

PUBLIC HEALTH ALERT

Locally Acquired Malaria in the United States

Current Situation: The Centers for Disease Control and Prevention (CDC), the Military Health System (MHS), and the Defense Health Agency (DHA) are closely monitoring the recent occurrences of locally acquired malaria cases in Florida and Texas. The CDC is collaborating with the state health departments on an investigation of 6 locally acquired cases of *Plasmodium vivax* (*P. vivax*) malaria in Sarasota County, Florida and 1 case in Cameron County, Texas (data as of 7 July 2023). The risk of locally acquired malaria is extremely low in the U.S., and there is no evidence to suggest that the cases in the two states are related. Most malaria cases diagnosed in the U.S. are imported, usually by persons who travel to countries where malaria is endemic. However, locally acquired mosquito-transmitted cases can occur. In 2003, there were 8 cases of locally acquired *P. vivax* malaria identified in Palm Beach County, Florida. As of 10 July 2023, no confirmed malaria cases have been reported among MHS beneficiaries in the U.S. during 2023. DHA Public Health is conducting surveillance using the Disease Reporting System internet (DSRi) and medical data from the MHS Data Repository (MDR).

Transmission: Malaria is primarily transmitted by the bite of an infected female *Anopheles* mosquito, which is most active late in the evening or at night. Other less common transmission methods include congenital transmission, transfusion of blood from infected persons, organ transplant, or use of contaminated needles and syringes. Prior to the COVID-19 pandemic, approximately 2,000 cases of mostly travel-related malaria were diagnosed in the U.S. each year; approximately 300 of these were cases of severe disease, and 5 to 10 people died.

Symptoms: Clinical manifestations are non-specific. Symptoms typically begin 10 days to 4 weeks after infection, although a person may feel ill as early as 7 days or as late as 1 year after infection.

Symptoms may include:

- Fever
- Chills
- Headache
- Myalgias
- Splenomegaly
- Neurologic changes
- Nausea
- Vomiting
- Diarrhea
- Arthralgias
- Pulmonary/Renal dysfunction

Laboratory abnormalities can vary from normal or mildly altered in uncomplicated disease to very abnormal in severe disease and may include:

- Anemia
- Elevated transaminases
- Hyperbilirubinemia
- Thrombocytopenia
- Hypoglycemia

Diagnosis:

- Consider the diagnosis of malaria in any person with a fever of unknown origin, regardless of international travel history, particularly if they have been to the areas with recent locally acquired malaria.
- Routinely obtain a travel history and consider malaria in a symptomatic person who traveled to an area with malaria in the weeks to months preceding symptom onset.
- Order microscopic examination of thin and thick blood smears, and a rapid diagnostic test (RDT) if available, to diagnose malaria as soon as possible.
- An [algorithm for diagnosis and treatment of malaria in the U.S.](#) has been developed by the CDC.
- MTFs should have a plan for rapidly diagnosing and treating malaria within 24 hours of presentation.
- Suspected or confirmed malaria is a nationally notifiable disease and a [reportable medical event](#) per DODD 6490.02E.

Treatment: Patients suspected of having malaria should be evaluated in a facility able to provide rapid diagnosis and treatment within 24 hours of presentation. Treatment recommendations for malaria vary by species and severity. Please refer to [CDC's Malaria Diagnosis and Treatment Guidelines for U.S. Clinicians](#) for detailed instructions.

Prevention: Encourage protection from mosquito bites by wearing loose-fitting long-sleeved shirts, pants, socks, and shoes; apply repellent (i.e., DEET, Picaridin, IR3535) to exposed skin as directed on label. Find ways to eliminate standing water, which serves as mosquito breeding sites, in your yard or surrounding area.

Resources:

For current malaria information: <https://www.cdc.gov/parasites/malaria/index.html> • <https://emergency.cdc.gov/han/2023/han00494.asp>
CDC Algorithm for Diagnosis and Treatment of Malaria in the U.S.: https://www.cdc.gov/malaria/resources/pdf/Malaria_Management_Algorithm_202208.pdf
Armed Forces Reportable Medical Events: <https://www.health.mil/Reference-Center/Publications/2022/11/01/Armed-Forces-Reportable-Medical-Events-Guidelines>
CDC Malaria Diagnosis and Treatment Guidelines for U.S. Clinicians: https://www.cdc.gov/malaria/diagnosis_treatment/clinicians1.html
Questions? Please contact Armed Forces Health Surveillance Division / Integrated Biosurveillance at:
email: dha.ncr.health-surv.list.ib-alert-response@health.mil, phone: 301-319-3241
web: <https://health.mil/Military-Health-Topics/Health-Readiness/AFHSD/Integrated-Biosurveillance>