

Most sinus infections don't require antibiotics

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The vast majority of sinus infections are caused by viruses and should not be treated with antibiotics, suggest new guidelines released by the Infectious Diseases Society of America (IDSA).

Nearly one in seven people are diagnosed with a sinus infection each year. Although [sinus infections](#) are the fifth leading reason for [antibiotic prescriptions](#), 90 to 98 percent of cases are caused by [viruses](#), which are not affected by [antibiotics](#). Used inappropriately, antibiotics foster the development of drug-resistant [superbugs](#).

"There is no simple test that will easily and quickly determine whether a sinus infection is viral or bacterial, so many [physicians](#) prescribe antibiotics 'just in case,'" said Anthony W. Chow, MD, chair of the [guidelines](#) panel and professor emeritus of [infectious diseases](#) at the University of British Columbia, Vancouver. "However, if the infection turns out to be viral – as most are – the antibiotics won't help and in fact can cause harm by increasing antibiotic resistance, exposing patients to drug side effects unnecessarily and adding cost."

The guidelines – the first developed by IDSA on this topic – provide specific characteristics of the illness to help doctors distinguish between viral and bacterial sinus infections. A sinus infection, called acute rhinosinusitis, is inflammation of the nasal and sinus passages that can cause uncomfortable pressure on either side of the nose and last for weeks. Most sinus infections develop during or after a cold or other upper respiratory infection, but other factors such as allergens and

environmental irritants may play a role.

The guidelines recommend treating bacterial sinus infections with amoxicillin-clavulanate versus the current standard of care, amoxicillin. The addition of clavulanate helps to overcome antibiotic resistance by inhibiting an enzyme that breaks down the antibiotic. The guidelines also recommend against using other commonly used antibiotics, including azithromycin, clarithromycin and trimethoprim-sulfamethoxazole, due to increasing drug resistance.

The recommendation to use amoxicillin-clavulanate instead of amoxicillin is a major shift from older guidelines developed by other organizations. Dr. Chow notes that this recommendation was made due to increases in antibiotic resistance as well as the common use of pneumococcal vaccines, which have changed the pattern of bacteria that cause sinus infections.

The IDSA guidelines use the new GRADE system (Grading of Recommendations Assessment, Development and Evaluation), which is designed to more clearly assess the quality of evidence and strength of recommendations. The new IDSA guidelines note that randomized controlled trials referenced in previous guidelines often don't differentiate between bacterial and viral cause of infection, and therefore may not provide the best recommendations.

"These are the first evidence-based rhinosinusitis guidelines using the GRADE system," said Thomas M. File Jr., MD, co-author of the guidelines and chair of the Infectious Disease Section at Northeast Ohio Medical University, Rootstown, Ohio. "Health care providers face difficulties when treating sinus infections, and these guidelines provide the best recommendations available. The guidelines are transparent, clearly stating the level of evidence for each recommendation and pointing out where we need more research."

The IDSA rhinosinusitis guidelines contain a number of other recommendations, including:

- How to tell the difference – The guidelines note a sinus infection is likely caused by bacteria and should be treated promptly with antibiotics if:
 - symptoms last for 10 days or more and are not improving (previous guidelines suggested waiting seven days); or
 - symptoms are severe, including fever of 102 or higher, nasal discharge and facial pain lasting 3-4 days in a row; or
 - symptoms get worse, with new fever, headache or increased nasal discharge, typically after a viral upper respiratory infection that lasted five or six days and initially seemed to improve.
- Shorter treatment time – Most guidelines to date have recommended 10 days to two weeks of antibiotic treatment for a bacterial infection. However, the IDSA guidelines suggest five to seven days of antibiotics is long enough to treat a bacterial infection without encouraging resistance. The IDSA guidelines still do recommend children receive antibiotic treatment for 10 days to two weeks.
- Avoid decongestants and antihistamines – Whether the sinus infection is bacterial or viral, decongestant and antihistamines are not helpful and may make symptoms worse. Nasal steroids can help ease symptoms in people who have sinus infections and a history of allergies.
- Saline irrigation may help – The guidelines note nasal irrigation using a sterile solution – including sprays, drops or liquid – may help relieve some symptoms. However, the guidelines note this may not be helpful in children because they are less likely to

tolerate the discomfort of the therapy.

To ease symptoms of a sinus infection, Dr. File said he recommends patients take acetaminophen for sinus pain, use saline irrigation and drink plenty of fluids.

The voluntary guidelines are not intended to take the place of a doctor's judgment, but rather support the decision-making process, which must be individualized according to each patient's circumstances.

Provided by Infectious Diseases Society of America

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