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MADISON NEUROLOGY LLC

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Neurology Care 7 days a Week. Because Your Brain Matters.

West Nile Neuroinvasive Disease

Patient education guide · Infections · Madison Neurology LLC

What is it?

West Nile virus is a mosquito-borne infection that in most people causes no symptoms or a mild flu-like illness. In about 1 in 150 infected people — mostly older adults — it invades the nervous system, causing meningitis, encephalitis, or a polio-like acute flaccid paralysis. There is no specific antiviral treatment; care is supportive, and recovery can take months.

How does it happen?

The virus cycles between mosquitoes and birds; humans are infected by mosquito bites, primarily in summer and early fall. Adults over 60 and immunocompromised people are at highest risk for neuroinvasive disease. It is not spread person-to-person (rare exceptions: transfusion, transplant, pregnancy).

Common symptoms

- High fever with severe headache and stiff neck (meningitis)
- Confusion, disorientation, tremor, or seizures (encephalitis)
- Acute flaccid paralysis: sudden painless weakness of one or more limbs, resembling polio
- Profound muscle weakness and fatigue
- A maculopapular rash in about half of the febrile cases

How is it diagnosed?

Blood and spinal fluid antibody testing (West Nile IgM) confirms the diagnosis; spinal fluid shows the inflammatory pattern. MRI may show characteristic changes in the basal ganglia and spinal cord in severe cases.

How is it treated?

There is no specific antiviral; treatment is supportive — hospital care for severe cases, breathing support if needed, aggressive rehabilitation for weakness and paralysis, and management of tremor and seizures. Most of the care happens after the acute illness: physical, occupational, and speech therapy drive recovery.

What does the future hold?

Febrile West Nile and meningitis usually recover fully, though fatigue and concentration problems can linger for months. Encephalitis and paralysis carry a heavier course: weakness from acute flaccid paralysis recovers incompletely in many patients, with gains continuing for a year or more with rehabilitation. Prevention is the real treatment: DEET-based repellent, long sleeves at dawn/dusk, and eliminating standing water.

Questions patients commonly ask

Q: Is there a vaccine or cure?

A: Neither exists yet — prevention (repellent, clothing, eliminating standing water) is the strategy, and supportive care plus rehabilitation is the treatment.

Q: Will my weakness recover?

A: Recovery from the polio-like paralysis is slow and often incomplete, but meaningful gains continue for 12-18 months with therapy.

Q: Am I contagious?

A: No — West Nile isn't spread person to person; family members are not at risk from caring for you.

National support groups & resources

- **Centers for Disease Control and Prevention** — cdc.gov
- **American Academy of Neurology — Brain & Life patient resources** — brainandlife.org
- **National Organization for Rare Disorders** — rarediseases.org — 1-800-999-6673

(Organization contact details were current at the time of compilation; please verify online.)

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