

Bronchitis, Chronic

What should I know about Chronic Bronchitis?

Colds, flu, and bronchial infections are common. Some are minor and yet as we age, our resistance to the damage caused by these infections creates problems. Respiratory tract infections remain the major cause of death from acute illness in the United States, and most likely, they represent the single most common reason patients seek medical attention.^(1 &#fn107396>) The respiratory tract has a wonderful defense system, that, when functioning properly, is very effective against invasion, and removing potentially infectious substances from the lungs.

Lower respiratory tract infections generally occur only when lung defense mechanisms are not functioning properly. Lung function can be impaired by such things as the chronic inflammation that accompanies cigarette smoking or continued exposure to other irritants. Defenses may be additionally compromised when a particularly infectious microorganism invades the lungs. The majority of lower respiratory tract infections follow a colonization of the upper respiratory tract by these microorganisms. After achieving sufficiently high concentrations, the microorganisms then gain access to the lungs through the breathing process itself. Microbes can also enter the lung by inhaling infected aerosolized particles, or by way of the blood from another source;however, this occurs less frequently.

The most common lower respiratory tract infections are bronchitis, pneumonia, and bronchiolitis. Bronchitis, both acute and chronic, occurs most often in the winter months. Cold, damp climates and the presence of high concentrations of irritating substances also seem to precipitate attacks. An appropriate treatment program for an individual who has an uncomplicated lower respiratory tract infection can usually be established by a history, physical examination, chest radiograph, and properly collected sputum cultures, interpreted knowing the most common lung pathogens and their antibiotic susceptibility patterns within one's community.

Chronic bronchitis is a condition with continuous or recurrent excess mucus secretions into the bronchial tree. This condition can be exhausting. There is a cough that occurs most days during a period of at least three months of the year for two consecutive years in an individual where other causes of chronic cough have been ruled out.^(2 &#fn107397>) The cough is the body's response to try to get rid of the excess mucus produced as a result of continued bronchial irritation caused by one or a combination of factors. Cigarette smoking has been identified as the most prominent bronchial irritant; however, exposure to occupational dusts, fumes, environmental pollution, and bacterial (and possibly viral) infections must also be included.

As mucus-producing glands are continually stimulated, damage may occur. The cells, which secrete mucus, are called goblet cells. These goblet cells are generally absent from the smaller bronchi of normal healthy individuals, yet the number and size is markedly increased in both the larger and small bronchi of a person with chronic bronchitis. Further complicating matters is the fact that the mucus gland ducts also become dilated. As a result of these changes, those with chronic bronchitis have increased mucus in their peripheral airways further compromising lung defenses. Additional changes occur in the bronchi, including increased smooth muscle, cartilage atrophy, inflammation, and loss of cilia. These bronchial changes do not contribute significantly to obstruction.^(3 &#fn107399>)

Although the majority of chronic bronchitis sufferers have a positive history of cigarette smoking, as many as 10 percent have no smoking history. For these patients, other airway irritants, alone, or more likely in combination, are responsible for helping to create or worsen the condition. The influence of recurrent respiratory tract infections in childhood or young adult life to the later development of chronic bronchitis remains unclear.

About the Author

Footnotes Back to Top &#top> ^1 Toltzis P, Glover ML, Reed MD. Lower Respiratory Tract Infections, In: DiPiro et al eds. Pharmacotherapy, A Pathophysiologic Approach, 4th ed. Stamford CT: Appleton and Lange; 1999:1651-1657. ^2 American Thoracic Society. Standards for the diagnosis and care of patients with chronic obstructive pulmonary disease. Am J Respir Crit Care Med. 1995;152:S77-S120. ^3 Petty TL. Definitions in chronic obstructive pulmonary disease. Clin Chest Med. 1990;11:363-373. View Abstract view-abs.asp?fnid=107399&absid=102332> Powered by NHIOnDemand Copyright © 2000-2008 NHIOnDemand All rights reserved. www.nhiondemand.com This information is educational in context and is not to be used to diagnose, treat or cure any disease. Please consult your licensed health care practitioner before using this or any medical information.

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