Specialties and Services

Neurology

What Is Neurology?

Neurology is a branch of medicine that studies and treats the nervous system, including the brain, spinal cord and nerves. Gillette Children’s Specialty Healthcare is a regional leader in pediatric neurology and pediatric neurosurgery.

Conditions Neurology Treats

Our neurology department cares for children, teens and adults who have complex neurological conditions and injuries that affect the spinal cord, neck, nerves and/or brain.

Some of the conditions that most often require neurological care include:

- Cerebral palsy
- Epilepsy and seizures
- Brain injury
- Muscular dystrophy. [spinal muscular atrophy](#) and other [neuromuscular conditions](#).
- Cerebral vascular conditions.
- Brachial plexus birth injury
- Complex movement disorders
- Microcephaly and malformations of brain development.
- Neurocutaneous syndromes.
- Developmental delay.
- Neuroimmunological conditions such as acute demyelinating encephalomyelitis (ADEM), transverse myelitis, and NMDA receptor encephalitis.
- Pediatric stroke.
- Genetic / Metabolic conditions associated with Neurologic dysfunction.

Tests and Treatments

For children, teens and adults who need neurological care, our leading neurology doctors use the latest technology and techniques to diagnose and treat a wide variety of conditions.

Early care is critically important in cases of neurological and neurodevelopmental delays.
A typical neurology test, treatment or evaluation might include:

- Developmental assessments.
- **First seizure evaluations.**
- Genetic evaluations.
- Discussion about dietary treatments for epilepsy and seizures including the ketogenic diet and low glycemic index treatment diet.
- Medical management of epilepsy and seizures.
- Neurodiagnostics, including electroencephalography (EEG), video EEG, electromyography and sleep study (polysomnography).
- Neurological care for cerebral palsy and other complex disorders.
- Vagus nerve stimulation for epilepsy and seizures.

**Integrated Care**

If your child needs specialized treatment for a complex neurological condition, they might work with a child neurologist to treat one or more of the following:

- Seizures and epilepsy.
- Acquired brain injuries.
- Neurodevelopmental delays.
- Complex movement disorders.

Your family can trust the expertise of our neurology team, which is made up of health care professionals who specialize in neurological conditions and injuries. Additionally, our pediatric nurse practitioners provide expert clinical care and patient and family support.

Children, teens and adults who have complex disorders often have many needs beyond neurological care. Our neurologists often collaborate with providers in the following specialties:

- Rehabilitation medicine.
- Comprehensive inpatient rehabilitation.
- Rehabilitation therapies.
- Neurodiagnostics.
- Neuropsychology.
Neurosciences inpatient care.

- Neurosurgery.
- Sleep medicine.
- Radiology and imaging.
- Adult Services.

If your child has a complex neurological condition or injury, internationally recognized Gillette specialists will work closely with you in a family-centered neurology clinic to create a customized treatment plan.

Galen Breningstall, MD
Pediatric Neurologist
Randal Richardson, MD
Pediatric Neurologist

Cathleen Rock, APRN, CPNP, ACPNP, PMHS
Pediatric Nurse Practitioner
Anna Walker, DNP, APRN, CPNP
Pediatric Nurse Practitioner

Nicole Williams Doonan, MD
Pediatric Neurologist

Locations

Services vary by location. For all locations, visit [Locations].

- St. Paul Campus
- Burnsville Clinic
- Gillette Mankato Clinic
- Maple Grove Clinic