

Kunjin virus is closely related to West Nile virus. Mosquitoes can sometimes transmit Kunjin virus from infected birds to people.

Kunjin virus disease

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What is Kunjin virus disease?

Kunjin virus disease is a viral infection caused by a flavivirus (Kunjin virus) found in mainland Australia and Papua New Guinea. It is closely related to West Nile virus which is found in Africa, Europe and the USA. The virus is spread by the bite of certain mosquitoes.

What are the symptoms?

The vast majority of infections do not show symptoms. A small number of people develop mild illness with fever, enlarged lymph nodes, rash, swollen and aching joints, headache, muscle weakness and fatigue. Some people with Kunjin virus disease may develop encephalitis, a severe brain infection which may require hospitalisation.

How is it spread?

The virus is spread by the bite of the common banded mosquito, *Culex annulirostris*. This mosquito breeds in fresh water and tends to be found in spring, summer and autumn around natural wetlands and irrigation waters. The mosquito is especially common around the Murray Darling River basin areas in NSW during summer and into autumn. This mosquito tends to be most active after sunset and around dawn.

Kunjin virus is a virus of birds. Various water bird species are thought to be infected with the virus, although other animals such as horses can also become infected. Mosquitoes become infected by feeding on infected birds and possibly other animals. An infected mosquito can then bite a human and transmit the infection.

Who is at risk?

As some mosquitoes may carry the Kunjin virus, people who are bitten by mosquitoes are most at risk. People working, living or visiting areas of rural NSW where there are rivers, wetlands, flooded areas or heavily irrigated areas may be at greater risk of Kunjin virus infection because the mosquitoes are more likely to be infected from water birds that naturally carry high levels of virus.

Kunjin virus is more common in some parts of northern Australia.

NSW Health has established a several flocks of sentinel chickens around the state. During the mosquito season, the chickens are tested weekly for the mosquito-borne diseases (Kunjin and Murray Valley encephalitis viruses). New infections in chickens serve as an early warning that local mosquitoes in the area may be carrying the virus. Kunjin virus has been found on several occasions in the chicken sentinel flocks and in mosquitoes in NSW. Mosquitoes are also trapped, counted and tested for Kunjin virus.

How is it prevented?

There is currently no vaccine against Kunjin virus disease.

To protect against mosquitoes and reduce the risk of diseases they transmit:

- Cover-up with a loose-fitting long sleeved shirt and long pants when outside
- Apply mosquito repellent to exposed skin
- Take special care during peak mosquito biting hours, especially around dawn and dusk
- Remove potential mosquito breeding sites from around the home and screen windows and doors
- Take extra precautions when travelling or camping in areas with a higher risk of mosquito-borne diseases.

For more detailed information on reducing the risk of mosquito bites at home and while travelling see the [Mosquitoes are a Health Hazard](#) factsheet. This also includes more information on mosquito repellents.

How is it diagnosed?

Blood tests can show whether there are antibodies to Kunjin virus. Blood samples are taken while the person is unwell and then again two weeks later to see if there has been a change in the antibody levels. This can indicate that there has been a recent Kunjin virus infection.

How is it treated?

Treatment is supportive - there is no specific treatment for Kunjin virus disease.

What is the public health response?

When laboratories confirm Kunjin virus disease, they notify their local public health unit. Public health units follow up each case to determine where the person acquired the infection and assess if there is an ongoing public health risk.

For further information please call your local Public Health Unit on 1300 066 055 or visit the New South Wales Health website www.health.nsw.gov.au