West Nile Virus Disease Fact Sheet

What is West Nile virus disease?

- West Nile disease encompasses a spectrum of illness which can result in becoming infected with the West Nile virus.
- West Nile virus (WNV) is transmitted to people and horses through the bite of a mosquito infected with the West Nile virus. In Minnesota, Culex tarsalis, a common mosquito in agricultural regions of western and central Minnesota, is the most important vector in transmitting WNV to humans.
- Most people infected with WNV will have no symptoms (70-80%). One in five people have a relatively mild illness with fever. A small percentage of people (<1%), especially elderly patients, may develop meningitis or encephalitis (inflammation of the central nervous system, including the brain). Approximately 10% of these encephalitis cases are fatal.
- WNV is maintained in a transmission cycle involving one or more species of mosquitoes and birds.
- WNV was historically found in Africa and southern Europe. The virus was first reported in North America during a 1999 outbreak of encephalitis in New York City.

How serious is West Nile virus?

- Most of the severe human cases of WN disease begin with a sudden onset of fever, headache, neck stiffness, and vomiting. The illness progresses quickly to include confusion and other mental status changes, altered reflexes, convulsions, and coma. There is no treatment for WN Encephalitis other than supportive care.

What is the risk of a West Nile Encephalitis outbreak in Minnesota?

- Since 1999, WNV has become established in all 48 states, the District of Columbia, and all Canadian Provinces. WNV was first detected in Minnesota July 23rd, 2002.
- From 1999-2012, 16,196 (1,549 deaths) human WN meningitis and encephalitis cases were reported in the United States. Including more mild WN fever cases, 535 (16 deaths) WN disease cases have been reported in Minnesota residents.
- With our abundant mosquito and bird populations, WNV has rapidly become established in Minnesota. Similar to other mosquito-transmitted diseases previously established in this area (LaCrosse encephalitis, Western equine encephalitis, and Eastern equine encephalitis), WNV will cause sporadic illness in humans (especially elderly people) and horses.

What can people do to prevent West Nile Encephalitis?

- Personal protection measures such as use of mosquito repellents (containing up to 30% DEET), avoiding outdoor exposures at dusk and dawn (peak feeding time for many mosquitoes), and wearing long-sleeved shirts and long pants can reduce the risk of WN disease.
- Removal of water-holding containers (mosquito breeding sites) from residential areas will reduce numbers of several mosquito species.
- There is a vaccine available for horses to prevent WN encephalitis. Please contact your veterinarian for vaccine recommendations. However, there is no WN disease vaccine for humans.