



# West Nile Fever



## Background

The disease was first diagnosed in blood taken from a woman living in the West Nile district of Uganda in 1937. Since that time the disease has been found in many other countries including Egypt, Israel, South Africa, parts of Asia and more recently in the American subcontinent. During 2003 three cases were diagnosed in Western Europe; one in the Netherlands and the other two in Southern France (may have been imported from Spain).

## Mosquito Transmission

This is a viral disease transmitted by **mosquitoes**. The disease mainly affects birds but the mosquitoes can transmit it to other animals (horses, cats, dogs, domesticated rabbits, skunks and bats) including humans. The mosquitoes which transmit West Nile Fever mainly feed on birds belonging to the Culex group. They are generally dusk and dawn feeders so protecting against mosquito bites at these times is particularly important.

## Other means of Transmission

It is also possible to transmit this disease in a number of other ways including **blood transfusion**. The virus has also been found in **breast milk** and passed to a child during **pregnancy**. **Organ transplantation** is another possible means of transmission though it should always be remembered that in the vast majority of cases the disease is passed by the bite of an infected mosquito.

## Signs & Symptoms

Many humans (80%) will have no signs or symptoms that they have been infected even though their antibody test may show a positive result confirming they were infected.

About 20% of infected humans will develop West Nile Fever. This will usually present with signs of a mild flu-like viral infection (fever, muscular aches and pains, perhaps a rash and occasionally swollen lymph glands).

A very small number of these patients (about 1%) may develop a more severe form of the disease. Typically they are likely to be people with a weakened immune system which includes the older person or those with certain chronic illnesses. The main serious signs and symptoms include significant headaches and neck stiffness (meningitis/encephalitis) and also difficulty with swallowing, moving their limbs, co-ordination, confusion, and loss of consciousness. The severe form of the disease can lead to death though it is important to remember that overall this only occurs in a very small number of those infected and mainly in the older age group.

## Treatment

There is no specific viral treatment against West Nile Fever available at this time. However those with the more severe form of the disease will be treated in hospital to ease their symptoms.

## Vaccination

At present (2004) there is no vaccine available against West Nile Fever though many groups are working actively on this project and there is hope that it will be available within the next few years.

## Protection against WNF

The only way to protect against West Nile Fever in the majority of cases is to avoid mosquito bites. This involves covering exposed skin with light coloured clothing (mainly at dusk and dawn when the mosquitoes are most active), avoiding perfumes, deodorants, hair lacquers and aftershaves (which attract mosquitoes) etc and also using effective insect repellents. (see TMB leaflet on avoiding insect bites)

## Insect Repellents

It is important to ensure that insect repellents contain DEET (**diethyltoluamide**) as its active compound as many of those available nowadays are based on other substances. Generally a repellent containing 30% to 55% of DEET will be sufficient but if the individual does not have sensitive skin it may be worth considering using up to 100% DEET to provide stronger cover. Applying a skin test is a wise precaution to ensure that the lotion/cream suits. Other repellents like Citronella have some beneficial effect but are shorter acting. Taking vitamin B tablets (or garlic pills) has no effect on reducing the number of insect bites. Ultrasonic insect repellents do not work.

## Care in the Mediterranean

The emergence of cases in France, Portugal and the Netherlands has confirmed that West Nile Fever has spread to western Europe. The surprising fact is that it has taken so long for the disease to occur in an Irish traveller to these regions and that we have no reported cases so far in our travellers returning from the United States or Canada.

## Summary

West Nile Fever is spreading throughout many regions of the world and until an efficient vaccine is available it is unlikely that it will be controlled. In the majority of cases those infected will not even realise that this has occurred as they will have no effects whatsoever. However, as the disease can lead to serious consequences in a small number of individuals, it is essential that travellers to risk zones take adequate care to avoid mosquito bites at all times.

National Travel Vaccine Appointment Tel 1-850-48 76 74

Web Address: [www.tmb.ie](http://www.tmb.ie)

This leaflet has been prepared using information supplied from W.H.O. Center for Disease Control (US), Health Canada and other International sources.

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- ✓ Travel Accessories
  - ✓ Tropical Diagnostic Laboratory
  - ✓ Tropical Disease Screening Centre
  - ✓ W.H.O. registered Yellow Fever Vaccination Centre
  - ✓ International Vaccination and Malaria Advice Centres

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