

What defines M.E., is a specific type of viral damage to the brain. M.E. represents a major attack on the Central Nervous System by the chronic effects of a viral infection which targets the brain: an enterovirus.

Neurological Effects of Myalgic Encephalomyelitis (ME-ICC)

The International Consensus Criteria (ME-ICC 2011) recognizes Myalgic Encephalomyelitis as a complex neurological disease involving dysfunction of the brain, autonomic nervous system, sensory processing, and neuroimmune signaling. Neurological impairment is considered one of the core features of ME.

Cognitive & Brain Function

People with ME may experience:

- * Brain fog or slowed thinking
- * Difficulty concentrating or processing information
- * Short-term memory problems
- * Word-finding difficulty
- * Confusion or disorientation
- * Mental fatigue after minimal cognitive effort
- * Reduced ability to multitask

These symptoms often worsen after exertion, stress, sensory overload, or lack of rest.

Sensory & Perceptual Disturbances

The nervous system can become hypersensitive, leading to:

- * Sensitivity to light, sound, touch, chemicals, or motion
- * Blurred vision or difficulty focusing
- * Floaters, visual distortions, or “wavy” vision
- * Tinnitus or sound distortion
- * Numbness, tingling, burning, or electric-shock sensations
- * Feeling overstimulated in busy environments

Many patients describe the brain as struggling to properly filter sensory input.

Autonomic Nervous System Dysfunction

ME frequently affects automatic body functions controlled by the brainstem and autonomic nervous system:

- * Orthostatic intolerance / POTS
- * Dizziness or faintness when upright
- * Temperature regulation problems
- * Sweating abnormalities
- * Abnormal heart rate or blood pressure regulation
- * Air hunger or difficulty regulating breathing
- * Digestive slowing or swallowing difficulties

This dysfunction can fluctuate significantly from hour to hour or day to day.

Motor & Coordination Problems

Neurological impairment may also affect movement and muscle control:

- * Muscle weakness or heaviness
- * Poor coordination
- * Tremors or internal vibrations
- * Muscle twitching
- * Difficulty initiating movement
- * Episodes where the body suddenly “shuts down” briefly
- * Problems holding the head upright in more severe disease

Some patients experience transient neurological episodes that can resemble seizure-like, stroke-like, or fainting episodes, though mechanisms may differ.

Sleep & Consciousness Disturbances

ME can disrupt normal neurological regulation of sleep and alertness:

- * Unrefreshing sleep
- * Fragmented sleep
- * Reversed sleep cycle
- * Sleep paralysis
- * Sudden overwhelming exhaustion
- * Episodes of altered awareness or cognitive “blinking out”

Neuroimmune & Brain Inflammation Research

Research into ME suggests involvement of:

- * Neuroinflammation
- * Brainstem dysfunction
- * Impaired cerebral blood flow
- * Abnormal immune signaling within the nervous system
- * Dysfunctional stress-response systems

The ICC emphasizes that these neurological abnormalities are not simply fatigue, but reflect measurable dysfunction affecting multiple brain and nervous system pathways.

References

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