# Yellow fever

Yellow fever is a viral infectious disease of the tropical world. It is named after the jaundice that often occurs in this disease. The virus originates from monkeys and some other jungle animals while infected mosquitoes can transmit the disease to humans. It occurs in parts of Africa and South America, usually due to human contact with natural infection centres in forests (sylvatic yellow fever) or in urban environments (urban yellow fever).

According to the World Health Organisation, around 200,000 people, mainly those in rainforests, get infected with yellow fever every year. Yellow fever does not exist in Slovenia nor in Europe.

### Cause

The causative agent is the yellow fever virus. It belongs to the group of so-called flaviviruses.

## **Incubation period**

The time from infection to disease onset is 3–6 days, and even 13 days.

### **Transmission**

The yellow fever virus is transmitted from a reservoir (usually monkeys) to humans through the bite of an infected mosquito. In South America, the vector is the Aedes aegypti or Haemagogus mosquito, and in Africa, various Aedes mosquitoes.

# Susceptibility to infection

Anyone who has not had yellow fever is susceptible to contracting the virus. Immunity is permanent after vaccination or after the infection.

The virus is present in the patient's blood just before the onset of fever and for 3–5 day after the onset of illness. Mosquitoes infected with the yellow fever virus remain infectious for life.

# **Symptoms**

The disease can be asymptomatic or severe, and deaths are not uncommon. In the severe form, jaundice, haemorrhage and renal impairment occur. Severe disease develops in 10% to 20% of patients. As many as 50% of patients die of liver or kidney failure on days 7 to 9 of the disease. Rarely, signs of cardiac and central nervous system involvement develop, with recovery lasting several weeks.

## **Treatment**

There is no antiviral medicine to treat yellow fever. Patients' symptoms are alleviated with symptomatic treatment and support for the organ systems.

### **Prevention of infection**

The most important measure to reduce the risk of infection is vaccination with the yellow fever vaccine. Vaccination is recommended for anyone travelling to yellow fever areas. Yellow fever vaccine is a live, attenuated vaccine and is therefore not suitable for pregnant women and immunocompromised patients. Children under 6 months cannot be vaccinated. Side effects after vaccination are possible but not common. Rarely, fever, headache and muscle aches occur a few days after vaccination. The problems are short-lived and pass by themselves.

Protective antibodies develop within 7–10 days after vaccination and remain present for life, so no further doses of the vaccine are needed. The vaccinated person receives a certificate of vaccination.

Some countries require proof of vaccination before entry from travellers coming from countries with yellow fever. Slovenia does not have yellow fever, so Slovenian citizens do not need this certificate if travelling from Slovenia to a country that requires it. However, if you are travelling through a country where yellow fever is present, then you must also bring a vaccination certificate.

Regardless of the certificate, we should be aware that yellow fever can be an extremely serious disease for which there is no cure. Therefore, vaccination before travelling to areas where there is a risk of infection is definitely advisable and necessary.

Yellow fever vaccination is carried out in the travel clinics of the National Institute of Public Health's regional units in Ljubljana, Maribor, Celje, Kranj, Novo mesto, Koper, Nova Gorica, Murska Sobota and Ravne na Koroškem.