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

Autoimmune Encephalitis

Patient education guide · Demyelinating & Autoimmune · Madison Neurology LLC

What is it?

Autoimmune encephalitis is a group of disorders in which the immune system attacks the brain — often via antibodies against cell-surface proteins such as the NMDA receptor — causing a subacute (days to weeks) onset of psychiatric symptoms, memory loss, seizures, confusion, and movement disorders. It can mimic psychiatric illness or rapid dementia, and it is treatable — recovery is often substantial with early therapy.

How does it happen?

Antibodies against brain surface proteins (NMDA receptor, LGI1, CASPR2, GABA receptors, and others) disrupt neuronal signaling. Some cases are triggered by tumors (e.g., ovarian teratoma in anti-NMDA encephalitis) or, rarely, follow herpes encephalitis or immune-checkpoint cancer therapy; many have no identified trigger.

Common symptoms

- Subacute memory loss and confusion over days to weeks
- Psychiatric symptoms: anxiety, agitation, hallucinations, bizarre behavior — often the first sign
- Seizures, sometimes subtle or frequent (faciobrachial dystonic seizures in LGI1)
- Movement abnormalities, speech reduction, or catatonia
- Autonomic instability and reduced consciousness in severe cases

How is it diagnosed?

Antibody testing of blood and spinal fluid identifies the specific type. MRI, EEG (which may show distinctive patterns), and a systematic tumor search (body imaging, pelvic/testicular ultrasound) are standard. Because early psychiatric presentations are deceptive, clinicians consider this diagnosis in any rapid-onset behavioral change with seizures or cognitive decline.

How is it treated?

First-line immunotherapy — steroids, IVIG, or plasma exchange — is started promptly, usually in hospital. Second-line agents (rituximab, cyclophosphamide) are added for incomplete response. Any associated tumor is removed. Seizures, agitation, and autonomic symptoms are managed supportively. Recovery takes months, and rehabilitation (cognitive, physical, psychological) is a core part of treatment.

What does the future hold?

With treatment, the majority of patients recover substantially — many return to work or school — though recovery is slow (months to over a year) and residual memory or mood symptoms are common. Relapses occur in a minority (more with some antibody types) and respond to retreatment; some patients need long-term immunotherapy. Early treatment is the strongest predictor of good outcome.

Questions patients commonly ask

Q: My family member was told they had a psychiatric illness — could it be this?

A: Rapid psychiatric change accompanied by seizures, memory loss, or movement problems warrants encephalitis testing — this condition is the great mimicker.

Q: Will memory fully recover?

A: Many patients recover well, but memory rehabilitation takes months; persisting gaps around the illness period are common.

Q: Can it come back?

A: Relapse occurs in a minority; your team will outline warning signs and whether maintenance immunotherapy is warranted.

National support groups & resources

- **Autoimmune Encephalitis Alliance** — aealliance.org
- **National Organization for Rare Disorders** — rarediseases.org — 1-800-999-6673
- **American Academy of Neurology — Brain & Life patient resources** — brainandlife.org

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

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