



Cough & Cold ≠ Antibiotic

The first question in the 2012 Infectious Diseases Society of America (IDSA) Acute Bacterial Rhinosinusitis Guidelines is how to differentiate bacterial infection from viral infection.¹ This question is important because patients with viral illnesses do not require antibiotics, and can be harmed by receiving them unnecessarily. So which patients who complain about cough and cold require antibiotics?

Common Respiratory Syndromes: Bacteria or Virus?

Bacterial and viral illnesses have some overlap in the symptoms and types of illnesses they can cause.^{1,2}

Symptoms	Virus	Virus or Bacteria	Bacteria	Give antibiotics?
Runny nose or cold	X			NO
Sore throat negative for strep testing	X			NO
COVID-19	X			NO
Influenza	X			NO
RSV	X			NO
Acute bronchitis		X		NO*
Sinus pain or infection		X		MAYBE
Pneumonia		X		YES
Strep throat (group A strep)			X	YES

*Antibiotics are not needed unless they have chronic obstructive pulmonary disease (COPD) or other chronic lung disease

When Should Antibiotics for Upper Respiratory Infections Be Prescribed?

IDSA rhinosinusitis guidelines discourage prescribing antibiotics in most patients with upper respiratory tract infections.¹ Starting antibiotics are only suggested in any the following situations:

- Symptoms > 10 days
- Severe symptoms without improvement for > 3 days
- Symptoms worsen after initial improvement

Key Takeaway: Antibiotics will not treat viruses that cause upper respiratory tract infections. Evaluating duration and severity of symptoms in combination with viral testing can help determine if antibiotics are needed.

References:

1. Anthony W. Chow, Michael S. Benninger, Itzhak Brook, Jan L. Brozek, Ellie J. C. Goldstein, Lauri A. Hicks, George A. Pankey, Mitchel Seleznick, Gregory Volturo, Ellen R. Wald, Thomas M. File, Jr, IDSA Clinical Practice Guideline for Acute Bacterial Rhinosinusitis in Children and Adults. *Clin Infect Dis*. 2012. 54(8): e72–e112, <https://doi.org/10.1093/cid/cis370>
2. Antibiotic Prescribing and Use. Centers for Disease Control and Prevention. Available at: [Be Antibiotics Aware Partner Toolkit | Antibiotic Use | CDC](#). Accessed Jan 04, 2023.