

Invasive Meningococcal Men Y Disease

[Announcer] This program is presented by the Centers for Disease Control and Prevention.

[Marc Merlin] Hi, I'm Marc Merlin and today I'm talking with Dr. Leonard Mayer, a public health microbiologist specializing in meningococcal disease at CDC. Our conversation is based on a study about invasive meningococcal capsular group Y disease in England and Wales, which appears in CDC's journal, *Emerging Infectious Diseases*. Dr. Mayer, welcome.

[Leonard Mayer] Thank you, Marc. It's a pleasure to be here.

[Marc Merlin] Dr. Mayer, what is meningococcal disease?

[Leonard Mayer] Meningococcal disease is an infection by the bacterium called *Neisseria meningitidis*, commonly known as the meningococcus. These bacteria can infect a normally sterile site, such as cerebrospinal fluid or blood, causing invasive disease. When they infect cerebrospinal fluid, it's called meningococcal meningitis; when they infect blood, it's called meningococcal bacteremia. Such invasive meningococcal disease is a serious, life-threatening illness requiring prompt medical treatment. Other types of meningococcal disease, such as pneumonia, can also occur.

[Marc Merlin] How is Men Y different from other strains?

[Leonard Mayer] Men Y is an abbreviation for *Neisseria meningitidis* serogroup Y. The serogroups of *Neisseria meningitidis* are based on the different biochemical structures of their polysaccharide coating called the capsule. Of the 12 known capsule serogroups, A, B, C, W135, and Y — plus sometimes X — are the main ones which cause meningococcal disease. Over the past 10 to 20 years, the proportion of meningococcal disease caused by Men Y has changed in several countries, including the United States, and from this study, the United Kingdom, too.

[Marc Merlin] What was the purpose of the study?

[Leonard Mayer] This study was implemented after extensive use of a vaccine against Men C disease in the UK since 1999. It was designed to monitor any changes in the number of cases of meningococcal disease, changes in the syndrome or type of disease, changes in the age group affected, and changes in the bacteria causing disease.

[Marc Merlin] What were the findings?

[Leonard Mayer] Comparing 2007 to 2009, there was a slight decrease in the number of cases of meningococcal disease, but the proportion caused by Men Y doubled. Significant increases in Men Y infection were seen in the 15 to 19, 45 to 64, and over 65 year old age groups. As we usually see, the case fatality ratio was higher for patients with other underlying diseases, like diabetes mellitus, systemic lupus, or complement deficiency. It was also higher for those with meningococcal pneumonia when compared to meningococcal meningitis.

[Marc Merlin] Should people be worried about getting this strain?

[Leonard Mayer] Meningococcal disease in the US is rare, with about 1,000 cases reported each year. There were four major clones, or genotypes, of Men Y described in this UK study. The clone that increased the most in the UK study during the study time period is similar to the one causing about one third of all meningococcal disease in the US over the past several years. However, meningococcus bacteria are not as contagious as germs that cause a cold or the flu; you can only spread them through exchange of respiratory secretions, like by kissing. Since it's so hard to spread meningococcus bacteria and we don't see a lot of disease in the US, the risk for most people is low. But it's important for people to understand how devastating this disease can be and the need to get recommended vaccines and promptly seek treatment. Meningococcal disease can be fatal in 10 to 15 percent of cases and result in long-term disabilities in 15 percent of survivors.

[Marc Merlin] Is there a vaccine that covers Men Y and, if not, is one planned?

[Leonard Mayer] Yes. Currently there are safe and effective vaccines against meningococcal disease caused by serogroups A, C, W135, and Y. Meningococcal vaccines are recommended for all 11 to 12 year olds, with a booster at 16. If your teenager missed getting the vaccine at their check-up, ask the doctor about getting it now, especially if your child is heading off to college to live in a dorm. Vaccination's also recommended for persons in other age groups with certain medical conditions. Those traveling to certain countries or working in a laboratory with *Neisseria meningitidis* should also get vaccinated. People should talk to their doctor to see if they need this vaccine and visit the CDC vaccine website at www.cdc.gov/vaccines.

[Marc Merlin] Besides vaccines, are there things people can do to protect themselves from getting meningitis?

[Leonard Mayer] Vaccines are the best strategy to prevent meningococcal disease. If someone you've been in close contact with gets meningococcal disease, your doctor or health department may recommend antibiotics to prevent you from getting infected.

[Marc Merlin] What are the next steps that are being taken to protect the public from this disease?

[Leonard Mayer] CDC is working closely with state and local health departments, international agencies, scientists at universities and in industry to improve all measures to reduce infectious diseases. This also includes promoting recommended vaccines for meningococcal disease to preteens and teens and developing new vaccines that protect against more types of meningococcal disease.

[Marc Merlin] Thanks, Dr. Mayer. I've been talking with Dr. Leonard Mayer about a study, *Invasive Meningococcal Capsular Group Y Disease, England and Wales, 2007–2009*, which appears in the January 2012 issue of CDC's journal, *Emerging Infectious Diseases*. You can see the entire article online at www.cdc.gov/eid.

If you'd like to comment on this podcast, send an email to eideditor@cdc.gov. I'm Marc Merlin, for *Emerging Infectious Diseases*.

[Announcer] For the most accurate health information, visit www.cdc.gov or call 1-800-CDC-INFO.