

Meningococcal Disease on the Rise, As Expected for the Season

Since late October, 3 cases of meningococcal illness in children have been reported from Cleveland, Texas, a town of about 7,600 in Liberty County, northeast of Houston. One child died. As a precautionary measure, the Texas Department of Health (TDH) has conducted a vaccination campaign against meningococcal disease for persons aged 2 through 19 years who live within the boundaries of the Cleveland Independent School District. The school district boundaries include portions of Liberty, San Jacinto, and Montgomery Counties. The illnesses are not school based, and school attendance does not increase the risk of illness; only 1 of the 3 confirmed cases was in a child of school age. An estimated 3,500 individuals will receive vaccinations during this immunization drive.

Meningococcal disease is more likely to appear October through March. The disease strikes about 3,000 (about 1 in 100,000) people each year in the United States. As many as 125 college students become ill annually with meningococcal disease, leading to 5 to 15 deaths every year. In 2001, 198 cases of meningococcal meningitis were reported in Texas with 19 deaths; this level of morbidity and mortality is normal for Texas.

Meningococcal disease is a serious, potentially deadly condition that can progress extremely quickly. Prompt medical attention is critical. The two main forms are meningitis, an inflammation of the membranes that surround the brain and spinal cord, and meningococemia, a blood infection that can occur by itself or with meningitis.

Meningococcal disease is caused by a gram-negative diplococcus, *Neisseria meningitidis*. Bacteria that cause meningococcal disease are spread by any means that allows the saliva or respiratory droplets from one person to get into the mouth or nose of another person. Sneezing or coughing directly in someone's face, kissing, and sharing eating or drinking utensils are some common ways that a person infected with *N. meningitidis* can transmit the bacteria to someone else.

It is common for people to be asymptomatic carriers of nasopharyngeal *N. meningitidis*, but these bacteria do not live long outside the body. Factors that increase the chance that nasopharyngeal carriage will progress to invasive disease include crowded living conditions, poor economic status, active and passive smoking, and preceding or coincident respiratory infections.

Once the bacteria enter the bloodstream, deadly toxins cause the blood to clot, cutting off the blood supply to critical organs or limbs. The bacteria may also infect the lining of membranes surrounding the spinal cord and brain, sometimes leading to permanent brain damage that can cause such problems as behavior changes, hearing loss, or seizures.

Symptoms of the disease include sudden onset of fever, intense headache, stiff neck or back, a skin rash consisting of small red or purplish patches, behavior changes, sensitivity to light, nausea (often with vomiting), and those usually associated with sepsis. The incubation period is typically 3 or 4 days but ranges from 2 to 10 days. Anyone with these symptoms should go to the emergency room immediately.

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Annual South Texas Rabies Vaccine Airdrop Underway

Upper respiratory infections with various causes flourish in the winter months due to increased close indoor contact. People can reduce their risk of infection, including the potentially deadly meningococcal disease, by following a few common-sense precautions.


- **NEVER share beverages, straws or containers.** People should have their own beverage containers such as water bottles, cups or cans.
- **DO NOT share cigarettes.** Smoking irritates the lungs and throat making them more vulnerable to infection. Smokers who share the same cigarette may infect each other with a communicable disease.
- **DO NOT share food.** Do not allow others to take a bite of your sandwich or piece of fruit and do not share eating utensils.
- **Maintain personal space.** As little as 36 inches will significantly reduce the potential to inhale virus or bacteria an infected person may transmit by sneezing or coughing.
- **Wash hands frequently.** Frequent hand washing will remove germs that may have been picked up from contaminated surfaces.
- **Get a flu shot.** If you carry germs in your nose and throat, protecting yourself from influenza may decrease the likelihood of self-infection.

Family members and close contacts of people with meningococcal disease are advised to take antibiotics to reduce their risk of getting the illness. A vaccine that protects against 4 of the 5 major serogroups that cause meningococcal disease is available for people over age 2 but is not routinely given in the United States. The vaccine is recommended for certain outbreaks, the military and some international travel. The vaccine is also recommended for incoming college students, especially those living in group settings such as dormitories.

Confirmed and suspected cases of invasive meningococcal infections **must** be reported immediately by calling 800/705-8868 (which routes callers to their closest local health authority) or 800/252-8239 (which reaches the Texas Department of Health [TDH] Central Office in Austin). Required case/patient information includes name, age, sex, race/ethnicity, DOB, address, telephone number, date of onset, method of diagnosis. The name, address, and telephone number of the physician also must be included. It may be possible to determine serogroup on probable (CSF culture-negative) cases by PCR testing (available only at CDC through TDH request). CSF from probable (culture-negative) cases should be held for 10 weeks in the event PCR testing is indicated.

Isolates from all cases **must be submitted** to the TDH Bureau of Laboratories in Austin for serogrouping and fingerprinting. **Isolates should be sent by overnight mail** (with a completed TDH G-1A laboratory specimen submission form) to the following address:

TDH Bureau of Laboratories
1100 West 49th Street
Austin, Texas 78756

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Call 512/458-7582 for additional laboratory information. For general information about meningococcal disease, contact Neil Pascoe, RN, BSN, CIC, at 512/458-7676, neil.pascoe@tdh.state.tx.us. For information about the current vaccination efforts in Cleveland, contact the TDH Public Health Region 6/5 South at 713/767-3010.

Annual South Texas Rabies Vaccine Airdrop Underway

The Texas Department of Health (TDH) Oral Rabies Vaccination Program (ORVP) is an innovative program that uses oral rabies vaccine to reduce the threat of this deadly disease to humans and domestic animals by controlling rabies in wildlife. Two canine rabies epizootics emerged in Texas in 1988, one involving dogs and coyotes in South Texas and the other, gray foxes in West-Central Texas. By 1996 these two epizootics had expanded to involve 69 counties. To date, the South Texas epizootic alone has resulted in 2 human deaths and caused over 3,000 people to receive postexposure rabies treatment. In February 1995 TDH initiated ORVP as a multiyear effort to create zones of vaccinated coyotes and gray foxes along the leading edges of the epizootics thereby halting the spread of the virus. Since its inception this vaccine airdrop has continued to successfully contain the rabies epizootic in coyotes.

Assisted by the Texas Wildlife Damage Management Service, the Texas National Guard, and Dynamic Aviation Group, ORVP began its yearly rabies vaccine airdrop on January 7, 2003, in Zapata, Texas. For the second phase of this operation, the field crew moved to Junction on January 15. By mid-January over 700,000 fish meal baits containing an oral rabies vaccine had been dropped over portions of 14 counties in South Texas to control rabies in coyotes and 36 counties in West-Central Texas to control rabies in gray foxes.

For a complete history of ORVP and daily updates on the current airdrop, visit the TDH Zoonosis Control Program Web site:

www.tdh.state.tx.us/zoonosis/orvp/default.asp



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