



PNEUMOCOCCAL VACCINE

The Issue

A new pneumococcal vaccine has been licensed for use in Canada for children.

Background

Pneumococcal disease is caused by a bacterium called *Streptococcus pneumoniae*. There are more than 90 different types of pneumococcal bacteria; however, only a few types account for most of the serious diseases.

Many people carry *S. pneumoniae* in their throat or nose without getting sick. If the bacteria overcome your body's natural defenses, they can cause various diseases. The most serious of these is meningitis, an inflammation of the tissue surrounding the brain and spinal cord. Pneumococcal meningitis is fatal in up to 26% of cases. Among people who recover, it can cause permanent health effects, including brain damage and hearing loss. Other diseases caused by *S. pneumoniae* include bacteremia (blood poisoning), pneumonia (lung infection), and otitis media (middle ear infections).

Pneumococcal disease is treated with antibiotics, such as penicillin and cephalosporins. In recent years, certain strains of *S. pneumoniae* have emerged that are resistant to one or more commonly used antibiotics. This makes prevention of pneumococcal disease through vaccination even more important.

How Pneumococcal Disease Spreads

The bacteria spread from one person to another through close contact involving secretions from the nose or throat. Examples include sharing eating utensils and kissing. Most people who are exposed to the bacteria do not get sick. No special treatment is required after being in contact with someone who has a pneumococcal infection.

Pneumococcal disease is quite common. A recent study in Canada looked at the more serious forms of the disease in children under the age of five. For this age group alone, it's estimated that pneumococcal disease causes 15 deaths, 65 cases of meningitis, 700 cases of bacteremia, 2,200 cases of pneumonia requiring hospitalization, and 9,000 cases of pneumonia not requiring hospitalization every year.

Risk Factors for Pneumococcal Disease

Anyone can get pneumococcal disease, but certain groups are at higher risk, including children under the age of two, and people over the age of 65. Others considered to be at higher risk are people with weakened immune systems due to illness or medications, including anyone with HIV infection; people with sickle cell disease, diabetes, or serious problems with their heart, lungs or kidneys; and, anyone without a spleen or with a spleen that functions poorly.



The New Conjugate Pneumococcal Vaccine

The new conjugate vaccine prevents diseases caused by seven of the most common types of pneumococcal bacteria. It is safe and effective. It protects against serious forms of the disease up to 97% of the time, depending on the person. The vaccine is given by a needle, and cannot cause pneumococcal disease because it contains no live bacteria. The side effects, which are usually minor and temporary, include some redness, swelling or tenderness where the needle went in, and a mild fever. Serious side effects, including allergic reactions, are quite rare. It can be given to infants, and there is no other vaccine to prevent pneumococcal disease in children less than two years of age.

Recommendations about the Conjugate Pneumococcal Vaccine

The National Advisory Committee on Immunization (NACI) is a group of experts that provides Health Canada with ongoing and timely medical, scientific, and public health advice relating to immunization. In the 2002 Canadian Immunization Guide, NACI recommends the new conjugate pneumococcal vaccine for all children less than two years of age, and for children under five who have conditions that put them at high risk for pneumococcal disease. They also recommend that this vaccine should be considered for all other children

aged two to five years, especially those who attend child care, and Aboriginal children living in isolated communities. Exceptions to the recommendations would include anyone who has previously had an allergic reaction to other components of the vaccine.

You may have to pay for conjugate pneumococcal vaccine. It is not currently part of the routine immunization program in all provinces and territories in Canada.

Minimize Your Risks

The conjugate pneumococcal vaccine is recommended for all children under the age of two, and for children under the age of five who are at risk for pneumococcal disease. Talk to your health care provider if you think that you or your family would benefit from the conjugate pneumococcal vaccine.

If you are older than 65, there is also the polysaccharide pneumococcal vaccine, which has been used for a longer period of time. Your health care provider may recommend this vaccine.

Health Canada's Role

Health Canada regulates vaccines in Canada through a rigorous licensing process. This includes an extensive pre-market review of information about a vaccine's safety and effectiveness, and post-market assessment, such as tracking adverse reactions. In addition, Health Canada monitors the incidence of vaccine-preventable diseases, including serious forms of pneu-

mococcal disease, develops guidelines for the control of diseases, and works with the provinces and territories on strategies to manage infectious diseases.

Need More Info?

For more information about vaccines and the NACI recommendations, visit Health Canada's Division of Immunization: <http://www.hc-sc.gc.ca/hpb/lcdc/bid/di/index.html>

Other Web sites of interest include the following:

Canadian Immunization Awareness Program: <http://www.immunize.cpha.ca/>

The Canadian Pediatric Society: www.caringforkids.cps.ca

For more It's Your Health articles go to: <http://www.hc-sc.gc.ca/english/iyh/index.html>