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Meningococcal Meningitis

Meningococcal disease is a potentially life-threatening bacterial infection. The disease most commonly is expressed as either meningococcal meningitis, an inflammation of the membranes surrounding the brain and spinal cord, or meningococemia, a presence of bacteria in the blood.

Meningococcal disease is caused by *Neisseria meningitidis*, which has become the leading cause of bacterial meningitis in older children and young adults in the United States.

Meningococcal disease strikes about 3,000 Americans each year, leading to death in approximately 10 to 15 percent of cases, which translates into 300 deaths annually. It is estimated that 100 to 125 cases of meningococcal disease occur annually on college campuses and 5 to 15 students die as a result. The disease can result in permanent brain damage, hearing loss, learning disability, limb amputation, kidney failure or death.

The incidence of meningitis outbreaks of serogroup C has risen in the past 10 years, including cases at U.S. colleges and universities. Data suggest that certain social behaviors, such as exposure to passive and active smoking, bar patronage and excessive alcohol consumption, may increase students' risk for contracting the disease. Recent data also show students living in dormitories, particularly freshman, have a sixfold increased risk for the disease.

Vaccination Recommendations for College Students

On October 29, 1999, the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC) voted to recommend that college students, particularly freshman living in dormitories and residence halls, be educated about meningococcal meningitis and the potential benefits of vaccination.

Transmission and Symptoms of the Disease

Meningococcal bacteria are transmitted through the air via droplets of respiratory secretions and direct contact with persons infected with the disease. Oral contact with shared items, such as cigarettes or drinking glasses, or through intimate contact such as kissing could put a person at risk for acquiring the infection. People identified as close contacts of a patient are at an increased risk for disease and should receive antibiotics (Cipro or Rifampin) to prevent meningitis.

Many healthy people become carriers of these bacteria and usually nothing happens to the person other than developing natural antibodies. Very rarely, for reasons such as suppressed immunity or concurrent respiratory illness, the bacteria invades the body causing disease.

Meningococcal disease usually peaks in late winter and early spring. The disease can easily be misdiagnosed as something less serious, because symptoms are similar to the flu. The most common symptoms include high fever, headaches, stiff neck, confusion, nausea, vomiting, lethargy and/or rashes. Anyone with similar symptoms should contact a physician immediately. If untreated, often within hours of the onset of symptoms, the disease can progress rapidly and can lead to shock and death.

Persons at Risk for the Disease, Including College Students

Meningococcal disease can affect people at any age. Certain groups are at increased risk for contracting the disease including those in close contact with a known case, individuals with compromised immune systems and persons traveling to endemic areas of the world. Since 1991, cases of meningococcal disease among 15 to 24-year olds have more than doubled.

Recent evidence found that students residing in dormitories on campus appear to be at higher risk for meningococcal disease than college students overall. Further research recently released by the CDC shows freshmen living in dormitories have a six times higher risk for meningococcal disease than college students overall.

Vaccination to Prevent Meningococcal Meningitis

A quadrivalent meningococcal vaccine is available against four of the most common strains of *N. meningitidis* in the United States (A, C, Y, W-135). The vaccine can be used in adults and children older than two years of age and is 85 to 100 percent effective in preventing serogroups A and C of meningitis in older children and adults.

The vaccine is often used to control serotype C meningococcal disease outbreaks and for pre-exposure among certain high-risk groups (e.g., immunosuppressed, travelers).

As of October 20, 1999, ACIP recommends that undergraduate college students, particularly freshmen who live in or plan to live in dormitories or residence halls, receive information about meningococcal meningitis and the benefits of vaccination. Freshmen and other undergraduates who wish to reduce their risk for disease should be provided access to the vaccine.

This information should not be used as substitute for the medical care and advice of your child's physician. Health related topics found on the Andorra Pediatrics web site should not be used for diagnosing purposes or be substituted for medical advice. As with any new or ongoing treatment, always consult your professional healthcare provider before making any changes in treatment or beginning any new treatment. If you have any questions or concerns, please call our office.