

Pocket Guide

# EPOS

European Position Paper  
on Rhinosinusitis and  
Nasal Polyps 2007

## PARTICIPANTS

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**Wyske Fokkens**  
**Chair**

*Department of Otorhinolaryngology  
Amsterdam Medical Centre  
PO Box 22660  
1100 DD Amsterdam  
The Netherlands  
Email: w.j.fokkens@amc.nl*

**Valerie Lund**  
**Co-Chair**  
*London, UK*

**Joaquim Mullol**  
**Co-Chair**  
*Barcelona, Spain*

**Claus Bachert**  
*Ghent, Belgium*

**Noam Cohen**  
*Philadelphia, USA*

**Roxanna Cobo**  
*Cali, Colombia*

**Martin Desrosiers**  
*Montreal, Canada*

**Peter Hellings**  
*Leuven, Belgium*

**Mats Holmstrom**  
*Uppsala, Sweden*

**Maija Hytönen**  
*Helsinki, Finland*

**Nick Jones**  
*Nottingham, UK*

**Livije Kalogjera**  
*Zagreb, Croatia*

**David Kennedy**  
*Philadelphia, USA*

**Jean Michel Klossek**  
*Poitiers, France*

**Marek Kowalski**  
*Lodz, Poland*

**Eli Meltzer**  
*San Diego, USA*

**Bob Naclerio**  
*Chicago, USA*

**Desiderio Passali**  
*Siena, Italy*

**David Price**  
*Aberdeen, UK*

**Herbert Riechelmann**  
*Ulm, Germany*

**Glenis Scadding**  
*London, UK*

**Heinz Stammberger**  
*Graz, Austria*

**Mike Thomas**  
*Aberdeen, UK*

**Richard Voegels**  
*Sao Paulo, Brazil*

**De-Yun Wang**  
*Singapore*

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## REFERENCE

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1. European Position Paper on Rhinosinusitis and Nasal Polyposis. *Rhinology*, Supplement 20, 2007; [www.rhinologyjournal.com](http://www.rhinologyjournal.com); [www.eaaci.net](http://www.eaaci.net).

## OBJECTIVES & AIMS

Rhinosinusitis is a significant and increasing health problem which results in a large financial burden on society. This pocket guide offers evidence-based recommendations on its diagnosis and treatment.

The full document<sup>1</sup> on which this is based is intended to be a state-of-the-art review for the specialist as well as for the general practitioner:

- to update their knowledge of rhinosinusitis and nasal polyposis
- to provide an evidence-based documented review of the diagnostic methods
- to provide an evidence-based review of the available treatments
- to propose a stepwise approach to the management of the disease
- to propose guidance for definitions and outcome measurements in research in different settings

## CATEGORY OF EVIDENCE

Ia evidence from meta-analysis of randomised controlled trials

Ib evidence from at least one randomised controlled trial

IIa evidence from at least one controlled study without randomisation

IIb evidence from at least one other type of quasi-experimental study

III evidence from non-experimental descriptive studies, such as comparative studies, correlation studies, and case-control studies

IV evidence from expert committee reports or opinions or clinical experience of respected authorities, or both

## STRENGTH OF RECOMMENDATION

A directly based on category I evidence

B directly based on category II evidence or extrapolated recommendation from category I evidence

C directly based on category III evidence or extrapolated recommendation from category I or II evidence

D directly based on category IV evidence or extrapolated recommendation from category I, II or III evidence

## DEFINITION OF RHINOSINUSITIS AND NASAL POLYPS

### *Clinical definition*

Rhinosinusitis (including nasal polyps) is defined as:

- inflammation of the nose and the paranasal sinuses characterised by two or more symptoms, one of which should be either nasal blockage/obstruction/congestion or nasal discharge (anterior/posterior nasal drip):

- ± facial pain/pressure
- ± reduction or loss of smell

and either

- endoscopic signs of:
  - polyps and/or
  - mucopurulent discharge primarily from middle meatus and/or
  - oedema/mucosal obstruction primarily in middle meatus

and/or

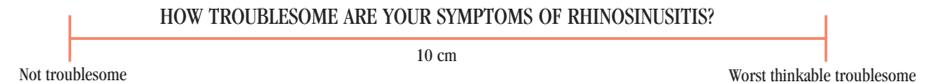
- CT changes:
  - mucosal changes within the ostiomeatal complex and/or sinuses

### *Severity of the disease*

The disease can be divided into MILD, MODERATE and SEVERE based on total severity visual analogue scale (VAS) score (0-10 cm):

- MILD = VAS 0-3
- MODERATE = VAS >3-7
- SEVERE = VAS >7-10

To evaluate the total severity, the patient is asked to indicate on a VAS the answer to the question:



A VAS >5 affects patient QOL

### *Duration of the disease*

#### Acute

<12 weeks  
complete resolution of symptoms

#### Chronic

>12 weeks symptoms  
without complete resolution of symptoms

- may also be subject to exacerbations

EVIDENCE-BASED MANAGEMENT SCHEME FOR ADULTS WITH ACUTE RHINOSINUSITIS

Table 1. Treatment evidence and recommendations for adults with acute rhinosinusitis

Therapy	Level	Grade of Recommendation	Relevance
oral antibiotic	Ia	A	yes, after 5 days, or in severe cases
topical corticosteroid	Ib	A	yes
topical steroid and oral antibiotic combined	Ib	A	yes
oral corticosteroid	Ib	A	yes, reduces pain in severe disease
oral antihistamine	Ib	B	yes, only in allergic patients
nasal douche	Ib (-)	D	no
decongestant	Ib (-)	D	yes, as symptomatic relief
mucolytics	none	no	no
phytotherapy	Ib	D	no

Ib (-): study with a negative outcome

EVIDENCE-BASED MANAGEMENT SCHEME FOR ADULTS WITH ACUTE RHINOSINUSITIS FOR PRIMARY CARE AND NON-ENT SPECIALISTS

Diagnosis

Symptom-based, no need for imaging (plain x-ray **not** recommended)

Symptoms for less than 12 weeks:

Sudden onset of two or more symptoms, one of which should be either nasal blockage/obstruction/congestion or nasal discharge (anterior/posterior nasal drip):

- ± facial pain/pressure
- ± reduction/loss of smell

with symptom free intervals if the problem is recurrent

with validation by telephone or interview asking questions on allergic symptoms, ie, sneezing, watery rhinorrhea, nasal itching and itchy watery eyes

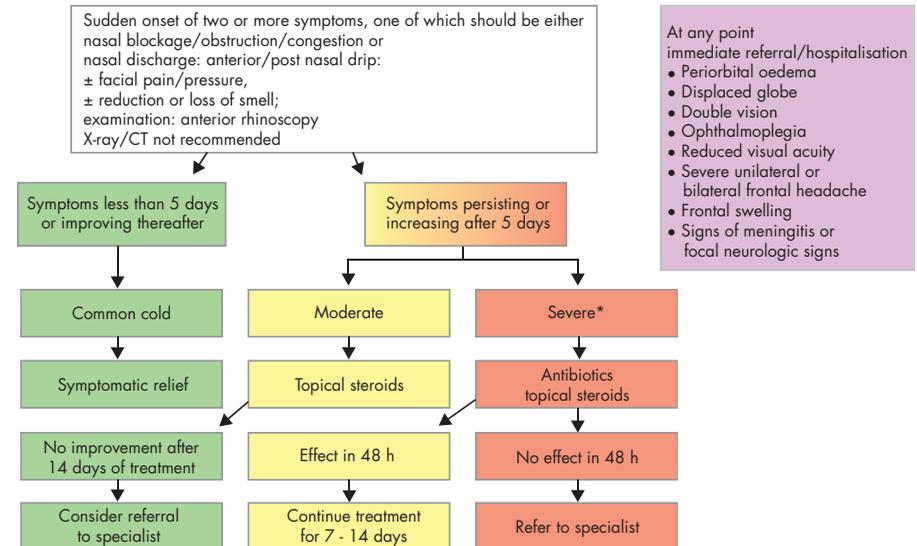
Common cold/acute viral rhinosinusitis is defined as:

duration of symptoms for <10 days

Acute non-viral rhinosinusitis is defined as:

increase of symptoms after 5 days or persistent symptoms after 10 days with <12 weeks duration

Figure 1. Management scheme for primary care for adults with acute rhinosinusitis



\*Fever >38°C, severe pain

EVIDENCE-BASED MANAGEMENT SCHEME FOR ADULTS WITH ACUTE RHINOSINUSITIS

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oral corticosteroid	Ib	A	yes, reduces pain in severe disease
oral antihistamine	Ib	B	yes, only in allergic patients
nasal douche	Ib (-)	D	no
decongestant	Ib (-)	D	yes, as symptomatic relief
mucolytics	none	no	no
phytotherapy	Ib	D	no

Ib (-): study with a negative outcome

EVIDENCE-BASED MANAGEMENT SCHEME FOR ADULTS WITH ACUTE RHINOSINUSITIS **FOR ENT SPECIALISTS**

**Diagnosis**

**Symptoms**

Sudden onset of two or more symptoms, one of which should be either nasal blockage/obstruction/congestion or nasal discharge (anterior/posterior nasal drip):

- ± facial pain/pressure
- ± reduction/loss of smell

**Examination**

- nasal examination (swelling, redness, pus)
- oral examination: posterior discharge
- exclude dental infection

ENT examination including nasal endoscopy

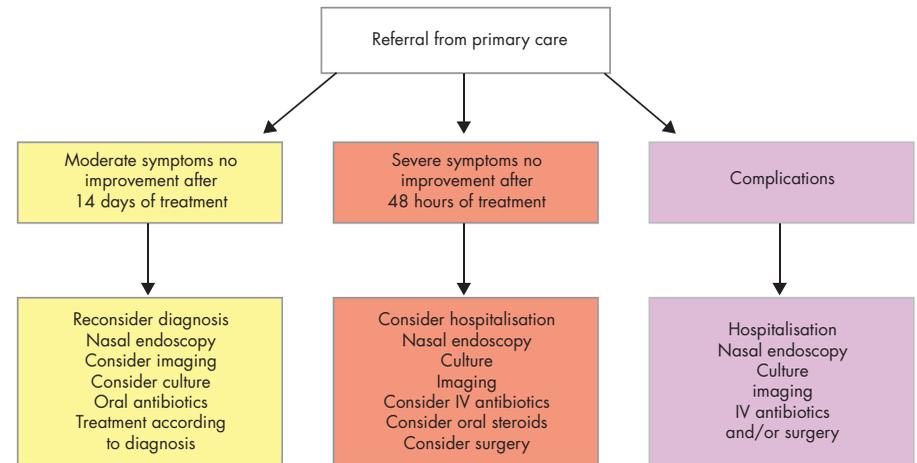
**Imaging**

(Plain x-ray **not** recommended)

CT scan is also **not** recommended **unless** additional problems such as:

- very severe disease
- immunocompromised patients
- signs of complications

Figure 2. Management scheme for ENT specialists for adults with acute rhinosinusitis



EVIDENCE-BASED MANAGEMENT SCHEME FOR ADULTS WITH CHRONIC RHINOSINUSITIS WITHOUT AND WITH NASAL POLYPS

Table 2. Treatment evidence and recommendations for adults with chronic rhinosinusitis *without* nasal polyps\*

Therapy	Level	Grade of Recommendation	Relevance
oral antibiotic therapy short term <2 weeks	Ib (-)	C	no
oral antibiotic therapy long term >12 weeks	Ib	A	yes
antibiotics – topical	III	D	no
steroid – topical	Ib	A	yes
steroid – oral	no data	D	no
nasal saline douche	Ib	A	Yes
decongestant oral/topical	no data	D	no
mucolytics	III	C	no
antimycotics – systemic	Ib (-)	D	no
antimycotics – topical	Ib (-)	D	no
oral antihistamine in allergic patients	no data	D	no
proton pump inhibitors	no data	D	no
bacterial lysates	Ib	A	no
immunomodulators	Ib (-)	D	no
phytotherapy	Ib (-)	D	no
anti-leukotrienes	III	C	no

\* Some of these studies also included patients with CRS with nasal polyps  
Ib (-): study with a negative outcome

EVIDENCE-BASED MANAGEMENT SCHEME FOR ADULTS WITH CRS WITH OR WITHOUT NP **FOR PRIMARY CARE AND NON-ENT SPECIALISTS**

Diagnosis

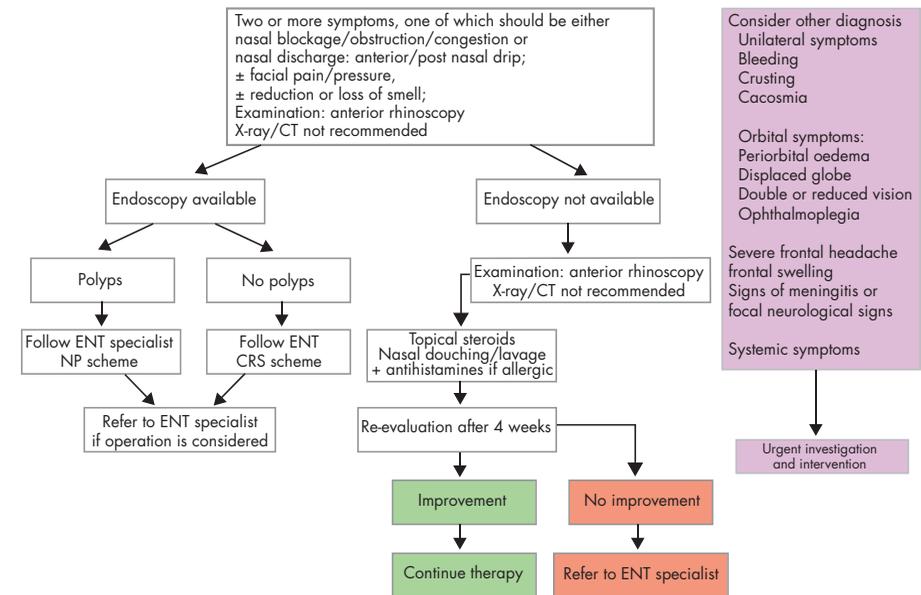
Symptoms present longer than 12 weeks

Two or more symptoms, one of which should be either nasal blockage/obstruction/congestion or nasal discharge (anterior/posterior nasal drip):

- ± facial pain/pressure
- ± reduction or loss of smell

with validation by telephone or interview asking questions on allergic symptoms ie, sneezing, watery rhinorrhea, nasal itching and itchy watery eyes. If positive, allergy testing should be performed (Plain x-ray or CT scan **not** recommended)

Figure 3. Chronic rhinosinusitis with or without nasal polyps management scheme for primary care and non-ENT specialists (CRS/NP)



Acute exacerbations of CRS should be treated like acute rhinosinusitis

**Evidence-based surgery for rhinosinusitis**

It is difficult to generalise about sinus surgery studies because surgery is indicated in selected patients who are not sufficiently responsive to medical treatment. There are specific problems in conducting surgical trials as surgery is difficult to estimate or standardize, particularly in multi-centre trials, and the type of treatment is difficult to conceal (blinding). Randomization may pose ethical problems unless narrow inclusion criteria are set and it is difficult to obtain homogenous patient groups with comparable therapeutic procedures for unbiased evaluation of sinus surgery outcomes. Notwithstanding this:

1. In acute rhinosinusitis, surgery is reserved for the most serious cases and their associated complications.
2. More than a hundred reviewed case series (level IV) with highly consistent results suggesting that patients with CRS with and without polyps benefit from sinus surgery.
3. Major complications occur in less than 1%, and revision surgery is performed in approximately 10% within 3 years.
4. In the majority of CRS patients, appropriate medical treatment is as effective as surgery, so sinus surgery should be reserved for patients who do not satisfactorily respond to medical treatment (level 1b).
5. Functional endoscopic surgery is superior to minimal conventional procedures including polypectomy and antral irrigations (Level 1b), but superiority to inferior meatal antrostomy or conventional sphenoidectomy is not yet proven.
6. In CRS patients not previously operated, extended surgery does not yield better results than limited surgical procedures (Level 1b). Although not evidence-based, the extent of surgery is frequently tailored to the extent of disease, which appears to be a reasonable approach. In primary paranasal surgery, surgical conservatism is recommended.
7. Revision endonasal sinus surgery is only indicated if medical treatment is not sufficiently effective. Substantial symptomatic improvement is generally observed in both CRS with and without polyps, though the improvement is somewhat less than after primary surgery. Complication rates and particularly the risk of disease recurrence are higher than after primary surgery.

**EVIDENCE-BASED MANAGEMENT SCHEME FOR ADULTS WITH CRS WITHOUT NP FOR ENT SPECIALISTS**

**Diagnosis**

*Symptoms present longer than 12 weeks*

Two or more symptoms, one of which should be either nasal blockage/obstruction/congestion or nasal discharge (anterior/posterior nasal drip):

- ± facial pain/pressure
- ± reduction or loss of smell

**Examination**

Nasal endoscopy - no visible polyps in middle meatus, if necessary following decongestant. (This definition accepts that there is a spectrum of disease in CRS which includes polypoid change in the sinuses and/or middle meatus but excludes those with polypoid disease presenting in the nasal cavity to avoid overlap)

- review primary care physician's diagnosis and treatment
- questionnaire for allergy and if positive, allergy testing if it has not already been done

*Treatment should be based on severity of symptoms*

- Decide on severity of symptomatology using VAS

**Figure 4. Management scheme for ENT specialists for adults with CRS without nasal polyps**

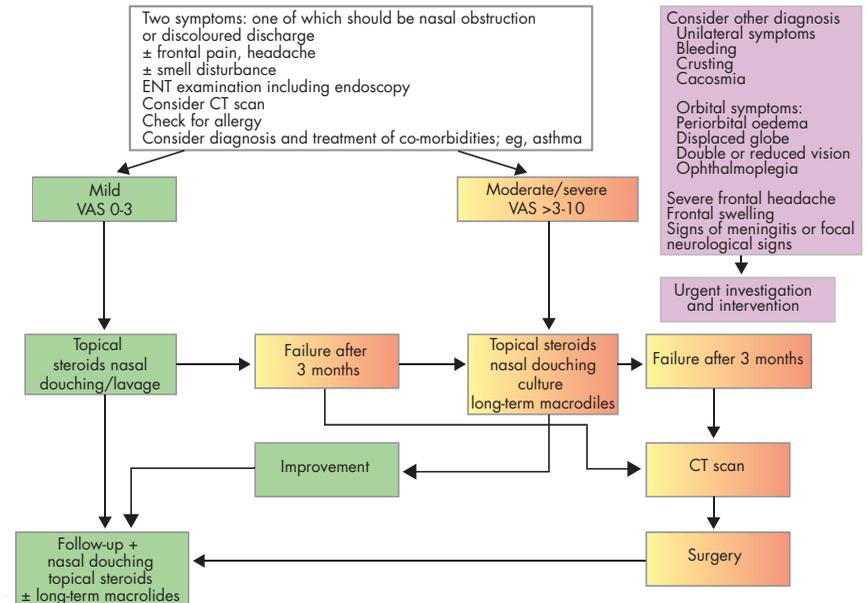


Table 3. Treatment evidence and recommendations for adults with chronic rhinosinusitis with nasal polyps\*

Therapy	Level	Grade of Recommendation	Relevance
oral antibiotics short term <2 weeks	no data	D	no
oral antibiotic long term >12 weeks	no data	D	yes, for late relapse
topical antibiotics	no data	D	no
topical steroids	Ib	A	yes
oral steroids	Ib	A	yes
nasal douche	Ib no data in single use	A	yes, for symptomatic relief
decongestant topical/oral	no data in single use	D	no
mucolytics	no data	D	no
antimycotics – systemic	Ib (-)	D	no
antimycotics – topical	Ib (-)	A	no
oral antihistamine in allergic patients	Ib (1)	A	yes, in allergy
capsaicin	II	B	no
proton pump inhibitors	II	C	no
immunomodulators	no data	D	no
phytotherapy	no data	D	no
anti-leukotrienes	III	C	no

\* Some of these studies also included patients with CRS without nasal polyps  
Ib (-): study with a negative outcome

EVIDENCE-BASED MANAGEMENT SCHEME FOR ADULTS WITH CRS WITH NP FOR ENT SPECIALISTS

Diagnosis

Symptoms present longer than 12 weeks

Two or more symptoms, one of which should be either nasal blockage/obstruction/congestion or nasal discharge (anterior/posterior nasal drip)  
± facial pain/pressure  
± reduction or loss of smell

Examination

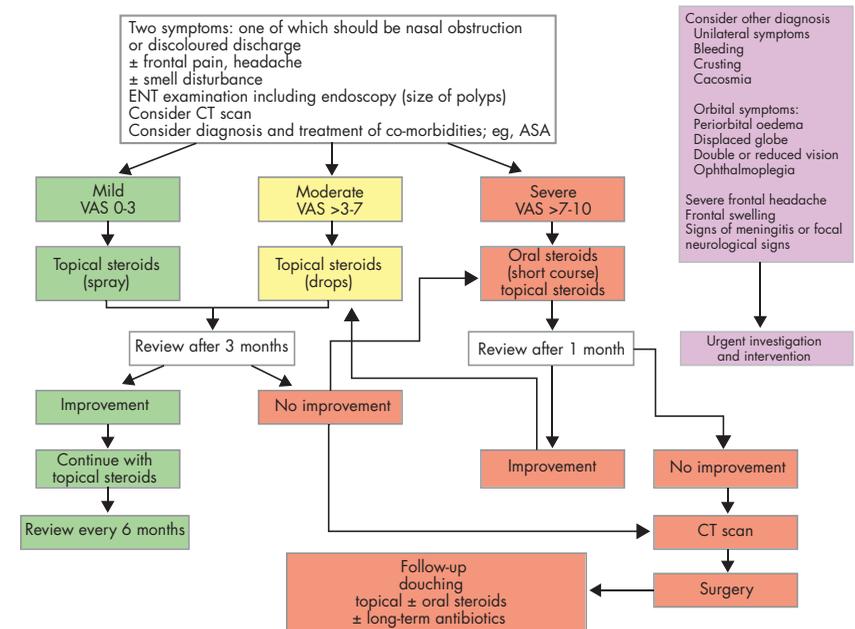
Nasal endoscopy - polyps bilateral, endoscopically visualised in middle meatus

- review primary care physician's diagnosis and treatment
- questionnaire for allergy and if positive, allergy testing if not already done

Severity of the symptoms

- (following the VAS score for the total severity) mild/moderate/severe.

Figure 5. Management scheme for ENT specialists for adults with CRS with nasal polyps



### EVIDENCE-BASED SCHEMES FOR THERAPY IN CHILDREN

The following scheme should help different disciplines in the treatment of rhinosinusitis in children. The recommendations are based on the available evidence, but the choices need to be made depending on the circumstances of the individual case.

Table 4. Treatment evidence and recommendations for children with acute rhinosinusitis

Therapy	Level	Grade of Recommendation	Relevance
oral antibiotic	Ia	A	yes, after 5 days, or in severe cases
topical corticosteroid	IV	D	yes
topical steroid on top of oral antibiotic	Ib	A	yes
topical decongestant	III (-)	C	no
saline douching	IV	D	yes

III (-): study with a negative outcome

### EVIDENCE-BASED MANAGEMENT SCHEME FOR CHILDREN WITH ACUTE RHINOSINUSITIS

#### Diagnosis

#### Symptoms

Sudden onset of two or more symptoms one of which should be either nasal blockage/obstruction/congestion or nasal discharge (anterior/posterior nasal drip):

- ± facial pain/pressure
- ± reduction/loss of smell

#### Examination (if applicable)

- nasal examination (swelling, redness, pus)
- oral examination: posterior discharge
- exclude dental infection

ENT examination including nasal endoscopy

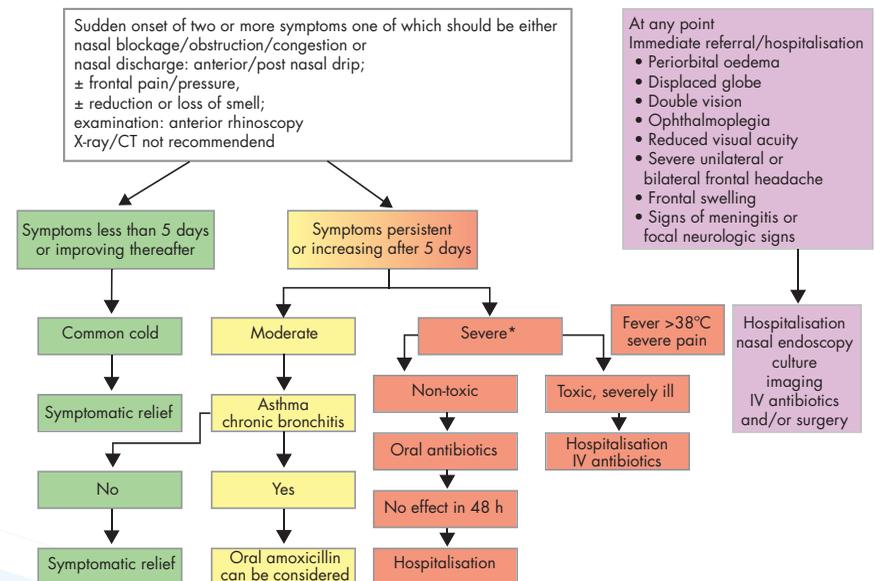
#### Imaging

(Plain x-ray **not** recommended)

CT scan is also **not** recommended **unless** additional problems such as:

- very severe diseases
- immunocompromised patients
- signs of complications

Figure 6. Management scheme for children with acute rhinosinusitis



EVIDENCE-BASED MANAGEMENT SCHEME FOR CHILDREN WITH CHRONIC RHINOSINUSITIS

Diagnosis

Symptoms present longer than 12 weeks

Two or more symptoms one of which should be either nasal blockage/obstruction/congestion or nasal discharge (anterior/posterior nasal drip):

- ± facial pain/pressure
- ± reduction or loss of smell

Additional diagnostic information

- questions on allergy should be added and, if positive, allergy testing should be performed.
- other predisposing factors should be considered: immune deficiency (innate, acquired, GERD)

Examination (if applicable)

- nasal examination (swelling, redness, pus)
- oral examination: posterior discharge
- exclude dental infection

ENT examination including nasal endoscopy

Imaging

(Plain x-ray **not** recommended)

CT scan is also **not** recommended **unless** additional problems such as:

- very severe diseases
- immunocompromised patients
- signs of complications

Treatment should be based on severity of symptoms

Table 5. Treatment evidence and recommendations for children with chronic rhinosinusitis

Therapy	Level	Grade of Recommendation	Relevance
oral antibiotic	Ia	A	yes, small effect
topical corticosteroid	IV	D	yes
saline douching	III	C	yes
therapy for gastro-oesophageal reflux	III	C	yes

Figure 7. Chronic rhinosinusitis in children management scheme

