



S I G N

**PROPOSED REVIEW OF SIGN GUIDELINE
CONSULTATION FORM**

Title of guideline	SIGN 73: Management of obstructive sleep apnoea/hypopnoea syndrome in adults	
Date of publication	June 2003	
SIGN scoping search – sources	<p>MeSH headings for the condition specified and any common variations as free text, plus terms for the interventions and care processes discussed in the guideline</p> <p>Sources: Guidelines: NICE; National Library for Health guidelines finder; National Guidelines Clearinghouse; GIN Web site. Technology appraisals: NICE; UK HTA database (Southampton); INAHTA database. Cochrane reviews: Cochrane Library. Other good quality systematic reviews: UK HTA database (Southampton); DARE.</p>	
SIGN scoping search - summary	<p>Guidelines – 12 HTAs – 9 Cochrane reviews – 6 Other good quality systematic reviews – 6</p>	
Other guidelines/HTAs	<p>National Coordinating Centre for Health Technology Assessment. Continuous positive airway pressure devices for the treatment of obstructive sleep apnoea-hypopnoea syndrome: a systematic review and economic analysis. National Coordinating Centre for Health Technology Assessment (NCCHTA). Health Technology Assessment 2008; Vol.13: No.4. 2009</p> <p>NICE (2008): Continuous positive airway pressure for the treatment of obstructive sleep apnoea/ hypopnoea syndrome (Technology appraisals TA139)</p> <p>Institute for Clinical Systems Improvement (ICSI). Diagnosis and treatment of obstructive sleep apnea in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2008 Jun. 55 p. [119 references]</p> <p>NICE (2007) Soft-palate implants for obstructive sleep apnoea</p> <p>Canadian Agency for Drugs and Technologies in Health (CADTH) Obstructive sleep apnea: a palatable treatment option? 2007: 4</p> <p>Obstructive sleep apnea-hypopnea syndrome: modeling different diagnostic strategies. Rockville: Agency for Healthcare Research and Quality (AHRQ) 2007: 116 May <i>add primary data to Section 3.6 Diagnostic strategies</i></p> <p>Obstructive Sleep Apnoea Syndrome. Report of a joint Nordic project. Finnish Office for Health Care Technology Assessment. Obstructive Sleep Apnoea Syndrome. Report of a joint Nordic project. Helsinki: Finnish Office for Health Care Technology Assessment (FinOHTA) 2007</p> <p>University of Texas, School of Nursing, Family Nurse Practitioner Program. (2006) Screening for obstructive sleep apnea in the primary care setting. Austin (TX): University of Texas, School of Nursing; 2006 May. 13</p> <p>Diagnosis and treatment of obstructive sleep apnoea - a health technology assessment. Danish Centre for Evaluation and Health Technology Assessment. Diagnosis and treatment of obstructive sleep apnoea - a health technology assessment. Danish Centre for Evaluation and Health Technology Assessment (DACEHTA). 2006</p> <p>Kushida CA, Littner MR, Hirshkowitz M, Morgenthaler TI, Alessi CA, Bailey D, Boehlecke B, Brown TM, Coleman J Jr, Friedman L, Kapen S, Kapur VK,</p>	

Kramer M, Lee-Chiong T, Owens J, Pancer JP, Swick TJ, Wise MS, American Academy of Sleep Medicine. Practice parameters for the use of continuous and bilevel positive airway pressure devices to treat adult patients with sleep-related breathing disorders. *Sleep* 2006 Mar 1;29(3):375-80

Pillar procedure for the treatment of obstructive sleep apnoea and snoring; horizon scanning report. Adelaide Health Technology Assessment on behalf of National Horizon Scanning Unit (HealthPACT and MSAC). Pillar procedure for the treatment of obstructive sleep apnoea and snoring; horizon scanning report. Adelaide Health Technology Assessment (AHTA) on behalf of National Horizon Scanning Unit (HealthPACT and MSAC). 2006

Kushida CA, Morgenthaler TI, Littner MR, Alessi CA, Bailey D, Coleman J Jr, Friedman L, Hirshkowitz M, Kapen S, Kramer M, Lee-Chiong T, Owens J, Pancer JP. Practice parameters for the treatment of snoring and obstructive sleep apnea with oral appliances: *Sleep* 2006 Feb 1;29(2):240-3

Practice guidelines for the perioperative management of patients with obstructive sleep apnea: a report by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Obstructive Sleep Apnea. *Anesthesiology* 2006 May;104(5):1081-93

American Medical Directors Association (AMDA). *Sleep disorders*. Columbia (MD): American Medical Directors Association (AMDA); 2006. 38

Atwood CW Jr, McCrory D, Garcia JG, Abman SH, Ahearn GS. Pulmonary artery hypertension and sleep-disordered breathing: ACCP evidence-based clinical practice guidelines. *Chest* 2004 Jul;126(1 Suppl):72S-77S.

Littner MR, Kushida C, Wise M, Davila DG, Morgenthaler T, Lee-Chiong T, Hirshkowitz M, Loubé DL, Bailey D, Berry RB, Kapen S, Kramer M. Practice parameters for clinical use of the multiple sleep latency test and the maintenance of wakefulness test. *Sleep* 2005 Jan 1;28(1):113-21.

NICE (2005) Radiofrequency ablation of the soft palate for snoring

Buscemi N., Vandermeer B., Pandya R., et al. *Melatonin for Treatment of Sleep Disorders*. Summary, Evidence Report/Technology Assessment: Number 108. AHRQ Publication Number 05-E002-1, November 2004. Agency for Healthcare Research and Quality, Rockville, MD.

Hailey D, Jacobs P, Mayers I, Mensinkai S. *Auto-titrating nasal continuous positive airway pressure systems in the management of obstructive sleep apnea*. Ottawa: Canadian Coordinating Office for Health Technology Assessment (CCOHTA), 2003.

Chesson AL Jr, Berry RB, Pack A. Practice parameters for the use of portable monitoring devices in the investigation of suspected obstructive sleep apnea in adults. *Sleep* 2003 Nov 1;26(7):907-13.

ECRI. *Mandibular advancement devices for obstructive sleep apnea*. Plymouth Meeting, PA: ECRI, 2002:31.

Hailey D, Tran K, Dales R, Mensinkai S, McGahan L. *Sleep laboratory investigations: a review of patient referral guidelines*. Ottawa: Canadian Coordinating Office for Health Technology Assessment (CCOHTA), 2005:14.

HAYES, Inc. *Pharmacologic treatment of sleep apnea*. Lansdale, PA: HAYES, Inc., 2005.

HAYES, Inc.. *Radiofrequency tissue volume reduction for the treatment of upper airway obstruction*. Lansdale, PA: HAYES, Inc 2007

Main conclusions from new evidence

- A Cochrane review reported some evidence that psychological /educational interventions improve CPAP usage. This requires confirmation in larger studies of longer duration, with rigorous follow-up. The cost-benefit ratio of such interventions requires assessment. Future studies need to consider the effects of treatment in participants who are poorly compliant. *May add to GL section on compliance.*
- An HTA concluded that CPAP is an effective and cost-effective treatment for OSAHS compared with conservative/usual care and placebo in populations with moderate to severe daytime sleepiness, and there may be benefits when the disease is mild. Dental devices may be a treatment option in moderate disease but some uncertainty remains. In line with *current A grade recommendation as first choice therapy.*
- A systematic review provided a range of conclusions on parameters of home diagnosis of obstructive sleep apnea-hypopnea syndrome. Facility-based PSG is the reference method to identify people with AHI suggestive of OSAHS. The AHI (or RDI) measurements from portable monitors and facility-based PSG are not interchangeable (especially in the higher end of the AHI spectrum). For studies in the home setting, there is no direct data on whether and to what extent technologist support and patient education affect the comparison of portable monitors with facility-based polysomnography. Overall, manual scoring or manual editing of automated scoring seems to have better agreement with facility-based PSG compared to manual scoring in the studies that assessed both scoring methods. Rates of unsatisfactory studies and data corruption are higher for portable monitors in the home setting, compared to facility-based PSG, or portable monitors in the sleep laboratory setting. *Little in SIGN guideline on home based sleep studies.*
- A Cochrane review found insufficient evidence to recommend the use of drug therapy in the treatment of OSA. Small studies reported positive effects of certain agents on short-term outcome and better matching of drugs to patients according to the dominant mechanism of their OSA may lead to better results. The guideline says that the evidence base to support pharmacological treatment as an effective therapeutic option is small and recommends that pharmacological therapy should not be used as first line therapy for OSAHS (A).
- A Cochrane review found CPAP is effective in reducing symptoms of sleepiness and improving quality of life measures in people with moderate and severe obstructive sleep apnoea (OSA). It is more effective than oral appliances (OA) in reducing respiratory disturbances in these people but subjective outcomes are more equivocal. A second Cochrane review concludes that until there is more definitive evidence on the effectiveness of OA in relation to CPAP, with regard to symptoms and long-term complications, it would appear to be appropriate to recommend OA therapy to patients with mild symptomatic OSAH, and those patients who are unwilling or unable to tolerate CPAP therapy. The guideline recommends CPAP as first choice therapy for patients with moderate or severe OSAHS (A) and intra-oral devices as an appropriate therapy for snorers and for patients with mild OSAHS with normal daytime alertness (A) or as an appropriate alternative therapy for patients who are unable to

	<p>tolerate CPAP (B).</p> <ul style="list-style-type: none"> ▪ A systematic review concludes that clinical history and physical examination are not reliable for diagnosing OSAHS compared with overnight polysomnography (PSG). The guideline has a good practice point stating that full PSG with EEG-based sleep staging is not necessary to diagnose sleep apnoea in most patients. <i>The guideline recommends limited sleep studies as an adequate first-line method of diagnostic assessment for OSAHS (B).</i> ▪ A systematic review found that compared to standard CPAP, APAP is associated with a reduction in mean pressure. However, APAP and standard CPAP were similar in adherence and their ability to eliminate respiratory events and to improve subjective sleepiness. APAP is more costly than standard CPAP, and should not be considered first-line chronic therapy in all patients with OSA. APAP may be useful in other situations (eg, home titrations, detection of mouth leak) or in certain subgroups of patients with OSA. <i>APAP is not discussed in the guideline.</i> ▪ A systematic review found no evidence that melatonin is effective in treating secondary sleep disorders or sleep disorders accompanying sleep restriction, such as jet lag and shiftwork disorder. There was evidence that melatonin is safe with short term use. <i>Melatonin is not discussed in the guideline.</i> ▪ A review suggests that habitual snorers with excessive daytime sleepiness have a high pretest probability of having OSA. These patients could be offered a therapeutic trial of continuous positive airway pressure (CPAP) to diagnose OSA, rather than a PSG.
New areas that could be added to the guideline	<ul style="list-style-type: none"> ▪ Use of APAP ▪ Use of melatonin ▪ Home based diagnostic studies
Summary of the recommendations that could be updated	<ul style="list-style-type: none"> ▪ Recommendations on use of oral appliances. ▪ Parameters around diagnostic strategies

Please answer the following questions as fully as possible:

Specialties:	General Practice (2), Psychology (1), ENT (1), Medicine (2)
1(a) Is there still a requirement for an evidence-based guideline on this topic?	<p>Yes</p> <p>This is an important subject that has increased in clinical importance and relevance since the guideline was first published in 2003. One could postulate that the increased prominence of this topic may in part be due to the fact that we do have a nationally agreed guideline on the management of this condition.</p>

1(b) If no, should the guideline be withdrawn?	
2(a) Do you agree with the assessment of the impact of the new evidence and its likely effect on recommendations?	
Yes	
2(b) Based on the information given above, and your own clinical judgement, does the guideline require revision in the light of new evidence? <i>Please give details.</i>	
<p>The main new areas relate to it being clear that simplified studies really do perform clinically as well as polysomnography. A clear statement on what can be used, the limitations etc would help.</p> <p>APAP and melatonin need to be updated. Home based diagnostic studies also need to be included in section 3 on diagnosis.</p>	
3 Please list any additions to the remit of the guideline that you think would be beneficial	
<ul style="list-style-type: none"> ▪ Continuous positive airway pressure initiation and CPAP types. Evidence for benefit in less severe patients and the importance of quality CPAP services. ▪ Audit tools. ▪ Section 6.2 on driving recommendations section needs to be fully updated to include a section on what advice should be given to the patient about driving when the diagnosis is suspected, but before it is confirmed by specialist care. ▪ Long-term management of OSAHS in conjunction with psychological interventions to improve CPAP adherence. 	
4 Please tick your preferred option for reviewing this guideline	
a. there is no new evidence that will affect existing recommendations and the guideline should not be reviewed at this time	✓
b. some recommendations will change in the light of the new evidence and selected elements of the guideline should be reviewed	✓
c. the entire guideline should be reviewed	
d. the guideline should be withdrawn	

5 SIGN COUNCIL			Date: 11/11/2012
Revalidate	Refresh	Revise	Remove
	✓		