

# Unprotected People #25

## Meningococcal Meningitis

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### **Meningitis: Big dread on campus**

Rise in potentially fatal illness in students prompts call for wider use of vaccine

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Life on Virginia Military Institute's (VMI) freshman "rat line" is rough, regimented and leaves little room for gim-riders, the tag given to those who spend too much time on the sick list. So when Cadet John Fuller started feeling sick and couldn't hold his head in a rat's traditional chin-down pose, he started to worry.

"It was a Wednesday night; in 15 minutes I went from feeling fine to feeling horrible," said the 19-year-old student from Anderson, Ind., now in his second year at the military college in Lexington, Va. "I was unbelievably cold. It felt like it was 30 degrees below—I thought I was getting the flu."

Fuller went to the school's infirmary, he learned he didn't have a fever, he got some Tylenol and went to bed. The next morning, while dressing, he couldn't push his chin to his neck. "I think that was the most noticeable thing, because I knew we were required to hold that position," he said. "By the time I got to class, I had red dots on my arms."

Barely 24 hours later, Fuller was in the intensive care unit at the University of Virginia hospital in Charlottesville. He had meningococemia, a form of meningitis caused by the bacterium *Neisseria meningitidis*.

"It moved super-fast," said Fuller about his brush last February with this sometimes fatal disease. "I was sweating and the headache, the pain, was so unbelievable—I was conscious the whole time, but it felt like I was drunk. I was talking, but I wasn't coherent."

Fuller joins the rising ranks of college students infected with meningococcal disease. It often strikes those living in close conditions, such as college

dorms and military barracks.

There have been recent cases in the Washington area. Two weeks ago a 20-year-old student at the University of Maryland was hospitalized with bacterial meningitis but is now recovering. The same day the student was hospitalized, a Manassas Park Middle School teacher, Jane Dimitriou, 47, died of bacterial meningitis.

The disease has two common forms: meningococcal meningitis, an inflammation of the membranes surrounding the brain and spinal cord, or meningococemia, when the bacteria move into the bloodstream. There is also a type of meningitis caused by a virus, but it is usually less severe than the bacterial form.

The bacterium causing meningitis is common and people often harbor it in their nasal passages and throats without effect. But when it gets into the bloodstream and moves to the brain, it causes problems. The bacteria can be spread by simply sneezing or coughing. Kissing and sharing utensils, drinking glasses or cigarettes can also contribute to its onset. Yet despite that, the bacterium is not especially contagious, and very close contact is usually necessary to spread the disease.

Of the more than 3,000 annual cases of bacterial meningitis in the United States, about 20 to 25 percent of those contracting meningococemia will die, said Bradley Perkins, chief of the meningitis and special pathogens branch of the U.S. Centers for Disease Control and Prevention (CDC). Perkins adds that many of these deaths could be prevented with a highly effective vaccine.

The vaccine was developed by the U.S. military and since 1971 has been given to all recruits. The num-

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ber of cases in the military has fallen 90 percent since then, according to James Turner, director of the department of student health at the University of Virginia in Charlottesville and chairman of the American College Health Association's (ACHA) task force on vaccine-preventable diseases.

Particularly alarming to health officials is an increase in cases among college freshmen and sophomores living in dormitories, a group the CDC reports are more than five times more likely to develop meningitis than college students in general. More than 600 cases of meningitis were reported in 1996 among people age 15 to 24, twice as many as a decade ago.

"Freshmen come into crowded conditions and are often exposed to bacteria they have not previously seen. And then their lifestyles—binge drinking, smoking, spending time in bars, lack of sleep—compromise their immune systems," said Turner. Three years ago, Turner began recommending that U-Va. students be vaccinated after seeing five cases in a 20-month period at the university. The university hasn't had any cases since then.

The vaccine protects against four common strains of the bacteria, but not others. Maggi Bridwell, director of the University of Maryland's health center, said, "We are not pushing the vaccine because it doesn't cover all strains and it only lasts about five years." Still, after the most recent case at College Park, Bridwell said university and Prince George's County Health Department officials gave out about 600 doses of the vaccine to students who were concerned about getting the disease.

The ACHA, which represents about half of the nation's college health service centers, made a formal recommendation in 1997 that all college students consider vaccination. And the CDC's Advisory Committee on Immunization Practices (ACIP) will consider issuing a similar recommendation on Oct. 20.

"It's likely to happen that ACIP will endorse (an optional recommendation) that college students living in dormitories get the vaccine," said Perkins, part of the ACIP study group. "This is a serious threat. We have seen over the last decade a gradual increase in rates in this age group and an increased frequency in out-

breaks among college students. It is preventable. Now is the right time to move aggressively."

Fuller was lucky. A rapid infusion of potent antibiotics stopped the progression of the bacteria. Nonetheless there are those receiving similar treatment who don't make it or are severely impaired. Others mistake the symptoms—high fever, headache, stiff neck, nausea, vomiting, confusion and sleepiness—for the flu and never seek treatment. A cadet at VMI died in 1996 from meningococemia. Reporting to the campus hospital with flu-like symptoms, Cadet Scott Hickey of Staunton, Va., died 12 hours later. The onset was similar to Fuller's.

"There's a pretty fixed proportion that will die," said CDC's Perkins. "There appears to be a group who are going to die no matter what—we are recognizing through improved studies that there are groups of people at risk for bad outcomes, and we think it has to do with the genetics of their inflammatory response." The vaccine, however, could help them.

There are no words to describe how Lynn Bozof felt when she discovered there was a vaccine that could have saved her son, Evan. "We were in disbelief," said Bozof, of Marietta, Ga. Evan, a 20-year-old honor student at Georgia Southwestern University, called his mom on a Wednesday afternoon to say he had a horrible headache.

"Migraines run in our family, so we weren't that alarmed," she recalls. "I checked on him around 5 and he had a blinding headache and couldn't keep anything down. I told him to have a friend take him to the emergency room."

Evan was hospitalized and slipped into a coma and because the disease ravages the circulatory system, his legs and arms became gangrenous. He, too, had meningococemia and died 26 days later. His family is working with Georgia officials to educate students and parents about the disease and the vaccine.

"We just can't sit back, we want parents to know. We will never be able to fill this hole in our hearts," she said. "The vaccine only costs about \$65—how often do we blow \$65? My child's life is worth more than \$65."

*Kathleen Phalen  
Special to the Washington Post*