

Risk of Yellow Fever

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ABSTRACT

The yellow fever virus, which is the primary cause of yellow fever, is spread via the bite of infected mosquitoes, especially the *Aedes aegypti* species. Mild to severe symptoms may include fever, headache, jaundice (yellowing of the skin and eyes), nausea, exhaustion, and muscle soreness. Severe cases may result in death or organ failure. Vaccination has a critical role in illness prevention, particularly in endemic areas

Introduction:

A virus called yellow fever virus is mostly spread by mosquitoes in tropical parts of South Africa. One important line of defense against the virus in areas where it is common is vaccination.

Life cycle

There are four phases in the life cycle of the *Aedes (A.) aegypti* that spreads diseases including dengue, zika and yellow fever. Life cycle includes eggs as the first stage which are laid in water-filled containers. Females deposit their eggs on the walls of the water tank. The eggs have a months-long shelf life without water. The eggs develop into larvae when they come into contact with water. Pupae are larvae that feed on organic substances while living in water. The larvae develop into pupae, which alter physically but do not eat. This is an inactive, non-feeding stage. The pupa gives way to the adult mosquito. Blood is the only food source for female mosquitoes and is essential to the development of eggs. Nectar is the main food for males (3).

Transmission

When a female *A. aegypti* mosquito feeds on the blood of an infected individual, she contracts a virus. Following the incubation phase, the virus-carrying mosquito can bite people and spread the infection. The virus is injected into the human bloodstream by the mosquito along with its saliva during successive blood feedings. The virus then multiplies within the host, possibly leading to disease. During the viremic stage, when the virus is in the bloodstream, another *A. aegypti* mosquito has the potential to become infected and perpetuate the cycle if it bites the affected person (2).

Clinical Signs

Yellow fever is characterized by an initial phase with symptoms like fever, headache, muscle pain, nausea, and vomiting. As it progresses it is characterized by jaundice a yellowing of the skin and eyes from liver malfunction. There is a chance of bleeding tendencies, renal damage, and eventually organ failure. For individuals displaying these symptoms, prompt medical attention is essential since yellow fever is a potentially fatal virus spread by mosquitoes (1).

Control

1. Source Reduction: You can break the life cycle of mosquitoes by getting rid of or cutting down on standing water in areas like flowerpots, gutters, and containers where they spawn (4).

2. Insecticides: Using insecticides to treat breeding places with larvicides or apply indoor residual spraying can help manage mosquito populations. However, in order to reduce the influence on the environment, this should be done carefully (4).

3. Biological Control: Introducing naturally occurring mosquito larvae predators, like specific fish species, can be a sustainable method of managing mosquito populations (4).

Conclusion

In conclusion, yellow fever is a dangerous virus that is primarily found in tropical areas and is spread by mosquitoes. In order to reduce the risk of infection, visitors should take the advised precautions when visiting places that have been affected by the outbreak, and vaccination is essential for prevention. Public health initiatives are ongoing.

References

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