

# Invasive Group A Streptococcal Infection

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[Reginald Tucker] Hello. I'm Reginald Tucker. I'm talking with CDC's Dr. Chris Van Beneden, about invasive group A streptococcal infection. Dr. Van Beneden is a medical epidemiologist in CDC's Respiratory Diseases Branch, and a subject matter expert on streptococcal infections. This conversation is based on a paper in the June 2011 issue of CDC's journal, *Emerging Infectious Diseases*. Welcome, Dr. Van Beneden.

[Chris Van Beneden] Thank you.

[Reginald Tucker] Dr. Van Beneden, what is invasive group A streptococcal infection and what effects does it have?

[Chris Van Beneden] Invasive group A strep disease is a serious infection caused by the bacteria, group A streptococcus. This is the same bacteria that causes common infections, such as strep throat and skin infections, like impetigo. Invasive infections are those that occur when the bacteria, the group A strep, gets into parts of the body where bacteria are not usually found, such as blood, muscles, or the lungs. The most common forms of invasive group A strep infection are cellulitis, pneumonia, and bloodstream infections. Most people who have these types of infection need hospital care. About 10 to 15 percent of patients with invasive group A strep disease die from their infection.

[Reginald Tucker] How do people get it?

[Chris Van Beneden] These bacteria are spread through direct contact with mucus from the nose or throat of people who are infected or through contact with infected wounds or sores on the skin. People who are most likely to get a severe strep infection are people with a suppressed immune system; the elderly; people with underlying chronic diseases, like diabetes, heart disease, or cancer; people who are IV drug users; people taking steroid treatments or chemotherapy; and those with chronic skin breaks or lesions, including children with chickenpox. Someone who carries the bacteria but has no symptoms is much less contagious. Treating an infected person with an antibiotic for 24 hours or longer generally eliminates their ability to spread the bacteria. However, it is important to complete the entire course of antibiotics, as prescribed. Also, it is not likely that household items like plates, cups, or toys spread these bacteria.

[Reginald Tucker] What's its relation to toxic shock syndrome?

[Chris Van Beneden] Well, two of the most severe, but least common, forms of invasive group A strep disease are necrotizing fasciitis and streptococcal toxic shock syndrome, or STSS.

Necrotizing fasciitis is sometimes described by the media as "the flesh-eating bacteria." It's a rapidly progressive disease that destroys muscles, fat, and skin tissue.

STSS results in a rapid drop in blood pressure and causes organs, like kidneys, liver, and the lungs, to fail. However, STSS is not the same as the "toxic shock syndrome" caused by the bacteria *Staphylococcus aureus*, which has been associated with tampon usage. About 25 percent of patients with necrotizing fasciitis and over 30 percent of those with STSS die.

[Reginald Tucker] How much of a problem is group A streptococcal infection and should we be worried about it?

[Chris Van Beneden] Although healthy people can get invasive group A strep disease, people with illnesses like cancer, diabetes, and chronic heart or lung disease, and those who use medications, such as steroids, are more likely to get it. The elderly; adults with history of alcohol and drug use; people with skin lesions, such as cuts, chicken pox, and surgical wounds also have a greater chance of getting group A strep disease. Although invasive group A strep infections are typically severe, few people who come in contact with this bacteria will actually develop invasive group A strep disease. In the United States, about three to four people among every 100,000 develop this type of severe infection. In contrast, there are several million cases of strep throat and skin infections each year.

[Reginald Tucker] Is there a vaccine for it?

[Chris Van Beneden] Well, currently there's no vaccine available that prevents group A strep infections. However, some potential vaccines are in various stages of development.

[Reginald Tucker] What can be done to help prevent group A streptococcal infections, since a vaccine is not available?

[Chris Van Beneden] Well, the spread of all types of group A strep infection can be reduced by good hand washing, especially after coughing and sneezing and before preparing foods or eating. People with sore throats should be seen by a doctor who can perform tests to find out whether the illness is strep throat. If the test result shows strep throat, the person should stay home from work, school, or day care until 24 hours after taking an antibiotic. Also, all wounds should be kept clean and watched for possible signs of infection, such as redness, swelling, drainage, and pain. A person with signs of an infected wound, especially if a fever occurs, should immediately seek medical care.

[Reginald Tucker] Thanks, Dr. Van Beneden. I've been talking with Dr. Chris Van Beneden about a paper, Invasive Group A Streptococcal Infection and Vaccine Implications, Auckland, New Zealand, that appears in the June 2011 issue of CDC's journal, Emerging Infectious Diseases. You can see the entire article online at [www.cdc.gov/eid](http://www.cdc.gov/eid). If you'd like to comment on this podcast, send an email to [eideditor@cdc.gov](mailto:eideditor@cdc.gov). That's e-i-d-editor – one word - at c-d-c-dot-gov. I'm Reginald Tucker, for Emerging Infectious Diseases.

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