

## Fact Sheet

### **Meningococcal Disease**

(meningococcal meningitis, meningococemia)

#### **What is meningococcal disease?**

Meningococcal disease includes meningococcal meningitis and meningococemia. Meningococcal meningitis is a severe form of meningitis (inflammation of the meninges, the tissues that cover the brain and spinal cord) caused by the bacterium *Neisseria meningitidis*. Meningococemia is an infection of the blood with *Neisseria meningitidis*. A person may have either meningococcal meningitis or meningococemia, or both at the same time.

#### **What are the symptoms?**

The signs and symptoms of meningococcal disease can vary widely, but include sudden onset of high fever, headache, vomiting, stiff neck and a rash. Sensitivity to light, sleepiness and confusion may also occur. Symptoms may be difficult to detect in infants and the infant may only appear lethargic, irritable, have vomiting, or be feeding poorly. As the disease progresses, patients of any age may have seizures. Meningococcal disease is fatal in 8-15% of cases.

#### **How soon do the symptoms appear?**

The symptoms may develop rapidly, sometimes in a matter of hours, but usually over the course of 1-2 days. In some cases, death may occur within hours of the onset of symptoms. The symptoms may appear anytime between 2 and 10 days after *exposure*, but usually within 3 to 4 days.

#### **Who gets meningococcal disease?**

*N. meningitidis* bacteria are commonly found in the nose and throat without ever causing disease. Nationally, it is estimated that 5-10% of the population is carrying the bacterium at any given time. Most people exposed to *N. meningitidis* do not become ill. It is not well understood why only a few people develop invasive illness, but may be influenced by genetic, immune (e.g., preceding viral illness, immune compromised), societal (e.g., overcrowding, smoke exposure) or physical factors making them more susceptible to disease. Anyone can get meningococcal disease, but it is most common in children under 5. Compared to other persons their age, college freshmen, especially those that live in dormitories, are at a slightly increased risk for meningococcal disease.

#### **How are the bacteria that cause meningococcal disease spread?**

The meningococcus bacteria are spread by direct contact with respiratory and oral secretions (saliva, sputum or nasal mucus) of an infected person.

**When and for how long is an infected person able to spread the disease?**

A person with meningococcal disease may transmit the disease beginning several days before he/she becomes ill, until the bacteria are no longer present in discharges from the nose and throat. Patients should be excluded from school, daycare or the work place until at least 24 hours after therapy was begun and the illness has subsided.

**What is the treatment for meningococcal disease?**

Meningococcal disease can be treated with a number of effective antibiotics. Persons who have been in close, direct contact with a patient with meningococcal disease may need to take antibiotics such as rifampin, ciprofloxacin or ceftriaxone as a preventive measure to eliminate the bacteria that they may be carrying in their throat.

**Should people who have been in contact with a person with a diagnosed case of meningococcal disease be treated?**

Only people who have been in close, direct contact need to be considered for preventive treatment. Close contacts include household members, intimate contacts, persons performing mouth to mouth resuscitation or endotracheal intubation, day care center classmates, or anyone directly exposed to the patient's oral or nasal secretions (e.g., kissing, sharing eating utensils or beverage containers). Direct contacts are usually advised to take preventive antibiotics. Close contacts should be alerted to watch for early signs of illness, especially fever, and seek treatment promptly. Casual contact that might occur in a classroom, office or work setting is not usually significant enough to warrant antibiotic treatment.

**Is there a vaccine to prevent meningococcal disease?**

There are two vaccines (Menomune®, Menactra™) that will protect against four of the types of meningococcus, including 2 of the 3 types most common in the U.S. (serogroup C, Y, and W-135) and a type that causes epidemics in Africa (serogroup A). Meningococcal vaccines cannot prevent all types of the disease (neither protect against type B). The vaccine is recommended in some outbreak situations or for travelers to areas of the world where high rates of the disease are known to occur. College freshman living in dormitories should consider receiving the vaccine due to their slightly elevated risk of acquiring the disease. In 2007, the Advisory Committee on Immunization Practices (ACIP) revised its recommendation to include routine vaccination of all persons aged 11--18 years with 1 dose of MCV4 (Menactra™) at the earliest opportunity. The ACIP recommended that children receive the new meningococcal vaccine at their routine 11-12 year old doctor's visit and that for the next two to three years, teens entering high school should also be vaccinated.

## Fact Sheet (Spanish)

### Enfermedad meningocócica

(meningitis meningocócica, meningococemia)

*Serie de hojas informativas de enfermedades*

#### ¿Qué es enfermedad meningocócica?

Enfermedad meningocócica incluye la meningitis meningocócica y meningococemia. La meningitis es una inflamación de las meninges, tejido que cubre el cerebro y la médula espinal. La meningitis meningocócica es una forma grave de meningitis causada por la bacteria *Neisseria meningitidis*. Meningococemia es una infección de la sangre con *Neisseria meningitidis*.

#### ¿Cuáles son los síntomas?

Las señales y síntomas de la enfermedad meningocócica pueden ser muy variados. Fiebre, dolor de cabeza, vómitos, cuello tieso y salpullido son síntomas comunes de la meningitis meningocócica. Las personas con meningococemia a menudo tienen fiebre, salpullido, dolor de cabeza y debilidad. Una persona puede tener meningitis meningocócica o meningococemia, o ambas a la vez.

#### ¿Cuándo aparecen los síntomas?

Los síntomas pueden desarrollarse rápidamente, a veces en unas horas, pero usualmente durante varios días. En algunos casos, la persona puede morir en unas horas después del inicio de los síntomas. Los síntomas pueden aparecer en cualquier momento entre 2 y 10 días después de exponerse, usualmente dentro de 3 a 4 días.

#### ¿Quién contrae la enfermedad meningocócica?

Muchas personas expuestas a *Neisseria meningitidis* no se enferman gravemente. Cualquier persona puede contraer la enfermedad meningocócica, pero es más común en niños y adultos jóvenes. Comparado con la edad de otras personas, los estudiantes de primer año de universidad, especialmente aquellos que viven en dormitorios, están a un riesgo un poco mayor de contraer la enfermedad meningocócica.

#### ¿Cómo se transmite la bacteria que causa la enfermedad meningocócica?

La bacteria meningocócica se transmite por contacto directo y cercano con secreciones orales y respiratorias (saliva, esputo o mucosidad nasal) de la persona infectada. Contacto cercano incluye a familiares que viven juntos, contacto en centros de guardería y cualquier persona directamente expuesta a secreciones orales o nasales del paciente. Muchas personas son portadoras de la bacteria en sus narices y garganta sin ningún síntoma de enfermedad, mientras que otros pueden desarrollar síntomas graves.

#### ¿Cuándo y por cuánto tiempo puede una persona infectada transmitir la enfermedad?

Una persona puede transmitir la enfermedad desde el momento en que se infecta hasta cuando ya no tenga la bacteria en secreciones de la nariz y garganta. La duración varía de acuerdo al tratamiento que se use. Los pacientes deben ser alejados de la escuela, guardería y lugar de trabajo hasta por lo menos 24 horas después de que se haya comenzado la terapia y la enfermedad se haya apaciguado.

**¿Cuál es el tratamiento para la enfermedad meningocócica?**

Penicilina es la droga de elección para la enfermedad meningocócica, aunque cefalosporinas de tercera generación son alternativas razonables.

**¿Las personas que han estado en contacto con una persona diagnosticada con enfermedad meningocócica, deben ser tratadas?**

Sólo las personas que han estado en contacto directo deben considerar tratamiento preventivo. Contacto cercano directo incluye a miembros de la familia que viven en la misma casa, contacto íntimo (por ejemplo, besos), personas que hacen resucitación de boca a boca o intubación endotraqueal, contactos en guarderías infantiles o cualquier exposición directa con secreciones nasal u oral del paciente. A esas personas usualmente se les recomienda tomar antibióticos preventivos, tales como rifampina, ciprofloxacina o ceftriaxona. El contacto casual que pudiese ocurrir en un salón de clases, oficina o fábrica, usualmente no es de gran preocupación. Contacto cercano (familia, guarderías, escuelas de niños pequeños, etc.), debe observarse para detectar signos tempranos de la enfermedad, especialmente fiebre, y buscar tratamiento en forma oportuna.

**¿Hay vacuna para prevenir la enfermedad meningocócica?**

Actualmente hay una vacuna que protegerá contra cuatro de los serogrupos de meningococo. Se recomienda en algunas situaciones de brote o cuando se viaja a lugares del mundo donde se sabe que esta enfermedad ocurre en gran número. Los estudiantes de primer año de universidad deberían considerar vacunarse para disminuir el riesgo de adquirir la enfermedad.

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## Sample Letter A

### Parental Meningococcal Disease Information

[PRINT ON SCHOOL LETTERHEAD]

### Meningococcal Disease Information

[INSERT DATE]

Dear Parent:

As the school nurse at [INSERT SCHOOL NAME], I am writing to inform you about the dangers of meningococcal disease, commonly known as meningitis, a potentially fatal bacterial infection that can strike teenagers and college students. The disease can come on quickly and may cause death or permanent disability within hours of the first symptoms; although rare the disease may be prevented through vaccination.

The U.S. Centers for Disease Control and Prevention (CDC) recommends meningococcal immunization for all adolescents 11-18 years of age.

Teenagers and college students have an increased rate of meningococcal infection compared to the general population, accounting for nearly 30 percent of all U.S. cases annually. Of those who survive, up to 20 percent suffer long-term disabilities, including brain damage, loss of hearing, organ failure and limb amputations.

Meningococcal disease can be misdiagnosed as something less serious, because early symptoms are similar to those of influenza or other common viral illnesses, including high fever, headache, nausea and stiff neck. That is why immunization is so important. A conjugate meningococcal vaccine is available that public health officials anticipate will provide longer protection against four of the five strains of bacteria that cause meningococcal disease. Although teenagers and college students are at increased risk for contracting the disease, up to 83 percent of cases in this population may be prevented through immunization.

As your child's school nurse, I encourage you to speak to your child's physician about meningococcal disease and to consider immunization. For more information about meningococcal disease and immunization, please feel free to contact the State Immunization Program at 860-509-7929 or visit the CDC Web site at [www.cdc.gov/vaccines/](http://www.cdc.gov/vaccines/).

Sincerely,

[INSERT NAME OF SCHOOL NURSE]  
[INSERT NAME OF SCHOOL]