

## **Yellow Fever**

Agent: Yellow fever virus

Mode of Transmission: Transmitted through the bites of several species of infected *Aedes* mosquitoes, most notably the yellow fever mosquito (*Aedes aegypti*), which breeds in containers of water occurring around human habitats. Yellow fever mosquitoes occur in Virginia but have become rare after being displaced from their container breeding habitats by the arrival of the closely related Asian tiger mosquito (*Aedes albopictus*) in 1992. The Asian tiger mosquito is more cold tolerant than the yellow fever mosquito and is able to overwinter and maintain populations from year to year in most parts of Virginia. As a result, tiger mosquitoes have become very common throughout most of Virginia and could be potential vectors of the yellow fever virus. Tiger mosquitoes are similar in behavior and appearance to yellow fever mosquitoes. Although the Asian tiger mosquito's competence as a yellow fever vector has been proven in laboratory studies, there are currently no records of this mosquito having transmitted yellow fever in nature.

Signs/Symptoms: Varying levels of severity, but could include a sudden onset of fever, chills, headache, backache, generalized muscle pain, prostration, nausea, vomiting and jaundice. Jaundice is usually mild in early disease but intensifies later. Among cases with jaundice, the fatality rate is 20% to 50%.

Prevention: Vaccination against the yellow fever virus before traveling to yellow fever endemic regions of the world and avoidance of mosquito bites while traveling in these regions.

Other Important Information: Yellow fever has three transmission cycles: (1) the jungle (sylvatic) cycle, which involves transmission between nonhuman primates and mosquitoes. The virus is then transmitted from infected mosquitoes to humans working in the jungle; (2) the intermediate (savannah) cycle, which involves transmission of virus from mosquitoes to humans living or working in jungle border areas; and (3) the urban cycle, which involves transmission of the virus between humans and urban mosquitoes. The virus is usually brought to the urban area by a human who was infected in the jungle or savannah.

Although sporadic cases of jungle (sylvatic) yellow fever were seen in various countries of Africa and South America in 2014, no cases of yellow fever have been reported in Virginia since the nineteenth century.