

Is it Chikungunya or Dengue?



Chikungunya and dengue are viruses most commonly transmitted by *Aedes aegypti* and *Aedes albopictus* mosquitoes. Anyone who lives in or has traveled to an area where chikungunya or dengue viruses are found is at risk for infection.

Chikungunya virus

- Approximately 3 in 4 people infected will develop disease.
- Incubation: 3–7 days (range: 2–12 days)
- Acute symptoms typically resolve within 7-10 days.
- Persons at risk for severe disease include neonates exposed intrapartum, older adults, and persons with underlying medical conditions.
- Infection is thought to confer lifetime immunity.
- Risk areas: <http://www.cdc.gov/chikungunya/geo/index.html>



Dengue virus

- Approximately 1 in 4 people infected will develop disease.
- Incubation: 4–7 days (range: 3–14 days)
- Some patients may develop life threatening consequences and require hospitalization.
- Since there are 4 distinct dengue viruses, a person can be infected up to 4 times. Infection with each dengue virus type confers lifetime immunity for that specific virus type.
- Risk areas: <http://www.cdc.gov/dengue/>

Treatment for Chikungunya and Dengue



Treat symptoms: Assess hydration and hemodynamic status and provide supportive care as needed. If adequate, instruct the patient to rest and drink fluids.



Treat or manage other conditions: Evaluate for other serious conditions (e.g., malaria and bacterial infections).

Relieve fever and pain: Recommend acetaminophen or paracetamol until dengue is ruled out. Aspirin and NSAIDs (like ibuprofen) can increase risk of bleeding in patients with dengue. NSAIDs, corticosteroids, or physiotherapy may help treat persistent joint pain.



Reduce risk of further transmission: Patients should protect themselves from further mosquito bites during the first week of illness to reduce the risk of local transmission. Vaccines are not available.

Signs and Symptoms

- Chikungunya begins as an acute febrile illness.
- Disease causes polyarthralgia; pain can be severe. Other common symptoms include headache, muscle pain, joint swelling, and rash.
- Some patients have persistence or relapse of rheumatologic symptoms in the months following acute illness.
- Mortality is rare and occurs mostly in older adults.

Signs and Symptoms

Dengue is an acute febrile illness that can vary in severity over a 5–7 day period. Recognizing warning signs for severe dengue and providing appropriate medical management can prevent morbidity and death.

Febrile Phase: Lasts 2–7 days after being bitten; can be biphasic.

- **Fever with 2 or more of the following:** Headache, retro-orbital pain, joint pain, muscle and/or bone pain, rash, mild bleeding (nose or gums, easy bruising), neutropenia

Critical Phase: Begins at defervescence, lasts 24–48 hours. Most patients improve but severe disease requiring hospitalization can occur.

- **Warning signs:** Evidence of plasma leakage—abdominal pain, persistent vomiting (at least 3 episodes/24 hours), clinical fluid accumulation, liver enlargement >2 cm, mucosal bleeding, lethargy or restlessness, hemoconcentration (↑HCT with rapid thrombocytopenia)



Recovery Phase (patient improvement):

- Gradual reabsorption of extravasated fluid from plasma leakage over 48–72 hours; diuresis; hemodynamic status stabilizes; patient can temporarily become bradycardic (but hemodynamically stable)

Diagnostic Testing: Test for both Chikungunya and Dengue

- Collect serum samples and order tests for both diseases.
- Contact your state health department for more information and to facilitate testing.
- For information on submitting diagnostic specimens for testing, including PRNT, to CDC: <http://www.cdc.gov/ncezid/dvbd/specimensub/arboviral-shipping.html>

Report Cases of Chikungunya and Dengue

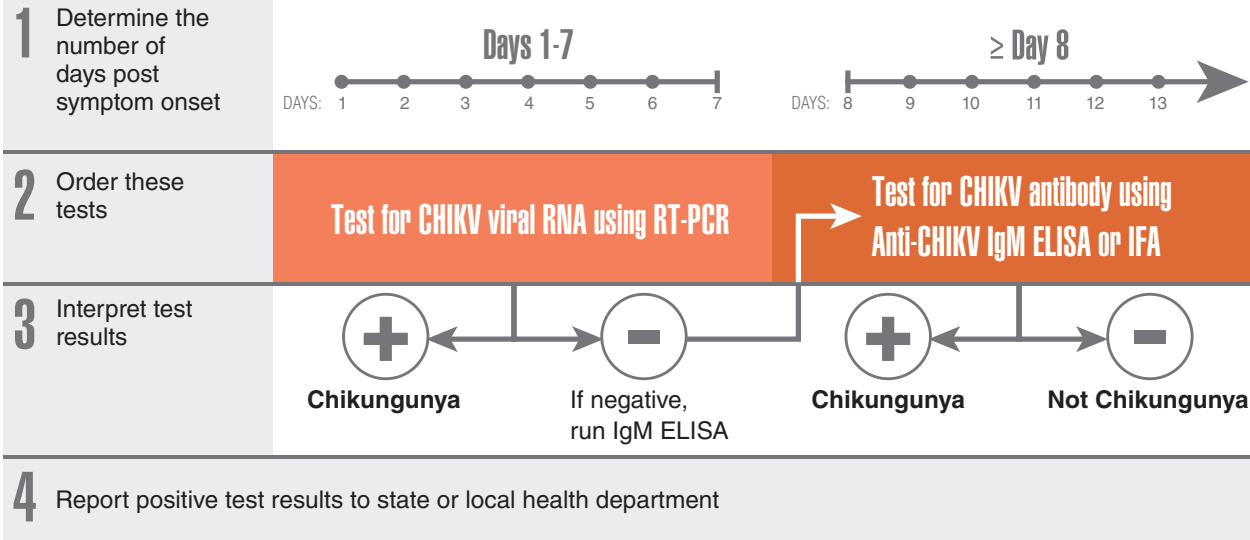
- Both infections and diseases are nationally notifiable conditions.
- Contact state or local health department to report suspected and confirmed cases.



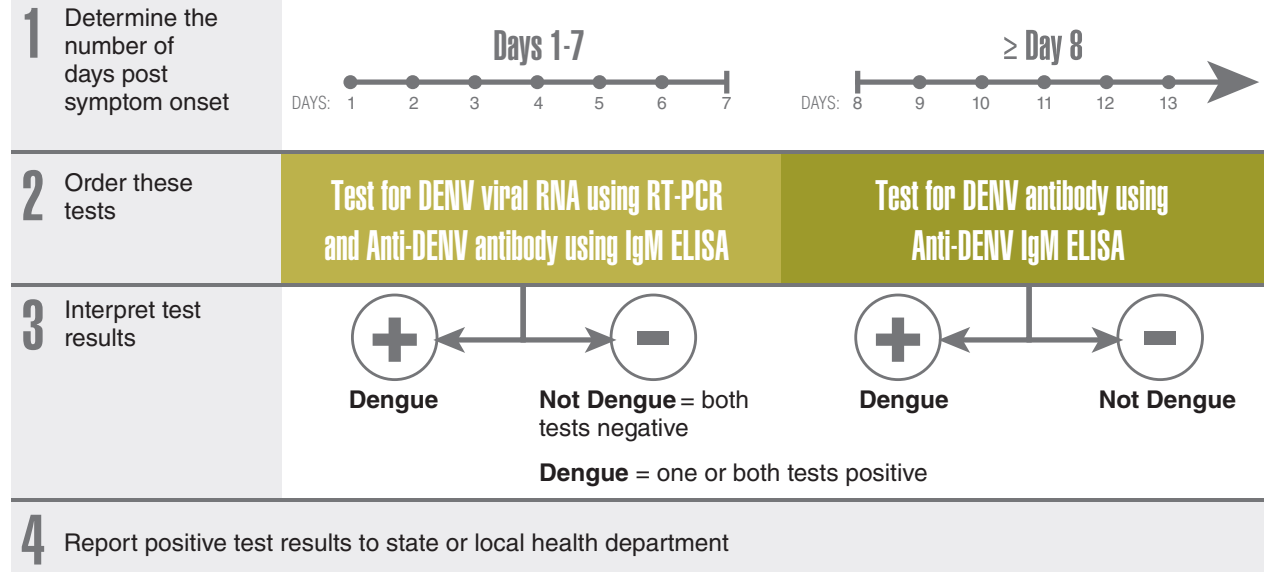
www.cdc.gov/chikungunya
www.cdc.gov/dengue

DIAGNOSTIC TESTING ALGORITHMS

CHIKUNGUNYA (CHIKV) VIRUS



DENGUE VIRUSES (DENV 1, 2, 3, AND 4)



Diagnostic Testing: Test for both Chikungunya and Dengue

- Collect serum samples and order tests for both diseases.
- Contact your state health department for more information and to facilitate testing.
- For information on submitting diagnostic specimens for testing, including PRNT, to CDC: <http://www.cdc.gov/ncezid/dvbd/specimensub/arboviral-shipping.html>



Report Cases of Chikungunya and Dengue

- Both chikungunya and dengue virus diseases are nationally notifiable conditions.
- Contact state or local health department to report suspected and confirmed cases.

- Cross-reaction with IgM antibodies against related flaviviruses (e.g., dengue, St. Louis encephalitis, West Nile, and Zika viruses) is common in areas where there is co-circulation of viruses.
- Plaque-reduction neutralization testing (PRNT) can be performed to measure virus-specific neutralizing antibodies and discriminate between cross-reacting antibodies in primary flavivirus infections.



www.cdc.gov/chikungunya
www.cdc.gov/dengue