

Comparison of Chikungunya Virus Infection and Dengue Fever

Characteristic	Chikungunya virus infection	Dengue fever	Comments or additional information
Incubation Period	3-7 days (range 2-12 days)	4-7 days (range 3-14 days)	
Signs and symptoms	Fever, polyarthralgia (usually bilateral and symmetric and associated with distal joints such as the hands, feet, wrists, ankles, elbows and knees), headache, backache, myalgia pain, maculopapular rash, polyarthritis or conjunctivitis; rarely fatal	Fever, headache, retroorbital pain, arthralgia, myalgia and/or bone pain, rash and mild bleeding (e.g., nose or gums bleed, petechial rash, easy bruising); severe complications affecting circulatory system with dengue hemorrhagic fever	<ul style="list-style-type: none"> • Infections can be mild or asymptomatic • Co-infection is possible • Although each may have own characteristic symptoms, they <u>cannot</u> always be differentiated on signs/symptoms alone • Suspected chikungunya cases should be managed as dengue until dengue has been ruled out
Clinical lab findings	Mild thrombocytopenia (>100,000 /mm ³), lymphopenia, elevated liver enzymes (ALT, AST)	Thrombocytopenia (<100,000 /mm ³), lymphopenia, neutropenia and elevated liver enzymes (ALT, AST); more severe signs with dengue hemorrhagic fever	
Laboratory Testing			
Test type and sensitivity	<ul style="list-style-type: none"> • RT-PCR: most sensitive if collected ≤8 days of onset • Serology: IgM might not be positive until up to 4 days after onset; specimens collected <4 days after onset may be negative for IgM and testing should be repeated 	<ul style="list-style-type: none"> • RT-PCR: most sensitive if collected ≤5 days of onset; • Serology: IgM might not be positive until up to 6 days after onset; specimens collected <6 days after onset may be negative for IgM and testing should be repeated 	<ul style="list-style-type: none"> • Serum (collected in red-top or tiger-top tube) is preferred specimen for RT-PCR and serology • Positive IgG in absence of positive IgM is consistent with past infection • Serology: acute and convalescent serum (collected 10 to 14 days after symptoms onset) are recommended • Dengue negative cases (those that only test IgG positive for dengue) should also be investigated as potential chikungunya cases
Test availability	Focus Diagnostics (commercial lab) and CDC offer both RT-PCR and serology	Same commercial lab options. Additional labs can test for dengue but cannot simultaneously test for CHIK.	<ul style="list-style-type: none"> • Turnaround times vary by lab • Specimens tested at CDC should be coordinated through local health department. Priorities for CDC testing include: 1) those with compatible illness who traveled in group to area known to be endemic within past 14 days; <u>or</u> 2) those with compatible illness who traveled to area not known to be endemic within past 14 days (possible new transmission area); <u>or</u> 3) those with signs/symptoms who did not travel (possible local transmission); <u>or</u> 4) if commercial testing is not feasible