



Ross River Virus

What is Ross River virus (RRV) disease?

It is a viral disease caused by the Ross River virus and 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, even if bitten by an infected mosquito, do not develop any symptoms of the disease.

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. Humid conditions enable mosquitoes to live longer, which allows more chance for a mosquito to pick up a virus from the animal reservoir, (usually marsupials such as kangaroos and wallabies), and to live long enough for it to multiply and infect the mosquito, and then pass it on to humans in saliva when it bites.

What are the symptoms?

Symptoms vary from person to person and may appear from 3 days to 3 weeks after being bitten, 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, 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, light intolerance 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.

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.

Symptoms subside eventually and leave few or no after-effects. It is not possible at present to say how long an individual person will take to get better.

Some adults with RRV infection recover within 2 to 6 weeks of onset of the illness and most people will progressively improve over 3 to 6 months. A minority of people (about 15%) will still be unwell at 3 months, and at 6 months about 5% will have persistent joint pains and lethargy.



A small minority (up to 2%) of people may have residual symptoms after a year. In general people with symptoms after a year should be re-investigated and other forms of arthritis considered.

People with long-term symptoms are not sick all the time. By 3 months, many people experience some days when they are well and others when they are not, and as time goes by, the latter become less frequent, but symptoms may recur suddenly and without warning.

As a rule, once you've had RRV once, you won't get it again. However, there have been a few rare cases of people developing RRV 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 is aimed at easing joint pains and swelling, and minimising fatigue and lethargy. For some people, simple pain-killers like aspirin or paracetamol are sufficient. Others will require stronger medications to ease the inflammation.

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

How can it be prevented?

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

Personal protective measures include

- avoiding being outside when mosquitoes are most active, from just before sunset until mid-evening
- wearing loose light coloured clothing with long sleeves, long trousers and socks

(mosquitoes can bite through tight-fitting clothes)

- applying a protective repellent containing up to 20 percent diethyl toluamide (DEET) or picaridin to exposed areas of skin. Lotions and gels are more effective and long lasting than sprays
- ensuring flyscreens in houses or caravans are in good repair
- if camping out, either 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
- try to reduce the number of places on your property where mosquitoes can breed. Any pools of water, even if tiny, can provide breeding sites for mosquitoes

For more information on disease aspects and prevention contact your nearest Centre for Disease Control.

Darwin	8922 8044
Katherine	8973 9049
Nhulunbuy	8987 0359
Tennant Creek	8962 4259
Alice Springs	8951 7549

Further CDC fact sheets available at:

http://www.nt.gov.au/health/cdc/fact_sheets/fact.shtml

For more information on mosquitoes and virus ecology contact the Medical Entomology Branch.

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For information regarding support groups and education call the Arthritis Foundation of the NT on 89485232.