

Dengue, Chikungunya, Zika, and Oropouche Virus Testing and Reporting Guidance

Revised August 2025

WHO TO TEST

Test patients with an **acute febrile illness** and **recent travel** (within 2 weeks of illness onset) to an endemic area for the respective disease. The viruses have similar disease manifestations, so use clinical judgment and refer to the Centers for Disease Control and Prevention (CDC) for current information on areas where [dengue](#), [chikungunya](#), [Zika](#), and [Oropouche](#) viruses circulate to guide testing. Locally acquired dengue and chikungunya are uncommon but possible in the continental U.S., particularly in southern states.

CLINICAL PRESENTATION

DENGUE: Fever accompanied by headache, myalgias, arthralgias, retro-orbital pain, anorexia, nausea, or rash. Some patients may develop substantial plasma leakage and hemorrhagic manifestations such as petechiae, epistaxis, gingival bleeding, and hematuria. Warning signs for severe dengue include abdominal pain, persistent vomiting, marked change in temperature, change in mental status, or early signs of shock.

CHIKUNGUNYA: Fever accompanied by polyarthralgia (usually bilateral and mainly involving the distal joints of extremities), headache, myalgia, conjunctivitis, nausea/vomiting, or maculopapular rash. Rare complications include uveitis, retinitis, myocarditis, hepatitis, nephritis, bullous skin lesions, hemorrhage, meningoencephalitis, myelitis, Guillain-Barré syndrome, and cranial nerve palsies.

ZIKA: Fever, arthralgia, conjunctivitis, and maculopapular rash. Rare complications include Guillain-Barré syndrome, encephalopathy, myelitis, uveitis, and thrombocytopenia. Infection during pregnancy can cause congenital Zika virus infection, which can result in serious birth defects of the brain and eyes.

OROPOUCHE: Fever accompanied by headache, myalgia, arthralgia, retro-orbital pain, or rash; symptoms may reoccur day to weeks later. Rarely neuroinvasive disease including meningitis and encephalitis may occur. Vertical transmission may be associated with adverse pregnancy outcomes, including fetal deaths and congenital abnormalities.

DIAGNOSTIC TESTS FOR ACUTE DISEASE

- Specimen types
 - Serum is the preferred specimen; however, some labs may also accept whole blood and plasma and urine for Zika.
 - CSF may also be accepted for patients who develop neuroinvasive disease.
- PCR to detect dengue, chikungunya, Zika and Oropouche viral RNA, and dengue NS1 antigen detection tests are most sensitive on serum collected early in the course of illness.
- IgM serology by immunoassay to detect antibodies is most sensitive on serum collected near the end of the first week of illness.
 - IgM antibodies can be reliably detected for 3 months or longer after infection.
 - Positive IgG without a positive IgM is consistent with past infection.
 - If IgM is negative and specimen was collected within the first week of illness, consider repeat testing.

Preferred Testing Options for Dengue, Chikungunya, Zika, and Oropouche Virus Infection Based on Timing of Serum Specimen Collection			
	≤7 days after illness onset	>7 days after illness onset	Testing Laboratories
DENGUE¹	IgM, PCR Dengue NS1	IgM, +/- PCR	ARUP , Eurofins-Viracor , Mayo Clinic , Quest
CHIKUNGUNYA²	IgM, PCR	IgM, +/- PCR	ARUP , Mayo Clinic , Quest
ZIKA³	IgM, PCR	IgM, +/- PCR	ARUP , Eurofins-Viracor , Labcorp , Mayo Clinic , Quest
OROPOUCHE⁴	PCR	PRNT, +/- PCR	Quest , Wadsworth Center – requires prior approval

¹For dengue, the IgM immunoassay may be used for specimens collected on day 6 or more after illness onset. Specimens collected more than 7 days after illness are less likely to be positive by PCR or dengue NS1 (non-structural protein 1).
²For chikungunya, PCR may detect viral RNA up to day 8 after illness onset, and the IgM immunoassay may be used for specimens collected on day 4 or more after onset.
³Zika testing is not recommended for people who are pregnant and asymptomatic. Refer to the CDC for current guidance on Zika testing <https://www.cdc.gov/zika/hcp/diagnosis-testing/index.html>. Urine may also be submitted.
⁴For Oropouche, plaque-reduction neutralization test (PRNT) and/or PCR on serum is available at Wadsworth Center for patients who test negative for dengue and requires prior approval from the NYC Health Department. CSF can be submitted with serum for patients with neuroinvasive disease.

Public Health Laboratory Testing - For select cases, special testing can be performed by public health laboratories including the [NYC Public Health Laboratories](#), [New York State Wadsworth Center](#), and CDC.

REPORTING

Laboratories are required to report to the NYC Health Department any positive result for dengue, chikungunya, Zika, Oropouche, and other arboviral infections.

- Providers can report online using [PRISM](#) (Provider Reporting Interface and Secure Messenger; login or sign up for NYC.ID account to access).
- Or download the [Universal Reporting Form](#) and fax to the Bureau of Communicable Disease at 347-396-8991.
- Or call the Provider Access Line (PAL) at 866-692-3641.

QUESTIONS?

During regular business hours, for questions, assistance with testing, or to report a cluster of cases or an individual urgent case, such as suspected dengue virus due to transfusion or organ transplantation, contact:

- NYC Health Department, Bureau of Communicable Disease by calling the Provider Access Line (PAL) at 866-692-3641.
- After hours, call the New York City Poison Control Center at 212-POISONS (212-764-7667) or 1-800-222-1222 and ask for the doctor on call.