
255. Planes C, D'Ortho MP, Foucher A, Berkani M, Leroux K, Essalhi M, Delclaux C, Quera-Salva MA, Lofaso F: Efficacy and cost of home-initiated auto-nCPAP versus conventional nCPAP. *Sleep* 2003; 26:156-160
256. Plunkett AR, McLean BC, Brooks D, Plunkett MT, Mikita JA: Does difficult mask ventilation predict obstructive sleep apnea? A prospective pilot study to identify the prevalence of OSA in patients with difficult mask ventilation under general anesthesia. *J Clin Sleep Med* 2011; 7:473-477
257. Prachartam N, Hans MG, Strohl KP, Redline S: Upright and supine cephalometric evaluation of obstructive sleep apnea syndrome and snoring subjects. *Angle Orthod* 1994; 64:63-73

258. Pradhan PS, Gliklich RE, Winkelman J: Screening for obstructive sleep apnea in patients presenting for snoring surgery. *Laryngoscope* 1997; 106:1393-1397 Erratum in: *Laryngoscope* 1997; 107:149
259. Preis C, Czerny C, Preis I, Zimpfer M: Variations in ILMA external diameters: another cause of device failure. *Can J Anaesth* 2000; 47:886-889
260. Price SD, Hawkins DB, Kahlstrom EJ: Tonsil and adenoid surgery for airway obstruction: perioperative respiratory morbidity. *Ear Nose Throat J* 1993; 72:526-531
261. Rafferty TD, Ruskis A, Sasaki C, Gee JB: Perioperative considerations in the management of tracheotomy for the obstructive sleep apnoea patient. Three illustrative case reports. *Br J Anaesth* 1980 ;52:619-622
262. Rajala R, Partinent M, Sane T, Palkonen R, Huikuri K, Seppalainen AM: Obstructive sleep apnoea syndrome in morbidly obese patients. *J Intern Med* 1991; 230:125-129
263. Rama PR, Sharma SC: Sleep apnea and complete heart block. *Clin Cardiol* 1994; 17:675-677
264. Ramachandran SK, Kheterpal S, Consens F, Shanks A, Doherty TM, Morris M, Tremper KK: Derivation and validation of a simple perioperative sleep apnea prediction score. *Anesth Analg* 2010; 110:1007-1015
265. Randazzo DN, Winters SL, Schweitzer P: Obstructive sleep apnea-induced supraventricular tachycardia. *J Electrocardiol* 1996; 29:65-67
266. Randerath WJ, Heise M, Hinz R, Ruehle KH: An individually adjustable oral appliance vs continuous positive airway pressure in mild-to-moderate obstructive sleep apnea syndrome. *Chest* 2002; 122:569-575
267. Rawal N, Sjostrand U, Christoffersson E, Dahlstrom B, Arvill A, Rydman H: Comparison of intramuscular and epidural morphine for postoperative analgesia in the grossly obese: Influence on postoperative ambulation and pulmonary function. *Anesth Analg* 1984, 63:583-592
268. Redline S, Tishler PV, Schluchter M, Aylor J, Clark K, Graham G: Risk factors for sleep-disordered breathing in children. Associations with obesity, race, and respiratory problems. *Am J Respir Crit Care Med* 1999; 159:1527-1532
269. Reeder MK, Goldman MD, Loh L, Muir AD, Casey KR, Gitlin DA: Postoperative obstructive sleep apnoea. Haemodynamic effects of treatment with nasal CPAP. *Anaesthesia* 1991; 46:849-853
270. Reeder MK, Goldman MD, Loh L, Muir AD, Casey KR, Lehane JR: Late postoperative nocturnal dips in oxygen saturation in patients undergoing major abdominal vascular surgery: predictive value of pre-operative overnight pulse oximetry. *Anaesthesia* 1992; 47:110-115
271. Reeves-Hoche K, Hudgel DW, Meck R, Witteman R, Ross A, Zwillich CW: Continuous versus bilevel positive airway pressure for obstructive sleep apnea. *Am J Respir Crit Care Med* 1995; 151:443-449
272. Reisch S, Daniuk J, Steltner H, Ruhle KH, Timmer J, Guttmann J: Detection of sleep apnea with the forced oscillation technique compared to three standard polysomnographic signals. *Respiration* 2000; 67:518-525
273. Rennotte MT, Baele P, Aubert G, Rodenstein DO: Nasal continuous positive airway pressure in the perioperative management of patients with obstructive sleep apnea submitted to surgery. *Chest* 1995; 107:367-374

274. Resta O, Foschino-Barbaro MP, Legari G, Talamo S, Bonfitto P, Palumbo A, Minenna A, Giorgino R, De Pergola G: Sleep-related breathing disorders, loud snoring and excessive daytime sleepiness in obese subjects. *Int J Obes Relat Metab Disord* 2001; 25:669-675
275. Resta O, Guido P, Picca V, Sabato R, Rizzi M, Scarpelli F, Sergi M: Prescription of nCPAP and nBIPAP in obstructive sleep apnoea syndrome: Italian experience in 105 subjects. A prospective two centre study. *Respir Med* 1998; 92:820-827
276. Riley RW, Guilleminault C, Herran J, Powell N: Cephalometric analysis and flow-volume loops in obstructive sleep apnea. *Sleep* 1983; 6:303-311
277. Rivlin J, Hoffstein V, Kalbfleish J, McNicholas W, Zamel N, Bryan AC: Upper airway morphology in patients with idiopathic obstructive sleep apnea. *Am Rev Respir Dis* 1984; 129:355-360
278. Robinson RW, Zwillich CW, Bixler EO, Cadieux RJ, Kales A, White DP: Effects of oral narcotics on sleep-disordered breathing in healthy adults. *Chest* 1987; 91:197-203
279. Rosenberg-Adamsen S, Stausholm K, Edvardsen L, Zwarts M, Kehlet H, Rosenberg J: Body position and late postoperative nocturnal hypoxaemia. *Anaesthesia* 1997; 52:589-592
280. Rosenthal L, Dolan D: The Epworth Sleepiness Scale in the identification of obstructive sleep apnea. *J Nerv Ment Dis* 2008; 196:429-431
281. Rowley JA, Aboussouan LS, Badr MS: The use of clinical prediction formulas in the evaluation of obstructive sleep apnea. *Sleep* 2000; 23:929-938
282. Russell AW, Owen H, Ilsley AH, Kluger MT, Plummer JL: Background infusion with patient-controlled analgesia: effect on postoperative oxyhaemoglobin saturation and pain control. *Anaesth Intensive Care* 1993, 21:174-179
283. Rybro L, Schurizek BA, Petersen TK, Wernberg M: Postoperative analgesia and lung function: A comparison of intramuscular with epidural morphine. *Acta Anaesth Scand* 1982, 26:514-518
284. Sajkov D, Cowie RJ, Thornton AT, Espinoza HA, McEvoy RD: Pulmonary hypertension in hypoxemia in obstructive sleep apnea syndrome. *Am J Respir Crit Care Med* 1994; 149:416-422
285. Sakakibara H, Tong M, Matsushita K, Girata M, Konishi Y, Suetsugu S: Cephalometric abnormalities in non-obese and obese patients with obstructive sleep apnea. *Eur Respir J* 1999; 13:403-410
286. Salomaki TE, Laitinen JO, Nuutinen LS: A randomized double-blind comparison of epidural versus intravenous fentanyl infusion for analgesia after thoracotomy. *Anesthesiology* 1991, 75:790-795
287. Samuels SI, Rabinov W: Difficulty reversing drug-induced coma in a patient with sleep apnea. *Anesth Analg* 1986; 65:1222-1224
288. Sanders MH, Moore SE, Eveslage J: CPAP via nasal mask: A treatment for occlusive sleep apnea. *Chest* 1985; 83:114-115
289. Sanders MH: Nasal CPAP effect on patterns of sleep apnea. *Chest* 1984; 86:839-844
290. Sandler AN, Stringer D, Panos L, Badner N, Friedlander M, Koren G, Katz J, Klein J: A randomized, double-blind comparison of lumbar epidural and intravenous fentanyl infusions for postthoracotomy pain relief: Analgesic, pharmacokinetic, and respiratory effects. *Anesthesiology* 1992, 77:626-634
291. Sanner BM, Doberauer C, Konermann M, Sturn A, Zidek W: Pulmonary hypertension in patients with obstructive sleep apnea syndrome. *Arch Intern Med* 1997; 157:2483-2487

292. Sanner BM, Tepel M, Markmann A, Zidek W: Effect of continuous positive airway pressure therapy on 24-hour blood pressure in patients with obstructive sleep apnea syndrome. *Am J Hypertens* 2002; 15:251-257
293. Schafer H, Ewig S, Hasper E, Luderitz B: Failure of CPAP therapy in obstructive sleep apnoea syndrome: predictive factors and treatment with bilevel-positive airway pressure. *Respir Med* 1998; 92:208-215
294. Schafer H, Pauleit D, Sudhop T, Gouni-Berthold I, Ewig S, Berthold HK: Body fat distribution, serum leptin, and cardiovascular risk factors in men with obstructive sleep apnea. *Chest* 2002; 122:829-839
295. Schellenberg JB, Maislin G, Schwab RJ: Physical findings and the risk for obstructive sleep apnea. The importance of oropharyngeal structures. *Am J Respir Crit Care Med* 2000; 162:740-748
296. Schmidt-Nowara WW, Meade TE, Hays MB: Treatment of snoring and obstructive sleep apnea with a dental orthosis. *Chest* 1991; 99:1378-1385
297. Schwab RJ, Gupta KB, Geftter WB, Metzger LJ, Hoffman EA, Pack AI: Upper airway and soft tissue anatomy in normal subjects and patients with sleep-disordered breathing. Significance of the lateral pharyngeal walls. *Am J Respir Crit Care Med* 1995; 152:1673-1689
298. Schwartz AR, Gold AR, Schubert N, Stryzak RA, Wise S, Permutt S, Smith PL: Effect of weight loss on upper airway collapsibility in obstructive sleep apnea. *Am Rev Respir Dis* 1991; 144:494-498
299. Serafini FM, MacDowell Anderson W, Rosemurgy AS, Strait T, Murr MM: Clinical predictors of sleep apnea in patients undergoing bariatric surgery. *Obes Surg* 2001; 11:28-31
300. Sériès F, Marc I: Efficacy of automatic continuous positive airway pressure therapy that uses an estimated required pressure in the treatment of the obstructive sleep apnea syndrome. *Ann Intern Med* 1997; 127:588-595
301. Sforza E, Bacon W, Weiss T, Thibault A, Petiau C, Krieger J: Upper airway collapsibility and cephalometric variables in patients with obstructive sleep apnea. *Am J Respir Crit Care Med* 2000; 161:347-352
302. Shahar E, Whitney CW, Redline S, Lee ET, Newman AB, Nieto FJ, O'Connor GT, Boland LL, Schwartz JE, Samet JM: Sleep-disordered breathing and cardiovascular disease: cross-sectional results of the Sleep Heart Health Study. *Am J Respir Crit Care Med* 2001; 163:19-25
303. Sharma S, Wali S, Pouliot Z, Peters M, Neufeld H, Kryger M: Treatment of obstructive sleep apnea with a self-titrating continuous positive airway pressure (CPAP) system. *Sleep* 1996; 19:497-501
304. Sharma SK, Vasudev C, Sinha S, Banga A, Pandey RM, Handa KK: Validation of the modified Berlin questionnaire to identify patients at risk for the obstructive sleep apnoea syndrome. *Indian J Med Res* 2006; 124:281-290
305. Shulman M, Sandler AN, Bradley JW, Young PS, Brebner J: Postthoracotomy pain and pulmonary function following epidural and systemic morphine. *Anesthesiology* 1984, 61:569-575
306. Sie KC, Perkins JA, Clarke WR: Acute right heart failure due to adenotonsillar hypertrophy. *Int J Pediatr Otorhinolaryngol* 1997; 41:53-58

307. Sinha R, Bose S, Thangaswamy CR: Unrecognized obstructive sleep apnea in children: caught on the wrong foot and lessons learnt!!! *Paediatr Anaesth* 2008; 18:984-986
308. Siyam MA, Benhamou D: Difficult endotracheal intubation in patients with sleep apnea syndrome. *Anesth Analg* 2002; 95:1098-1102
309. Skinner MA, Kingshott RN, Filsell S, Taylor DR: Efficacy of the 'tennis ball technique' versus nCPAP in the management of position-dependent obstructive sleep apnoea syndrome. *Respirology* 2008; 13:708-715
310. Skinner MA, Kingshott RN, Jones DR, Taylor DR: Lack of efficacy for a cervicomandibular support collar in the management of obstructive sleep apnea. *Chest* 2004; 125:118-126
311. Smith DC, Crul JF: Early postoperative hypoxia during transport. *Br J Anaesth* 1988; 61:625-627
312. Sorajja D, Gami AS, Somers VK, Behrenbeck TR, Garcia-Touchard A, Lopez-Jimenez F: Independent association between obstructive sleep apnea and subclinical coronary artery disease. *Chest* 2008; 133:927-933
313. Spector A, Scheid S, Hassink S, Deutsch ES, Reilly JS, Cook SP: Adenotonsillectomy in the morbidly obese child. *Int J Pediatr Otorhinolaryngol* 2003; 67:359-364
314. Spiegel JH, Raval TH: Overnight hospital stay is not always necessary after uvulopalatopharyngoplasty. *Laryngoscope* 2005; 115:167-171
315. Spurr K, Morrison DL, Graven MA, Webber A, Gilbert RW: Analysis of hospital discharge data to characterize obstructive sleep apnea and its management in adult patients hospitalized in Canada: 2006 to 2007. *Can Respir J* 2010; 17:213-218
316. Squadrone V, Cocha M, Cerutti E, Schellino MM, Bioline P, Occella P, Bellone B, Vilianis G, Fiors G, Cavallo F, Ranieri VM: Continuous positive airway pressure for treatment of postoperative hypoxemia: a randomized clinical trial. *JAMA* 2005; 293:589-595
317. Steinberg B, Fraser B: The cranial base in obstructive sleep apnea. *J Oral Maxillofac Surg* 1995; 53:1150-1154
318. Stepanski E, Zayyad A, Nigro C, Lopata M, Basner R: Sleep-disordered breathing in a predominantly African-American pediatric population. *J Sleep Res* 1999; 8:65-70
319. Stradling JR, Crosby JH: Predictors and prevalence of obstructive sleep apnea and snoring in 1001 middle aged men. *Thorax* 1991; 46:85-90
320. Strauss SG, Lynn AM, Bratton SL, Nespeca MK: Ventilatory response to CO₂ in children with obstructive sleep apnea from adenotonsillar hypertrophy. *Anesth Analg* 1999; 89:328-332
321. Suen JS, Arnold JE, Brooks LJ: Adenotonsillectomy for treatment of obstructive sleep apnea in children. *Arch Otolaryngol Head Neck Surg* 1995 May; 121:525-530
322. Sugerma HJ, Baron PL, Fairman RP, Evans CR, Vetrovec GW: Hemodynamic dysfunction in obesity hypoventilation syndrome and the effects of treatment with surgically induced weight loss. *Ann Surg* 1988; 207:604-613
323. Sullivan CE, Berthon-Jones M, Issa FG: Remission of severe obesity-hypoventilation syndrome after short-term treatment during sleep with nasal continuous positive airway pressure. *Am Rev Respir Dis* 1983; 128:177-181
324. Sullivan CE, Issa FG, Berthon-Jones M: Reversal of obstructive sleep apnea by continuous positive airway pressure applied through the nares. *Lancet* 1981; 1:862-865
325. Suzuki M, Saigusa H, Kurogi R, Morita S, Ishizuka Y: Postoperative monitoring of esophageal pressure in patients with obstructive sleep apnea-hypopnea syndrome who

- have undergone tonsillectomy with uvulopalatopharyngoplasty. *Ann Otol Rhinol Laryngol* 2008; 117:849-853
326. Tagaito Y, Isono S, Tanaka A, Ishikawa T, Nishino T: Sitting posture decreases collapsibility of the passive pharynx in anesthetized paralyzed patients with obstructive sleep apnea. *Anesthesiology* 2010; 113:812-818
 327. Tami TA, Duncan HJ, Pflieger M: Identification of obstructive sleep apnea in patients who snore. *Laryngoscope* 1998; 108:508-513
 328. Tan YK, L'Estrange PR, Luo YM, Smith C, Grant HR, Simonds AK, Spiro SG, Battagel JM: Mandibular advancement splints and continuous positive airway pressure in patients with obstructive sleep apnoea: a randomized cross-over trial. *Eur J Orthod* 2002; 24:239-249
 329. Tangugsorn V, Krogstad O, Espeland L, Lyberg T: Obstructive sleep apnoea: multiple comparisons of cephalometric variables of obese and non-obese patients. *J Craniomaxillofac Surg* 2000; 28:204-212
 330. Tangugsorn V, Skatvedt O, Krogstad O, Lyberg T: Obstructive sleep apnoea: a cephalometric study. Part I. Cervico-craniofacial morphology. *Eur J Orthod* 1995; 17:45-56
 331. Tangugsorn V, Skatvedt O, Krogstad O, Lyberg T: Obstructive sleep apnoea: a cephalometric study. Part II. Uvulo-glossopharyngeal morphology. *Eur J Orthod* 1995; 17:57-67
 332. Ulnick KM, Debo RF: Postoperative treatment of the patient with obstructive sleep apnea. *Otolaryngol Head Neck Surg* 2000; 122:233-236
 333. Unal M, Ozturk L, Kanik A: The role of oxygen saturation measurement and body mass index in distinguishing between non-apnoeic snorers and patients with obstructive sleep apnoea syndrome. *Clin Otolaryngol* 2002; 27:344-346
 334. van Kralingen KW, de Kanter W, de Groot GH, Venmans BJ, van Boxem T, van Keimpema AR, Postmus PE: Assessment of sleep complaints and sleep-disordered breathing in a consecutive series of obese patients. *Respiration* 1999; 66:312-316
 335. van Lersberghe C, Camu F, de Keersmaecker E, Sacre S: Continuous administration of fentanyl for postoperative pain: a comparison of the epidural, intravenous, and transdermal routes. *J Clin Anesth* 1994, 6:308-314
 336. VanDercar DH, Martinez AP, De Lisser EA: Sleep apnea syndromes: a potential contraindication for patient-controlled analgesia. *Anesthesiology* 1991; 74:623-624
 337. Vasu TS, Doghramji K, Cavallazzi R, Grewal R, Hirani A, Leiby B, Markov D, Reiter D, Kraft WK, Witkowski T: Obstructive sleep-apnea syndrome and postoperative complications: clinical use of the STOP-BANG questionnaire are more likely to have multiple postoperative complications. *Arch Otolaryngol Head Neck Surg* 2010; 136:1020-1024
 338. Vaughan RW, Wise L: Postoperative arterial blood gas measurements in obese patients: effect of position on gas exchange. *Ann Surg* 1976; 182:705-709
 339. Vegfors M, Cedarholm I, Lennmarken C, Lofstrom JB: Should oxygen be administered after laparoscopy in healthy patients? *Acta Anaesth Scand* 1988; 32:350-352
 340. Vgontzas AN, Legro RS, Bixler EO, Grayev A, Kales A, Chrousos GP: Polycystic ovary syndrome is associated with obstructive sleep apnea and daytime sleepiness: role of insulin resistance. *J Clin Endocrinology Metabolism* 2001; 86:517-520

341. Vgontzas AN, Tan TL, Bixler EO, Martin LF, Shubert C, Kales A: Sleep apnea and sleep disruption in obese patients. *Arch Intern Med* 1994; 154:1705-1711
342. Viner S, Szalai JP, Hoffstein V: Are history and physical examination a good screening test for sleep apnea? *Ann Intern Med* 1991; 115:356-359
343. Voyagis G, Kyriakis K, Dimitriou V, Vrettou I: Value of oropharyngeal Mallampati classification in predicting difficult laryngoscopy among obese patients. *Eur J Anaesth* 1998; 15:330-334
344. Waters KA, Everett FM, Bruderer JW, Sullivan CE: Obstructive sleep apnea: the use of nasal CPAP in 80 children. *Am J Respir Crit Care Med* 1995; 152:780-785
345. Weatherwax KJ, Lin X, Marzec ML, Malow BA: Obstructive sleep apnea in epilepsy patients: the Sleep Apnea scale of the Sleep Disorders Questionnaire (SA-SDQ) is a useful screening instrument for obstructive sleep apnea in a disease-specific population. *Sleep Med* 2003; 4:517-521
346. Wehner RJ, Pierson DJ: The Pickwickian syndrome: a special challenge for the anesthetist. *AANA J* 1977; 45:57-61
347. Weldon BC, Connor M, White PF: Pediatric PCA: The role of concurrent opioid infusions and nurse-controlled analgesia. *Clin J Pain* 1993, 9:26-33
348. Wieczorek PM, Carli F: Obstructive sleep apnea uncovered after high spinal anesthesia: a case report. *Can J Anaesth* 2005; 52:761-764
349. Wiest GH, Harsch IA, Fuchs FS, Kitzbichler S, Bogner K, Brueckl WM, Hahn EG, Ficker JH: Initiation of CPAP therapy for OSA: does prophylactic humidification during CPAP pressure titration improve initial patient acceptance and comfort? *Respiration* 2002; 69:406-412
350. Wilson K, Lakheeram I, Morielli A, Brouillette R, Brown K: Can assessment for obstructive sleep apnea help predict postadenotonsillectomy respiratory complications? *Anesthesiology* 2002; 96:313-322
351. Woodson BT, Naganuma H: Comparison of methods of airway evaluation in obstructive sleep apnea syndrome. *Otolaryngol Head Neck Surg* 1999; 120:460-463
352. Yegneswaran B, Chung F: The importance of screening for obstructive sleep apnea before surgery. *Sleep Med* 2009; 10:270-271
353. Yildirim N, Fitzpatrick MF, Whyte KF, Jalleh R, Wightman AJA, Douglas NJ: The effect of posture on upper airway dimensions in normal subjects and in patients with the sleep apnea/hypopnea syndrome. *Am Rev Respir Dis* 1991; 144:845-847
354. Young T, Palta M, Dempsey J, Skatrud J, Weber S, Badr S: The occurrence of sleep-disordered breathing among middle-aged adults. *N Engl J Med* 1993; 328:1230-1235
355. Young T, Peppard P, Palta M, Hla KM, Finn L, Morgan B, Skatrud J: Population-based study of sleep-disordered breathing as a risk factor for hypertension. *Arch Intern Med* 1997; 157:1746-1752
356. Yu X, Fujimoto K, Urushibata K, Matsuzawa Y, Kubo K: Cephalometric analysis in obese and nonobese patients with obstructive sleep apnea syndrome. *Chest* 2003; 124:212-218
357. Zonato AI, Bittencourt LR, Martinho FL, Junior JF, Gregorio LC, Tufik S: Association of systematic head and neck physical examination with severity of obstructive sleep apnea-hypopnea syndrome. *Laryngoscope* 2003; 113:973-980
358. Zucconi M, Ferini SL, Palazzi S, Orena C, Zonta S, Smirne S: Habitual snoring with and without obstructive sleep apnoea; the importance of cephalometric variables. *Thorax* 1992; 47:157-161

359. Zucconi M, Ferini-Strambi L, Palazzi S, Curci C, Cucchi E, Smirne S: Craniofacial cephalometric evaluation in habitual snorers with and without obstructive sleep apnoea. *Otolaryngol Head Neck Surg* 1993; 109:1007-1013