

Yellow fever

Yellow fever is a serious viral hemorrhagic infection spread by several species of mosquito found in Africa, South and Central America and Trinidad and Tobago. A yellow fever vaccination is recommended if traveling to an area with the disease, along with mosquito bite prevention methods.

Symptoms

Individuals infected with yellow fever can be asymptomatic (without symptoms), have a moderate flu-like illness, or have severe symptoms leading to death. Those that develop a flu-like illness will have symptoms after an incubation period of around 3-6 days. Most make a full recovery 3-4 days after symptoms.

General symptoms include:

- Fever (>38°C or >100.4°F)
- Chills
- Headache
- Nausea and vomiting
- Muscle pain and back ache
- Fatigue
- Loss of appetite
- Eyes being sensitive to light (photophobia)
- Generally feeling unwell



A few will develop more serious symptoms (the toxic phase), usually within 24 hours of recovering from initial symptoms. Notably the liver and kidneys are affected. Up to half of these cases will be fatal within 7-10 days.

Serious symptoms include:

- Jaundice (yellowing of the skin and eyes, hence the name 'yellow' fever)
- Dark urine
- Abdominal pain
- Bleeding from the mouth, nose, ears, or eyes
- Vomiting blood or passing blood in the stools

Diagnosis

Diagnosis is difficult during the early stages as yellow fever can be mistaken for other infections, e.g. severe malaria, leptospirosis, viral hepatitis and other hemorrhagic fevers. Laboratory tests (viral isolation tests) early in the infection can offer a definitive diagnosis; however, viral particles may be undetectable later during the infection, so therefore these laboratory tests should not be used to rule out a yellow fever diagnosis.

Treatment

Arrange to seek medical advice if experiencing any of the symptoms. No specific antiviral treatment is available, but rest and painkillers such as paracetamol can help with aches and pains and lower your temperature to relieve symptoms. Care should be taken to avoid medications that can increase the risk of bleeding (aspirin, non-steroidal anti-inflammatory drugs). Drinking plenty of non-alcoholic fluids helps to prevent dehydration. More serious symptoms require hospital intervention and early treatment improves survival rates in hospitals.

Prevention and Control

The most effective method of prevention is vaccination. A single vaccination provides life-long immunity, so a booster is not normally required. Boosters are recommended for those who received a vaccination when aged less than two years old, during pregnancy, or had a weakened immune system (e.g. HIV positive or preparing for a bone marrow transplant).

The vaccine needs to be given at least 10 days prior to travel and a certificate will only be valid from this time. Vaccination should still be given to those traveling at short notice who should also be advised regarding mosquito bite prevention strategies. If experiencing any acute illness, vaccination should be delayed.

It is important for travelers to note that there may be a requirement for yellow fever certification in the country of destination if someone transits through a country with yellow fever for more than 12 hours on their journey. It is crucial that country-specific vaccination requirements are checked well in advance of travel. In general, traveler-associated yellow fever is rarely reported due to the effectiveness of the vaccination in conjunction with other prevention strategies.

Those without vaccination on medical grounds should use other mitigating strategies such as bite prevention and must supply appropriate exemption certification when traveling to areas that require a yellow fever certificate.

Those who are between 6-9 months old, over the age of 60, pregnant, breastfeeding, or those with weakened immunity require further detailed risk assessment prior to yellow fever vaccination if travel to a high-risk area is unavoidable. If traveling with children who have recently had the MMR (measles, mumps, rubella) vaccine, they will need to ideally wait 28 days before having the yellow fever vaccine.



Personal protective measures

These are important to reduce the risk of exposure, including being aware of peak exposure times with regards to mosquito bites, wearing clothes that cover as much skin as possible and tucking in shirts and trousers (pants) into socks, wearing shoes/boots instead of sandals and using repellents for clothes as well as exposed skin. Avoid stagnant water where mosquitoes are known to breed. It is also important to stay in places with air-conditioning and window and door screens. Use bed nets that reach the floor or can be tucked under the mattress and are ideally pre-treated with an insecticide.

Always call the Everbridge Assistance line if help is required with medications or any medical issues during travel.

Insect repellents

Insect repellents containing DEET, picaridin (20%), IR3535, oil of lemon eucalyptus or para-menthane-diol (derived from the eucalyptus tree), or 2-undecanone are safe and effective even for pregnant women or if breastfeeding as long as they are used as directed. However, these products should not be used on infants less than 2 months old and products containing the active ingredients oil of lemon eucalyptus or para-menthane-diol should not be used on children less than three years old.

Insect repellents should be reapplied on exposed skin throughout the day and should also be used at night both indoors and outdoors. It should also be reapplied after swimming and in hot countries more frequent application may be required.

The best way to mitigate the risk of contracting yellow fever if traveling to an endemic area is to have the vaccine and use protective bite avoidance precautions.

References

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