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MENINGITIS

Know your risk.

Learn about vaccination.

Important notice: Information in this handout has been gathered from the Alaska Postsecondary Student Immunization Act (HB 185), signed into law effective May 18, 2005. Additional information was gathered from the Alaska Department of Health and Social Services' Division of Public Health, and the website of the American College Health Association. The Alaska Commission on Postsecondary Education (ACPE) cannot provide medical information and is not responsible for any medical information provided to schools or students. For questions specific to meningitis, immunization, and related diseases, please consult a qualified medical professional.

Did you know?

- **Meningococcal disease** is a contagious but largely preventable bacterial infection that most often leads to meningitis, an inflammation of the membranes surrounding the brain and spinal cord, or a condition called meningococcal septicemia, which is an infection of the blood.
- **Meningococcal disease is caused by bacteria** called *Neisseria meningitidis* that are spread person-to-person through the air (usually by sneezing or coughing), through direct contact with an infected person, such as oral contact with shared items like cigarettes or drinking glasses,

or through intimate contact, such as kissing. This disease is not as contagious as things like the common cold or the flu, and it is not spread by casual contact or by simply breathing the air where a person with meningitis has been.

- **Meningococcal disease is a serious illness** that can lead to death within a few hours of onset; one out of ten cases is fatal, and in one out of seven survivors, it can lead to severe and permanent disabilities such as brain damage, hearing loss, seizures, or limb amputation.

What are the symptoms of meningococcal disease?

- High fever, headache, and stiff neck are common symptoms of meningitis in anyone over the age of 2 years. A rash may also develop over parts of the body, or the entire body. Other symptoms include nausea, vomiting, discomfort looking into bright lights, confusion, and sleepiness. These symptoms can develop over several hours, or they may take 1-2 days. As the disease progresses, seizures may develop. If you notice these symptoms—in yourself, friends, or others—you should contact your college health service or local hospital immediately.

Who is at risk for meningococcal disease?

- Anyone can get meningococcal meningitis, but scientific evidence suggests that college freshmen living in campus housing are at moderately increased risk to get this disease when compared to the general college population. The reasons for this increased risk are still not known for certain, but factors may include such things as crowded living situations, bar patronage, active or passive smoking, irregular sleep patterns, and sharing personal items.

- Other risk groups include infants and young children, household contacts to a person with meningococcal disease, refugees from parts of the world with high rates of meningococcal disease, laboratory workers who work with this bacteria, and military recruits.

Are there vaccines against meningococcal disease?

- Yes, there are two safe and effective vaccines that protect against four strains of the bacteria that cause meningococcal disease—serogroups A, C, Y, and W135. Immunizations against meningococcal disease will decrease the risk of contracting the illness from these meningococcal strains.

How can meningococcal disease be prevented?

- **Many cases of meningococcal disease can be prevented.** The Centers for Disease Control and Prevention and the American College Health Association recommend that all first-year students living in residence halls be vaccinated against meningococcal disease. All other college students under the age of 25 years who wish to reduce their risk for the disease may choose to be vaccinated.

Vaccination is safe and effective. It protects against four of the five most common strains (or types) of bacteria that cause meningitis. Approximately 70-80 percent of cases in the college age group are caused by strains that are potentially vaccine-preventable. The most commonly reported adverse reactions among adolescents and adults in clinical studies were pain at the injection site, headache, and fatigue. These respond to simple measures (ibuprofen or acetaminophen) and resolve spontaneously within a few days.

Frequently Asked Questions and Answers About Meningococcal Disease

1. What is meningococcal disease?

Meningococcal disease is a rare, but potentially fatal, bacterial infection, and most commonly leads to meningitis, an inflammation of the membranes surrounding the brain and spinal cord, or meningococcal septicemia, an infection of the blood.

2. What causes meningococcal disease?

Meningococcal disease is caused by *Neisseria meningitidis*, a leading cause of bacterial meningitis in older children and young adults in the United States. There are five types of bacteria (or serogroups) for meningococcal disease that circulate worldwide: A, B, C, Y, and W-135.

Evidence shows approximately 70-80 percent of cases in the college age group are caused by serogroup C, Y, or W-135, which are potentially vaccine-preventable.

The number of cases caused by each type varies by location. For instance, type A rarely causes cases in the United States, but is the most common cause of epidemics in Africa and Asia. Different age groups appear to be disproportionately affected by different types. Type B is the most common type in infants, and was recently associated with cases in Oregon. In Alaska, 56% of cases were due to type B between 1999 and 2004. Type Y causes the majority of cases in those 65 years and older. Type C is associated with outbreaks in communities and schools, including colleges and universities. The proportion of disease caused by different types of the bacteria also

changes over time.

3. How many people get meningococcal disease each year?

Meningococcal disease strikes 1,400 to 3,000 Americans each year and is responsible for approximately 150-300 deaths. Adolescents and young adults account for nearly 30 percent of all cases in the United States. Approximately 100-125 cases of meningococcal disease occur on college campuses each year, and 5-15 students will die as a result.

4. How serious is meningococcal disease?

Meningococcal disease is contagious and progresses very rapidly. It can easily be misdiagnosed as the flu or other minor febrile infections, and, if not treated early, meningitis can lead to death or permanent disabilities. One in seven of those who survive these long-term side effects, such as brain damage, hearing loss, seizures, or limb amputation.

5. How is meningococcal disease spread?

Meningococcal disease is spread person-to-person through the air by respiratory droplets (e.g. coughing, sneezing). The bacteria also can be transmitted through direct contact with shared items like cigarettes or drinking glasses, and through kissing. Although contagious, this disease is not as contagious as things like the common cold or the flu, and it is not spread by casual contact or by simply breathing the air where a person with meningitis has been.

6. What are the symptoms of meningococcal disease?

High fever, headache, and stiff neck are common symptoms of meningitis in anyone over the age of 2 years. A rash may also

develop over parts of the body, or the entire body. Other symptoms include nausea, vomiting, discomfort looking into bright lights, confusion, and sleepiness. These symptoms can develop over several hours, or they may take 1 to 2 days. As the disease progresses, seizures may develop. Students who notice these symptoms in themselves, friends, or others should contact their college health service or hospital immediately.

7. What are the complications of meningococcal disease?

If not treated early, meningococcal disease can lead to death or permanent disabilities. One in seven of those who survive will suffer long-term side effects, such as brain damage, hearing loss, seizure, or limb amputation.

8. Who is at risk of getting meningococcal disease?

Anyone can get meningococcal disease, however certain groups are at higher risk. These include infants, adolescents, and college students, particularly those living in residence halls. Disease rates decline after infancy, but begin to rise again in early adolescence, peaking between the ages of 15 and 20 years.

Due to lifestyle factors, such as crowded living situations, bar patronage, active or passive smoking, irregular sleep patterns, and sharing of personal items, some college students are more likely to get meningococcal disease than the general college population.

Certain conditions also increase a person's susceptibility to the disease. Persons with

immature or damaged immune systems are at increased risk.

Respiratory tract infections also increase a person's risk of getting the disease. There also may be certain genetic factors that increase the risk of infection.

9. Who should be vaccinated?

The Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP) and the American College Health Association (ACHA) recommend that the following groups be vaccinated:

- All first-year students living in residence halls
- Undergraduate students 25 years of age or younger who wish to reduce their risk for the disease may choose to be vaccinated
- Students with medical conditions that compromise immunity (e.g. HIV, absent spleen, antibody deficiency, chemotherapy, immunosuppressants)
- Other groups (non-college age) are recommended for vaccination
 1. Students at the time of high school entry
 2. Young adolescents at the pre-adolescent doctor visit (11-12years of age)
 3. Travelers to endemic areas of the world
 4. Lab workers with possible exposure to meningococcus

10. Why should college students consider getting the meningococcal vaccine?

Meningococcal vaccination is recommended by ACIP and ACHA for all first-year students living in residence halls. Data also shows an increased incidence of meningococcal disease among adolescents and young adults, including college students. Additionally, in persons 15-24 years of age, 70-80 percent of cases are caused by vaccine-preventable strains.

11. How effective is vaccination?

The meningococcal vaccine provides protection against four of the five types of *N. meningitides* bacteria that cause meningococcal disease in the United States – types A, C, Y, and W-135. In persons 15-24 years of age, 70-80 percent of cases are caused by potentially vaccine-preventable strains.

12. Is vaccination safe? Are there any adverse side effects?

The vaccine is safe and effective, and adverse reactions are mild and infrequent. The most commonly reported reactions by adolescents and adults in clinical studies were pain at the injection site, headache, and fatigue. These respond to simple measures (ibuprofen or acetaminophen) and resolve spontaneously within a few days.

I certify that I have received and reviewed this brochure discussing meningococcal disease.

Name:

Date:
