HERPES B

Herpes B is a serious occupational hazard: It spreads silently in macaques and can lead to rapid, fatal disease in humans.

A Lethal Zoonotic Threat in the Primate Pipeline

Herpes B virus (*Macacine herpesvirus* 1) is a zoonotic pathogen that can cause fatal encephalomyelitis in humans. Importantly, there has never been a confirmed case of pathogenic herpes B following contact with free-ranging macaques; all documented human cases have occurred in captive or laboratory settings. The virus naturally infects macaques—including rhesus, long-tailed, and pig-tailed monkeys commonly used in experiments—where it causes infections similar to human herpes simplex virus.[1]

When transmitted to humans, herpes B virus can be fatal. Infection usually occurs through bites, scratches, or contact of mucous membranes with contaminated fluids and can cause severe neurological disease requiring immediate treatment. Since it was identified in 1932, at least 50 human cases have been reported, with 21 deaths—all linked to macaque exposure in captive settings.[1]

The Invisible Risk: Asymptomatic Shedding

Despite decades of warnings, herpes B continues to circulate silently in captive macaque colonies. Most infected monkeys never display symptoms, yet they can shed the virus unpredictably. Stressful events such as capture, breeding, or transport increase the likelihood of reactivation. Because testing is usually limited to symptomatic animals, infected but apparently healthy monkeys routinely pass through quarantine undetected. Records from the Centers for Disease Control and Prevention (CDC) highlight the ongoing risk: In 2019, eight macaques were euthanized after developing symptoms, followed by two more in 2021.[2] These cases are likely just the visible portion of a much larger, hidden threat.

Fatal Even After Minor Exposure

In 1997, a 22-year-old researcher at the Yerkes National Primate Research Center died after fluid from a macaque splashed into her eye, despite protective equipment and no direct contact with the animal.[3] Her case shows how even minor exposure can be deadly.

The Consequences

- Constant hazard: Because macaques carry herpes B for life,[4] staff face a risk of exposure in every interaction, from handling to cage cleaning, whether or not animals show symptoms.
- Severe outcomes: In untreated human cases, fatality rates are 70% to 80%.[4] Even with rapid intervention, outcomes are uncertain, making exposure prevention the only reliable safeguard.
- Systemic failure: Despite the seriousness of the threat, herpes B is not part of the CDC's routine testing during quarantine. Infected carriers continue to enter U.S. research facilities undetected.

CONTINUED

Endnotes

[1] CDC. B virus: Causes and how it spreads. Updated May 9, 2024. Accessed September 3, 2025. https://www.cdc.gov/herpes-b-virus/causes/index.html

[2] CDC disease reports: 22-00828 final response package. July 27, 2022. Accessed May 1, 2025. https://www.peta.org/wp-content/uploads/2022/12/CDC-Disease-Reports-22-00828-Final-Response-Package-PETA.pdf

[3] Bragg R. A drop of virus from a monkey kills a researcher in 6 weeks. *The New York Times*. December 14, 1997. Accessed July 3, 2025. https://www.nytimes.com/1997/12/14/us/a-drop-of-virus-from-a-monkey-kills-a-researcher-in-6-weeks.html

[4] Hu G, Du H, Liu Y, Wu G, Han J. Herpes B virus: History, zoonotic potential, and public health implications. *Biosafety and Health*. 2022;4(4):213-219.