

**Northwestern Medicine-West Region
Sinusitis Treatment Guideline Summary**

Basic Point: The IDSA guideline outlines specific criteria to help distinguish between viral and bacterial sinusitis to help identify patients who will likely benefit from antibiotic therapy.

Facts¹:

-The prevalence of viral URI is 90-98% versus 2-10% prevalence of bacterial URI—**Patients presenting with URIs are most likely viral**

-Secondary bacterial infection occurs in about 0.5-2% of adult patients with antecedent viral URIs and about 5% in children with viral URIs—**Very few URIs develop into secondary bacterial infections**

-The majority of children and adults with viral URI will have significant abnormalities in imaging studies if scanned (plain radiographs, CT, and MRI)—**Imaging is not a reliable way to differentiate between viral versus bacterial sinusitis**

Conventional Criteria for Diagnosis of Sinusitis

(presence of at least 2 major or 1 major and ≥2 minor symptoms)

-Major symptoms: Purulent anterior nasal discharge, purulent or discolored posterior nasal discharge, nasal congestion or obstruction, facial congestion or fullness, facial pain or pressure, hyposmia or anosmia, or fever (for acute sinusitis only)

-Minor symptoms: Headache, ear pain, pressure or fullness, halitosis, dental pain, cough, fever (for subacute or chronic sinusitis), or fatigue

Clinical Distinction between Viral vs. Bacterial URI—More likely bacterial if¹:

- 1) Onset with persistent symptoms > 10 days and NOT IMPROVING
- 2) Onset with severe symptoms with higher fever of at least 39°C (102°F) and purulent nasal discharge x 3-4 consecutive days AT BEGINNING OF ILLNESS
- 3) Onset with worsening symptoms, usually with typical viral URI symptoms that seems to improve followed by sudden worsening after 5-6 days (“double-sickening”)

| More likely Viral if | More likely Bacterial if |
|--|--|
| Fever in 1 st 24-48hr then subsides and | Fever x 3-4 consecutive days at beginning and |
| Purulent nasal discharge not present until 4-5 days into illness | Purulent nasal discharge present at beginning of illness |

Recommended Empiric Antibiotic Therapy if Bacterial Sinusitis is identified (listed in order from first-line to second/third line options)^{1,2,3}:

Adults:

- 1) Amoxicillin/clavulanate (Augmentin) 875mg PO BID x 5-7 days
- 2) Doxycycline 100mg PO BID x 5-7 days

Children:

- 1) Amoxicillin/clavulanate (Augmentin) 45mg/kg/dose PO BID x 10-14 days
- 2) Clindamycin 15-20mg/kg/dose PO TID PLUS cefdinir 7mg/kg/dose PO BID both x 10-14 days (for penicillin-allergic patients)

Northwestern Medicine-West Region Sinusitis Treatment Guideline Summary

Supportive Therapies^{1,2}

- “Symptomatic management [of rhinosinusitis] should focus on hydration, analgesics, antipyretics, saline irrigation, and [intranasal corticosteroids]¹.”
- It is recommended to avoid topical and oral decongestants and antihistamines due to lack of a proven benefit (despite the perception of an improved nasal airway patency) and the risk of side effects such as rebound congestion with decongestants and dry mouth or drowsiness with antihistamines

Analgesics/Antipyretics

- Acetaminophen (Tylenol)
 - Adults: 325-650 mg po q4-6h prn pain, headache or fever (max 3g/day)
 - Children: 10-15 mg/kg po q4-6h prn pain, headache or fever (max 2.6g/day)
- Ibuprofen (Motrin, Advil)
 - Adults: 200-400 mg po q4-6h prn pain, headache or fever (max 1.2g/day)
 - Children: 5-10 mg/kg po q6-8h prn pain, headache or fever (max 40mg/kg/day)

Saline Irrigation

- Sodium chloride nasal spray (Ocean, Ayr) 2-3 sprays in each nostril as needed for nasal congestion (same dose in children > 2 yo)

Intranasal Corticosteroids (a few examples and dosing listed, more exist)

- Adults:
 - Fluticasone propionate (Flonase)—2 sprays per nostril once daily; may reduce to 1 spray per nostril once daily after a few days
 - Triamcinolone (Nasacort AQ)—2 sprays per nostril once daily; may reduce to 1 spray per nostril once daily
- Children:
 - Fluticasone furoate (Veramyst)—for children ages 2-11 yo, 1 spray per nostril once daily; dose may be increased to 2 sprays per nostril once daily if inadequate response
 - Fluticasone propionate (Flonase)—for children older than 4 yo, 1 spray per nostril once daily; may increase to 2 sprays per nostril once daily if inadequate response
 - Triamcinolone (Nasacort AQ)—for children ages 2-<6 yo, 1 spray per nostril once daily; ages 6-<12 yo, 1 spray per nostril once daily, but may increase to 2 sprays per nostril if needed

References

- 1) Chow AW, Benninger MS, Brook I, et al. IDSA Clinical Practice Guideline for Acute Bacterial Rhinosinusitis in Children and Adults. *CID* 2012 (March), electronically released 3/20/12. Accessed online on 2/4/14 at <http://cid.oxfordjournals.org/content/early/2012/03/20/cid.cir1043.full.pdf+html>.
- 2) Lexicomp Online Drug Database. Wolters Kluwer Health, 1978-2014. Accessed online 2/5/14 and 2/6/14.
- 3) Wald ER, Applegate KE, Bordley C, et al. Clinical Practice Guideline for the Diagnosis and Management of Acute Bacterial Sinusitis in Children aged 1 to 18 Years. *Pediatrics* 2013; 132:e262-e280.