

MONKEY B VIRUS:

A Guide to the Causes, Transmission, and Prevention of Cercopithecine herpesvirus

The University of Virginia's Occupational Health Program is a three-part program: Health Surveillance, Education, and Risk Assessment. This brochure has been prepared to educate you about the risks associated with Monkey B Virus transmission from macaque monkeys.



What is Monkey B-Virus?

Monkey B Virus, also known as Cercopithecine herpesvirus type I or Herpes simiae, is a member of the herpes group of viruses that occur naturally in macaque and other Old World monkeys. Infection with Monkey B Virus produces very mild disease in the monkey and most have no obvious evidence of infection. Some monkeys may have vesicles (small blisters) which progress to ulcers in the mouth, face, lips, genitals, and/or eye. These lesions spontaneously heal after a few days, but the virus resides permanently in the monkey, and may reactivate and cause ulcers periodically, similar to the human's reactivation of herpes simplex type I (like cold sores or fever blisters in humans).



How does transmission of the Monkey B Virus from monkeys to humans occur?

Transmission to humans occurs by exposure of the eyes, mouth, or open wounds to secretions from the eye, mouth, genitals or neurologic tissue from macaque monkeys. During relapses, the virus is shed by the monkey to the environment. However, monkeys may also shed the virus without visible lesions or symptoms. The most likely routes of transmission are bites and scratches. There has been a single case report of person-to-person transmission.



Who is at risk for infection with Monkey B Virus?

Those at risk include animal caretakers, laboratory personnel, or anyone who is exposed to monkeys or monkey tissues. Persons who are immune suppressed because of medication or underlying medical conditions may be at higher risk for infection. The risk of acquiring Monkey B Virus infections from macaques is probably very low. Thousands of persons have handled macaques since human infection with Monkey B Virus infection was first reported in 1932, yet only between 50-100 cases of human infection have been documented.



Can there be serious complications from Monkey B Virus infection?

Of the 23 reported cases, 20 infected individuals developed encephalitis and 15 of these patients died as a result of their infection.



How can I protect myself from infection?

Proper work practices markedly reduce the chances of infection. All individuals who work with monkeys should receive training on safe practices. These include:

1. Exercise caution at all times, remembering these are wild animals. They can and will bite and scratch, and are capable of transmitting several diseases to humans, such as Shigella and Salmonella, as well as Monkey B Virus.
2. Wear appropriate protective clothing as directed by your supervisor.
3. Never handle a monkey that has not been anesthetized unless pre-approved by the Animal Care and Use Committee.
4. Report any observed facial, lip, or oral lesion in monkeys to one of the veterinary staff.
5. Report any exposures to oral, genital or ocular secretions or neurologic tissues of a macaque monkey or scratches from cages or equipment that might be contaminated with their secretions immediately to your supervisor. Within minutes of such exposure, the affected skin or mucosa must be cleansed with soap and water for 15 minutes. Your supervisor will then provide an Authorization for Treatment form and direct you to the Occupational Health Clinic.



What are the signs and symptoms of Monkey B Virus infection in humans?

Monkey B Virus is characterized by a variety of signs and symptoms, which generally occur within one month of exposure. The early signs and symptoms can occur within hours to days of being infected with the virus. The following list describes early Monkey B Virus infection symptoms:

1. Fever and chills
2. Flu-like symptoms including headache, fatigue, and muscle soreness
3. Severe pain, itching, numbness or loss of feeling at the injury site
4. Blisters or shallow open ulcers at or near the injury site (only 20-30% of people infected are noted to have these symptoms)

If any of the above symptoms occur following an injury involving a macaque, other Old World monkey, or equipment contaminated with their secretions or tissues, cleanse the affected tissue as described above, then notify your supervisor, obtain a Authorization for Treatment form, and report to the Occupational Health Clinic.

Important Contacts for the Occupational Health Program

*UVA-WorkMed: 243-0075
Elson Student Health Center: 924-5362
Environmental Health and Safety: 982-4911
Institutional Animal Care and Use Committee (ACUC): 924-0405
Center for Comparative Medicine: 924-2052
University Human Resources: 924-4598*

*The Occupational Health Program is jointly administered by UVA-WorkMed and Student Health, in consultation with representatives of University Human Resources, Comparative Medicine, the ACUC, and Environmental Health and Safety. For more information about the Program, visit our web site:
<http://hsc.virginia.edu/research/ccm/page5.htm>.*