

Ross River Virus

What is Ross River virus (RRV) disease?

RRV disease is the most commonly reported and widespread mosquito-transmitted viral disease in Australia. It is characterised by painful or swollen joints lasting from days to months. Symptoms usually settle by themselves.

How is it spread?

RRV infection cannot be spread from person to person. The virus is transmitted to humans by the bite of an infected mosquito.

The mosquitoes present in the Northern Territory (NT) that can spread the virus are *Culex annulirostris* (common banded mosquito), *Aedes vigilax* (salt marsh mosquito), *Aedes normanensis* (flood water mosquito) and *Aedes notoscriptus* (backyard mosquito).

Many people, particularly children, do not develop any symptoms of the disease, even if bitten by an infected mosquito.

Where and when is the virus found?

RRV is found throughout Australia, Papua New Guinea, parts of Indonesia, and the western Pacific Islands.

In the NT, the main risk season is from December to March inclusive with the highest risk period in January when large numbers of mosquitoes result from either high tides or increased rainfall.

Mosquitoes can pick up the virus while feeding on animal reservoir hosts, most commonly marsupials such as wallabies and kangaroos. The chances of this occurring are greater in humid conditions when mosquitoes live long enough to pass on the virus to people.

What are the symptoms?

Symptoms vary from person to person and may appear from 3 days to 3 weeks after being bitten by an infected mosquito, most commonly within 7 to 14 days.

The illness generally begins with painful (sometimes swollen) joints and muscle and tendon pain. The most commonly affected joints are the ankles, toes, fingers, knees and wrists. The pain usually develops rapidly, may be intense, and may be more severe in different joints at different times.

Other symptoms include a raised red rash affecting mostly limbs and trunk, fever, fatigue, headache and swollen glands. Less common symptoms include sore eyes and throat, nausea and tingling in the palms of the hands or soles of the feet. It is important to see a doctor to rule out other conditions which may present similarly.

Fever, nausea and the skin rash usually disappear within the first 1 or 2 weeks of illness. Joint, muscle and tendon pain may last much longer, and can be distressing. Some people also have lingering fatigue, lethargy and depression.

Most people will progressively improve over 3 to 6 months, while a minority may experience ongoing fatigue and joint pain for many months. These cases should be investigated to consider other forms of arthritis.

As a rule, if a person has had RRV once, they won't get it again. However, there have been a few rare cases of people developing RRV disease more than once in their lifetime.

Children tend to experience milder symptoms of shorter duration than adults.

What is the treatment?

RRV infection is diagnosed by a blood test. There is no vaccine to prevent RRV infection, and there is no medical cure for the disease.

Medical treatment includes rest and simple pain relief. However, some people may require stronger medication to assist with pain and inflammation.

Emotional stress, physical fatigue and alcohol may cause symptoms to worsen or to last longer.

How can it be prevented?

Try to reduce the number of places with standing water on your property where mosquitoes can breed.

The only protection from RRV is to avoid being bitten by mosquitoes.

Personal protective measures

- Avoid outdoor exposure between dawn and dusk, especially if within 2 km of wetlands or flooded areas
- Ensure flyscreens in houses or caravans are in good condition
- If camping, sleep in a mosquito-proof tent or under a mosquito net. Repellents only protect against mosquito bites for up to four hours, not all night
- Use personal repellents containing deet, picaridin or extract of lemon eucalyptus (pmd) on areas of exposed skin in combination with protective clothing.
- Use protective clothing that covers feet, legs and arms. Loose, light-coloured clothing is best.
- Use mosquito coils or mosquito lanterns with insecticide treated pads for small and sheltered outdoor areas

Contact

For more information on:

- mosquitoes and virus ecology contact Medical Entomology on 8922 8901.
- support groups and education call the Arthritis Foundation of the NT on 8948 5232.

For more information contact your nearest [Centre for Disease Control](#).

Location	Phone
Darwin (Top End Region)	(08) 8922 8044 1800 008 002
Katherine (Big Rivers Region)	(08) 8973 9049
Tennant Creek (Central Australia Region)	(08) 8962 4259
Alice Springs (Central Australia Region)	(08) 8951 7540
Nhulunbuy (East Arnhem Region)	(08) 8987 0357

PGC ID: HEALTHINTRA-1627664142-59642	TRM ID: EDOC2022/382194	
Version: Version: 5.0 DO NOT EDIT THIS	Approved Date: 3/12/2023	Review Date: 3/12/2028