



Royal College of Paediatrics  
and Child Health

## Management of Acute and Recurring Sore Throat and Indications for Tonsillectomy

These recommendations have been derived from a original guideline document produced by the Scottish Intercollegiate Guidelines Network.<sup>1</sup> The full guideline may be obtained at the following website: <http://www.sign.ac.uk>. This publication presents evidence-based recommendations for the management of acute and recurring sore throat and indications for tonsillectomy for children. Please note that the statements only consider tonsillectomy for recurring sore throat. Although directed to primary care, the recommendations within this guideline are of relevance to all health professionals who care for children with sore throat. The guideline does not address tonsillectomy for suspected malignancy or as a treatment for sleep apnoea, peritonsillar abscess or other conditions. It should be noted that the published literature in this area is mainly concerned with a paediatric population and there is little specific evidence concerning the management of recurring sore throats in adults. The guideline states that a review of the guideline to take into account any new evidence will take place in 2001.

### Aims

The aim of the original recommendations is to suggest a rational approach to the management of sore throat in primary care and to provide reasonable criteria for referral for tonsillectomy. Guidelines are 'systematically developed statements to assist decisions about appropriate care for specific clinical circumstances' based on systematic reviews of the research literature. Guidelines are not intended to restrict clinical freedom, but practitioners are expected to use the recommendations as a basis for their practice. Local resources and the circumstances and preferences of individual patients will need to be taken into account. Where possible, recommendations are based on, and explicitly linked to, the evidence that supports them. Areas lacking evidence are highlighted and may form a basis for future research.

### Background

The management of sore throat in general practice and the further progress to tonsillectomy in a number of cases results in significant use of health service resources. In most cases, the condition is relatively minor and self-limiting. Sore throat has few long-term adverse health effects. However, a significant number of patients experience unacceptable morbidity, inconvenience and loss of education due to recurrent sore throat. As a result patients present to GPs who may actively treat them with antibiotics of questionable efficacy and considerable aggregate cost. Tonsillectomy has an appreciable perioperative morbidity, a complication rate of around 2% and the outcome is as yet undefined.

### Potential Economic Benefits

Based on information from the General Practice Administration System for Scotland (GPASS), 'acute tonsillitis' is the sixth most common presentation in primary care for girls, the eighth for boys (aged 0-14 years). For all ages acute tonsillitis was the eighth most common acute presentation in 1996, a rate of almost 1 in 30. SIGN has estimated that there are 0.1 consultations per capita per annum regarding sore throat. On an assumption that each consultation costs £10.00, the cost to the NHS of GP consultations for sore throat is approximately £60 million per annum, before any treatment or investigation.<sup>2</sup> Any improvements in practice as a result of implementing these recommendations would have a significant impact on this level of expenditure.

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## The Role of the Royal College of Paediatrics and Child Health

In order to raise awareness about the existence of the original guideline and to ensure its relevance for children's health, the College (through its Quality of Practice Committee) assessed the original guideline against the checklist laid out in its 'standards' document.<sup>3</sup> Having established the quality of the guideline's methodology in this way, the College recruited independent reviewers to examine the recommendations presented in the guideline document in the context of the original research papers from which they were derived. These reviewers were expert in both the clinical area under examination and in critically appraising research literature. The reviewers' findings are presented here. Where discrepancies between their findings and the originals exist, both recommendations have been included. These areas of discrepancy are indicated by the shaded boxes.

The levels of evidence used throughout are those derived from the US Agency for Health Care Policy and Research, 1993 (see below).<sup>4</sup> The College's appraisal should not be considered valid beyond the end of 2001, and new evidence at any time could invalidate these recommendations.

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***Please note that those recommendations originally ascribed as Grade C have not been appraised by the College***

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### Grades of Evidence/Derivation of Recommendations

- Grade A Evidence:** Requires at least one randomised controlled trial as part of the body of overall good quality and consistency addressing the specific recommendation.
- Grade B Evidence:** Requires availability of well-conducted clinical trials but no randomised clinical trials on the topic of the recommendation.
- Grade C Evidence:** Requires evidence from expert committee reports or opinions and/or clinical experience of respected authorities. Indicates absence of directly applicable studies of good quality.
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### Key points for clinical audit

**SIGN** recommend the following as topic areas suitable for clinical audit:

#### **Management of acute sore throat**

- Antibiotic prescription rate for sore throat in general practice
- Number of patient visits to the general practitioner for sore throat symptoms

#### **Referral criteria for surgery**

- Criteria for referral to hospital from general practice
- Operation rate with reference to the referral criteria

#### **Admission rates for suppurative complications of sore throat**

- Rates of hospital admission for sore throat complication, such as peritonsillitis, quinsy and parapharyngeal abscess

## Recommendations for Good Practice

	GRADE	Endorsed by College
<b>Presentation</b>		
<ul style="list-style-type: none"> <li>● Sore throat associated with stridor or respiratory difficulty is an absolute indication for admission to hospital</li> </ul>	C	
<ul style="list-style-type: none"> <li>● Practitioners should be aware of underlying psychosocial influences in patients presenting with sore throat <sup>5-9</sup></li> </ul>	B	✓
<b>Diagnosis of sore throat</b>		
<ul style="list-style-type: none"> <li>● Clinical examination should not be relied upon to differentiate between viral and bacterial sore throat <sup>10-14</sup></li> </ul>	B	✓
<ul style="list-style-type: none"> <li>● Throat swabs should not be carried out routinely in sore throat <sup>15-20</sup></li> </ul>	B	✓
<ul style="list-style-type: none"> <li>● Rapid antigen testing should not be carried out routinely in sore throat and it is recommended that research should be undertaken using antibody titres as a 'gold standard'<sup>21-26</sup> (<b>Original statement:</b> <i>Rapid antigen testing should not be carried out in sore throat.</i> Grade B)</li> </ul>	B	✓
<b>Management of sore throat</b>		
<ul style="list-style-type: none"> <li>● Paracetamol is effective in treatment (in the first 48 hours) of symptoms associated with sore throat <sup>27</sup></li> </ul>	A	✓
<ul style="list-style-type: none"> <li>● Ibuprofen is effective in treatment (in the first 48 hours) of symptoms associated with sore throat <sup>27-29</sup> (<b>Original statement:</b> <i>Taking account of the increased risks associated with NSAIDs, their routine use in management of sore throat is not recommended.</i> Grade B)</li> </ul>	A	✓
<ul style="list-style-type: none"> <li>● Paracetamol is the drug of choice for analgesia in sore throat, taking account of the increased risks associated with other analgesics</li> </ul>	C	
<b>Antibiotics</b>		
<ul style="list-style-type: none"> <li>● Penicillin appears to have a significant (but relatively small) advantage over antipyretics/analgesics in the early reduction of symptoms in those children with severe symptoms and signs. However, antibiotics should not be used routinely to secure symptomatic relief in sore throat <sup>30-35</sup> (<b>Original statement:</b> <i>Antibiotics should not be used to secure symptomatic relief in sore throat.</i> Grade A)</li> </ul>	A	✓
<ul style="list-style-type: none"> <li>● Sore throat should not be treated with antibiotics specifically to prevent the development of rheumatic fever or acute glomerulonephritis <sup>36-40</sup></li> </ul>	B	✓
<ul style="list-style-type: none"> <li>● Antibiotics may prevent cross-infection with group A beta-haemolytic streptococcus (GABHS) in closed institutions (such as barracks or boarding schools) but should not be used routinely to prevent cross infection in the general community <sup>41-43</sup></li> </ul>	B	✓
<ul style="list-style-type: none"> <li>● The prevention of suppurative complications is not a specific indication for antibiotic therapy in sore throat</li> </ul>	C	
<b>Indications for tonsillectomy</b>		
<ul style="list-style-type: none"> <li>● Patients should meet all of the following criteria <sup>44-50</sup> <ul style="list-style-type: none"> <li>◆ sore throats are due to tonsillitis</li> <li>◆ five or more episodes of sore throat per year</li> <li>◆ symptoms for at least a year</li> <li>◆ the episodes of sore throat are disabling and prevent normal functioning</li> </ul> </li> </ul>	C	
<ul style="list-style-type: none"> <li>● A six-month period of watchful waiting is recommended prior to tonsillectomy to establish firmly the pattern of symptoms and allow the patient to consider fully the implications of operation</li> </ul>	C	
<ul style="list-style-type: none"> <li>● Once a decision is made for tonsillectomy, this should be performed as soon as possible, to maximise the period of benefit before natural resolution of symptoms might occur (without tonsillectomy)</li> </ul>	C	

## References

- 1 **Scottish Intercollegiate Guidelines Network** (1999) *Management of acute and recurring sore throat & indications for tonsillectomy*. SIGN: Edinburgh: www.sign.ac.uk
- 2 **Little P; Williamson I** (1996) *Sore throat management in general practice* Fam Pract 13 317-321
- 3 **Royal College of Paediatrics and Child Health** (1998) *Standards for development of clinical guidelines in paediatrics and child health*. RCPCH: London
- 4 **US Department of Health & Human Services. Agency for Health Care Policy and Research** (1993) *Acute pain management: operative or medical procedures and trauma*. Rockville (MD): The Agency; Clinical Practice Guideline No 1. AHCPR Publication No 92-0023
- 5 **Kolnaar BG; van den Bosch WJ; van den Hoogen HJ; van Weel C** (1994) *The clustering of respiratory diseases in early childhood* Family Medicine 26 106-110
- 6 **Howie JG** (1996) *Addressing the credibility gap in general practice research: better theory; more feeling; less strategy* British Journal of General Practice 46 479-481
- 7 **Howie JGR; Porter AMD; Forbes JF** (1989) *Quality and the use of time in general practice: widening the discussion* BMJ 298 1008-1010
- 8 **Howie JGR; Bigg AR** (1980) *Family trends in psychotropic and antibiotic prescribing in general practice* BMJ 280 836-838
- 9 **Little P; Gould C; Williamson I; Warner G; Gantley M; Kinmouth AL** (1997) *Reattendance and complications in a randomised trial of prescribing strategies for sore throat: the medicalising effect of prescribing antibiotics* BMJ 315 350-352
- 10 **Seppala H; Lahtonen R; Zeigler T; Meurman O; Hakkarainen K; Miettinen A et al** (1993) *Clinical scoring system in the evaluation of adult pharyngitis* Archives of Otolaryngology, Head and Neck Surgery 119 288-291
- 11 **Meland E; Digranes A; Skjaerven R** (1993) *Assessment of clinical features predicting streptococcal pharyngitis* Scandinavian Journal of Infectious Disease 25 177-183
- 12 **Stillerman M; Bernstein SH** (1961) *Streptococcal pharyngitis. Evaluation of clinical syndromes in diagnosis* American Journal of Disease of Childhood 101 476-489
- 13 **Breese BB; Disney FA** (1954) *The accuracy of diagnosis of beta streptococcal infections on clinical grounds* Journal of Pediatrics 44 670-673
- 14 **McIsaac WJ; Goel V; Slaughter PM; Parsons GW; Woolnough KV; Weir PT; Ennet JR** (1997) *Reconsidering sore throats. Part 1: problems with current clinical practice* Canadian Family Physician 43 485-493
- 15 **Caplan C** (1979) *Case against the use of throat culture in the management of streptococcal pharyngitis* Journal of Family Practice 8 485-490
- 16 **Feery BJ; Forsell P; Gulasekharan M** (1976) *Streptococcal sore throat in general practice - a controlled study* Medical Journal of Australia 1 989-991
- 17 **Brook I; Yocum P; Shah K** (1980) *Surface vs core-tonsillar aerobic and anaerobic flora in recurrent tonsillitis* JAMA 244 1696-1698
- 18 **Uppal K; Bais AS** (1989) *Tonsillar microflora - superficial surface vs deep* Journal of Laryngology and Otology 103 175-177
- 19 **Schachtel BP; Fillingim JM; Beiter DJ; Lane AC; Schwartz LA** (1984) *Subjective and objective features of sore throat* Archive of Internal Medicine 144 497-500
- 20 **Del Mar C** (1992) *Managing sore throat: a literature review. I; making the diagnosis* Medical Journal of Australia 156 572-575
- 21 **Lewey S; White CB; Lieberman MM; Morales E** (1988) *Evaluation of the throat culture as a follow-up for an initially negative enzyme immunosorbent assay rapid streptococcal antigen detection test* Pediatric Infectious Diseases Journal 7 765-769
- 22 **Radetsky M; Wheeler RC; Roe MH; Todd JK** (1985) *Comparative evaluation of kits for rapid diagnosis of Group A streptococcal disease* Pediatric Infectious Disease 4 274-281
- 23 **Slifkin M; Gil GM** (1984) *Evaluation of the Culturette brand 10-minute group A strep iD technique* Journal of Clinical Microbiology 20 12-14
- 24 **White CB; Bass JW; Yamada SM** (1986) *Rapid latex agglutination compared with the throat culture for the detection of Group A streptococcal infection* Pediatric Infectious Disease 5 2 208-212
- 25 **Kellogg JA; Manzella JP** (1986) *Detection of group A streptococci in the laboratory or physician's office. Culture vs antibody methods* JAMA 255 2638-2642
- 26 **Burke P; Bain J; Lowes A; Athersuch R** (1988) *Rational decisions in managing sore throat: evaluation of a rapid test* BMJ 296 1646-1649
- 27 **Bertin L; Pons G; d'Athis P; Lasfargues G; Maudelonde C; Duhamel JF et al** (1991) *Randomised, double-blind, multicenter, controlled trial of ibuprofen vs acetaminophen (paracetamol) and placebo for treatment of symptoms of tonsillitis and pharyngitis in children*. Journal of Paediatrics 119 811-814
- 28 **Sauvage JP; Ditisheim A; Bessede JP; David N** (1990) *Double-blind, placebo-controlled, multi-centre trial of the efficacy and tolerance of niflumic acid ('Nifluril') capsules in the treatment of tonsillitis in adults*. Current Medical Research Opinion 11 631-637
- 29 **Manach Y; Ditisheim A** (1990) *Double-blind, placebo-controlled multicentre trial of the efficacy and tolerance of morniflumate suppositories in the treatment of tonsillitis in children*. International Journal of Medical Research 18 30-36
- 30 **Marlow RA; Torrez AJ; Haxby D** (1989) *The treatment of nonstreptococcal pharyngitis with erythromycin: a preliminary study*. Family Medicine 21 6 435-427
- 31 **Del Mar C** (1992) *Managing sore throat: a literature review. II. Do antibiotics confer benefit?*. Medical Journal of Australia 156 644-649
- 32 **Merenstein JH; Rogers KD** (1974) *Streptococcal pharyngitis. early treatment and management by nurse practitioners*. JAMA 227 1278-1282
- 33 **Randolph MF; Gerber MA; DeMeo KL; Wright L** (1985) *Effect of antibiotic therapy on the clinical course of streptococcal pharyngitis*. Journal of Pediatrics 106 870-875
- 34 **Pichichero ME; Disney FA; Talpey WB; Green JL; Francis AB; Roghman KJ; Hoekelman RA** (1987) *Adverse and beneficial effects of immediate treatment of Group A beta-hemolytic streptococcal pharyngitis with penicillin*. Pediatric Infectious Diseases Journal 6 635-643
- 35 **Middleton DB; D'Amico F; Merenstein JH** (1988) *Standardised symptomatic treatment vs penicillin as initial therapy for streptococcal pharyngitis*. Journal of Pediatrics 113 1089-1094
- 36 **Blumer JL; Goldfarb J** (1994) *Meta-analysis in the evaluation of treatment for streptococcal pharyngitis: a review*. Clinical Therapy 16 604-620
- 37 **Shulman ST** (1996) *Evaluation of penicillins, cephalosporins and macrolides for therapy in streptococcal pharyngitis*. Pediatrics 97 955-959
- 38 **Howie JG; Foggo BA** (1985) *Antibiotics, sore throats and rheumatic fever*. Journal of the Royal College of General Practitioners 35 223-224
- 39 **Taylor JL; Howie JG** (1983) *Antibiotics, sore throats and acute nephritis*. Journal of the Royal College of General Practitioners 33 783-786
- 40 **Denny FW; Wannamaker LW; Brink WR; Rammelkamp CH; Custer EA** (1950) *Prevention of rheumatic fever: treatment of the preceding streptococcal infections*. JAMA 143 151-153
- 41 **Blumer JL; Goldfarb J** (1994) *Meta-analysis in the evaluation of treatment for streptococcal pharyngitis: a review*. Clinical Therapy 16 604-620
- 42 **Gerber MA** (1996) *Antibiotic resistance: relationship to persistence of Group A streptococci in the upper respiratory tract*. Pediatrics 97 971-975
- 43 **Snellman LW; Stang HJ; Stanf JM; Johnson DR; Kaplan EI** (1993) *Duration of positive throat cultures for group A streptococci after initiation of antibiotic therapy*. Pediatrics 91: 1166-1170
- 44 **Paradise JL, Bluestone CD, Bachman RZ, Colborn DK, Bernard BS, Taylor FH, et al** (1984) *Efficacy of tonsillectomy for recurrent throat infection in severely affected children. Results of parallel randomized and nonrandomized clinical trials*. N Engl J Med; 310: 674-83.
- 45 **McKee WJ** (1963) *A controlled study of the effects of tonsillectomy and adenoidectomy in children*. J Br Soc Prev Med; 17: 49-69.
- 46 **Mawson SR, Adlington P, Evans M** (1967) *A controlled study evaluation of adeno-tonsillectomy in children*. J Laryngol Otol; 81: 777-90.
- 47 **Roydhouse N** (1970) *A controlled study of adenotonsillectomy*. Arch Otolaryngol; 92: 611-6
- 48 **Camilleri AE, MacKenzie K, Gatehouse S** (1995) *The effect of recurrent tonsillitis and tonsillectomy on growth in childhood*. Clin Otolaryngol; 20: 153-7
- 49 **Ahlqvist-Rastad J, Hultcrantz E, Melander H, Svanholm H** (1992) *Body growth in relation to tonsillar enlargement and tonsillectomy*. Int J Pediatr Otorhinolaryngol; 24: 55-61.
- 50 **Williams EF III, Woo P, Miller R, Kellman RM** (1991) *The effects of adenotonsillectomy on growth in young children*. Otolaryngol Head Neck Surg; 104: 509-16