

JAPANESE ENCEPHALITIS

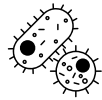
LABORATORY RESEARCH SAFETY

The following is general information for those involved in the laboratory-based research of Japanese encephalitis.¹⁻³
Contact occupational.health@cuanschutz.edu if you have any questions.

ABOUT JAPANESE ENCEPHALITIS

Japanese encephalitis virus (JEV) is a mosquito-borne zoonotic disease. While mosquitoes are the primary vector for JEV, wading birds and pigs are the primary reservoirs. JEV is a flavivirus and is related to dengue, yellow fever, and West Nile viruses. Infection with JEV may occur through laboratory contact with infected blood or tissue.

EXPOSURE TO JAPANESE ENCEPHALITIS



- Accidental exposure to JE may occur through
 - Needle stick
 - Droplet exposure of mucous membranes or broken skin with infectious particles

JAPANESE ENCEPHALITIS INFECTION

- 99% of infected individuals are asymptomatic or only experience mild symptoms
 - Mild symptoms include fever and headache
- Symptoms of neurological illness (less than 1% of infected individuals)
 - Fever
 - Headache
 - Vomiting
 - Disorientation and weakness
 - Coma
 - Seizures (common in children)
- After acute symptoms have improved, those who develop neurological illness/ encephalitis may experience continued symptoms related to behavior, movement, or thinking
- Symptoms typically appear in 5 to 15 days after exposure

VACCINATION FOR JAPANESE ENCEPHALITIS WORK



- The Advisory Committee on Immunization Practices (ACIP) recommends:
 - JE-VC (IXIARO) two-dose series (day 0 and at 1 month)
 - Booster one year after primary series
 - Titer 5 years after booster
 - If the titer results low, a booster dose is administered

JAPANESE ENCEPHALITIS EXPOSURE SAFETY

Follow proper exposure reporting protocols

- If you are injured on the job, promptly report the incident to your supervisor
 - Immediately call or email Occupational Health (303) 724-9145 during business hours
 - Outside of normal hours seek medical attention at emergency department or other healthcare provider
 - Fill out incident report for exposure to biological hazards
 - File a claim with University Risk Management
 - <https://www.cu.edu/risk/file-claim>
- Minor cuts and abrasions should be immediately cleansed with antibacterial soap
 - Protect injuries from exposure

Tell your physician you work with Japanese encephalitis

- Whenever you are ill, mention to your physician that you work with Japanese encephalitis virus

PPE FOR JAPANESE ENCEPHALITIS



- Personal Protective Equipment (PPE) for work with JEV
 - Laboratory coats, gloves; safety goggles; N95 respirator (requires fit test) or PAPR (requires training)
- Do not reuse PPE used for work with biohazards
 - Dispose of all PPE as biohazardous waste
- Always wash your hands after removing gloves and after handling biohazards

CONTROLS FOR JAPANESE ENCEPHALITIS

- BSL-3 protections for procedures involving JEV
 - Physical separation from access corridors
 - Self closing, double door access
 - Exhausted air not recirculated
 - Negative airflow into laboratory

For more information, refer to the Occupational Health website:
<https://research.cuanschutz.edu/ehs/home/divisions/occupational-health>
or contact Occupational Health at occupational.health@cuanschutz.edu



Updated: 3/21/2025

Sources

1. Centers for Disease Control and Prevention. Japanese encephalitis virus. May 15, 2024. Accessed December 18, 2024. www.cdc.gov/japanese-encephalitis/about/index.html.
2. World Health Organization. Japanese encephalitis. August 6, 2024. Accessed December 18, 2024. [www.who.int/news-room/fact-sheets/detail/japanese-encephalitis#:~:text=Japanese%20encephalitis%20virus%20\(JEV\)%20is,cases%20every%20year%20\(1\)](http://www.who.int/news-room/fact-sheets/detail/japanese-encephalitis#:~:text=Japanese%20encephalitis%20virus%20(JEV)%20is,cases%20every%20year%20(1)).
3. Boston University Office of Research. Japanese encephalitis virus agent information sheet. Accessed December 18, 2024. www.bu.edu/research/ethics-compliance/safety/rohp/agent-information-sheets/japanese-encephalitis-virus-agent-information-sheet/.