

Practical information on Chikungunya

What is Chikungunya (or “Chik”)?

Chikungunya is a debilitating disease caused by a virus of the *Togaviridae* family (*Alphavirus* genus). The incubation period (time between contamination or infecting bite and the first clinical signs) is usually 4-7 days. Chikungunya is an arbovirolosis: the virus causing the disease is transmitted by a vector, an arthropod (mosquito).

How is the virus of Chik transmitted?

The virus is only transmitted by mosquito. The mosquito picks up the virus by biting a person suffering from the disease during the viremia phase and in turn infects other people. The virus is contained in the blood during the “viremic period” or “viremia.” This period starts on the first day of symptoms (D0) and lasts until about D+5. The virus is therefore transmitted from human to the mosquito when a human is bitten by a mosquito during the viremic period.

An infected mosquito will remain infected all its life and can therefore transmit the virus each time it bites.

Can the virus be transmitted from one person to another?

No. Transmission takes place uniquely through vector mosquitoes. However, artificial transmission through blood transfusion and graft surgery is possible in theory, hence the precautionary measures taken to prevent sufferers from the disease to donate blood.

What are the symptoms of Chikungunya?

Chikungunya generally causes a sudden onset of fever, headaches and severe joint pain (wrists, ankles, hands) or “arthralgia.” Less frequently, skin eruptions (rash on all parts of the body) and/or digestion, respiratory or ENT disorders may occur.

Like in other arboviroses, a Chikungunya infection can either go totally unnoticed (i.e. the person is symptom-free; infection is then said to be asymptomatic) or cause painful and persisting symptoms.

What should you do when the first symptoms appear?

You should see a doctor, who will prescribe a suitable treatment for your particular symptoms. You must also avoid contact with mosquitoes so as not to transmit the disease to people around you.

Can you be infected with Chikungunya several times?

No. Any person infected once acquires durable immunity naturally. However, some joint pain (arthralgia) may persist or reappear over variable periods of time. This is a reaction of the joints and is not due to any re-infection by the virus.

Are certain population groups more likely to develop Chikungunya than others?

No single category of the population (age, sex, occupation, ethnic group, etc.) is more immune from Chikungunya than another.

Is there a human vaccine? Can it be developed in the short term?

No. There is currently no marketed vaccine available for man. It takes several years to complete a vaccine research, development and marketing campaign.

Is there an efficient therapy for people?

There is no active treatment against the virus of Chikungunya. However symptom treatments can give good results, especially for joint pain and fever.

How to avoid being infected by Chikungunya

Because there is no vaccine or preventive treatment, the only way not to be infected is to reduce exposure to mosquito bite to the maximum. This entails destroying larva breeding grounds in order to reduce vector density, and protecting oneself against insect bites.

Where does the female *Aedes albopictus* lay its eggs?

The female *Aedes albopictus* lays its eggs in a breeding ground or “nest” consisting of standing water pools. Females lay their eggs in fresh water containing little organic matter (clear water). There are different types of these nests:

- Household nests: rain barrels, flower pot saucers, cutting pots, etc.
- Quasi-household nests: rain-exposed containers, cluttered rain gutters that do not drain completely, unmaintained swimming-pools and basins, old tyres and refuse abandoned in gardens, cut bamboo stalks, plants with sheathing leaves, etc.
- Natural pockets: ravines, holes in boulders, holes or nooks of trees, swamps, ruts, etc.

About 80% of nests are man-made (household and quasi-household). The *Aedes* mosquito is sedentary: it will not fly more than 100 metres from its original shelter.

At which times of the day is the *Aedes albopictus* more likely to bite?

The adult (female) is active during the day, with two major periods of activity: one in the morning at sunrise, the other in late afternoon at sunset (when the mosquito is often more aggressive). *Aedes albopictus* generally bites outdoors (it is “exophagic”) but it can also fly into houses and bite people inside.

Is a virus-infected mosquito itself affected by the disease?

No. Mosquitoes do not seem to be affected by the virus in their bodies. Once a female is infected (and infecting), it remains so throughout its life. There is no evidence of the female transmitting the Chikungunya virus to its eggs (however, transmission of the *dengue* fever virus to eggs has been evidenced).

What can I do to reduce the risk of catching the disease and how can I protect other people around me?

Short of an available vaccine or preventive drugs, the only way to reduce the risk of catching the disease is to reduce exposure to infected mosquitoes. You must therefore (i) protect your body against bites, and (ii) reduce the number of mosquitoes around your home by destroying larva nests (see above).

How to protect oneself from mosquito bites

Several options are available to protect you:

- ventilation with fans or air conditioners,

- electric insecticide diffusers or coils for outside use,
- repellent creams and sprays. Standard products should not be used by pregnant women and young children (your pharmacist will advise you on suitable products),
- in the evening, long-leaved clothes and long trousers should be worn to reduce direct skin exposure (especially legs and ankles),
- mosquito screens should be placed on windows; mosquito nets over baby cots and prams and over the beds of people confined to bed.

Additional information can be found on the websites:

<http://www.chikungunia.net>

<http://www.cbwinfo.com/Biological/Pathogens/CHIK.html>