

Bloodborne Pathogens Key Topic for 2017

Zika Virus

Why the Zika Virus?

In 2017, the Occupation Health & Safety (OH&S) Bloodborne Pathogens course focused on the Zika Virus, which was at a pandemic level in Central and South America.

It was also chosen as the key topic because the geographical range of mosquitos that carry the virus extends into more than half of the continental U.S. This suggests that it will only be a matter of time before local transmission is prevalent.



By October 12, 2016, Florida reported over 128 locally transmitted cases of the Zika Virus Disease.

The geographical range of the mosquitos may not be a limiting factor in the spread of the virus. Transmission can also occur through blood transfusion, sex, lab exposures, or from mother to fetus. Therefore, healthcare and laboratory workers should follow good infection control and biosafety practices (including universal precautions) as appropriate to prevent or minimize the risk of transmission of Zika Virus and other bloodborne pathogens.

Symptoms and Treatment

Approximately 20% of individuals infected with Zika Virus will become ill. The symptoms are fever, rash, joint pain, and conjunctivitis.

The symptoms are typically mild and may last a few days to a week. Employees who traveled to affected areas and may be symptomatic should have testing carried out immediately.

Currently, only palliative treatments are available. Avoid aspirin and other NSAIDs until dengue fever is ruled out.

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Pregnancy and Birth Defects

The Zika Virus infection during pregnancy may lead to significant birth defects. Transmission can occur through sexual contact. Therefore, the CDC recommends pregnant women to avoid travel to Zika Virus-affected areas.

Men who have traveled to affected areas should consistently and correctly use condoms, or abstain from sexual activity with partners that may become pregnant, or for the duration of pregnancy, for those with pregnant partners.

General Protective Measures

- **Avoid outbreak locales.** If possible, resist traveling to locations that are experiencing an epidemic. The CDC maintains a [travelers' health advisory site](#), which informs travelers of regional disease transmission patterns and outbreaks.
- **Insect repellents.** Application of an [EPA-registered insect repellent](#) to skin and clothing is one of the most natural and most effective measures for avoiding mosquito bites. These include products containing DEET, Picaridin, IR3535, Oil of Lemon Eucalyptus, and Para-Menthane- Diol.
- **Wear protective clothing.** Minimize exposed areas of skin by wearing long-sleeved shirts, pants, boots, close-toed shoes with socks, and hats. Insect repellents applied to clothing offer added protection.
- **Eliminate breeding grounds.** Get rid of mosquito breeding sites by emptying standing water from flowerpots, buckets, and barrels. Change the water in pet dishes, and replace the water in birdbaths weekly. Drill holes in tire swings so water drains out. Keep wading pools empty and on their sides when not in use.

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Zika Virus Research Lab Protective Measures

- Use BSL-2 containment facilities and practices that are appropriate for Zika Virus research laboratories. Depending on the nature of the work, additional controls and PPE may be warranted.
- Conduct risk assessments. Submit project registrations for review to the UAB IBC to determine whether specific procedures or specimens require higher levels or containment, special practices, and controls.
- Review OSHA's and NIOSH's information – [Interim Guidance for Protecting Workers from Occupational Exposure to Zika Virus](#) as well as the CDC's posted guidance on [Laboratory Safety when Working with Zika Virus](#).



Transportation of the virus falls under DOT Hazmat regulations and importation requires CDC or USDA permits. Contact UAB OH&S for more information.