

# MULTIPLE SCLEROSIS

## Background

Multiple sclerosis (MS) is an inflammatory auto-immune disorder of the central nervous system (CNS) that affects the brain, spinal cord, and optic nerves. The attack damages myelin, the protective coating that insulates nerves and helps them send information throughout the CNS. Inflammation from the attack leaves behind spots or lesions that disrupt the normal flow of nerve conduction causing weakness, numbness, tingling, imbalance and changes in vision.

Symptoms of MS are dependent upon the area of the brain or spinal cord affected. Symptoms are often categorized by changes in sensation or changes in muscle function. MS is an unpredictable disease where symptoms can present and change. It usually follows a pattern where symptoms are stable before new or worsening symptoms appear; also known as neurological attacks or flare-ups. Additional symptoms include fatigue, problems with bowel and bladder, and speech and cognitive difficulty.

MS is most commonly diagnosed in young adults, but children can also be affected. Pediatric onset multiple sclerosis (POMS) is generally defined as MS in children under the age of 18. Delay in diagnosis is common as MS is not always recognized as a pediatric disease. Children also may not readily report symptoms, particularly if they involve bladder or bowel dysfunction. Other symptoms like fatigue, irritability, and depression may also be more easily dismissed in teenagers. Progression may be slower in children than adults, but children diagnosed with POMS are more likely to experience more frequent relapses with shortened recovery time.

There is no cure for MS. Medication may be prescribed to help slow progression of the disease, prevent new attacks, and alleviate the severity of symptoms. Steroids can help reduce inflammation in the brain and spinal cord during a flare-up. Other treatment options may focus on managing fatigue, tremors, pain, vertigo, bowel and bladder dysfunction, and emotional changes.



## Top Takeaways for School Considerations

MS is an autoimmune disease that attacks the central nervous system, affecting neurological status, muscle strength, mood, and cognition.

Pediatric MS (POMS) is characterized by a relapsing and remitting symptom course.

Visible physical symptoms like trouble with balance, coordination, tone, and tremors may require planning for accessibility and safety of the school environment.

Children with POMS are more likely to experience neurocognitive symptoms early in the disease progression, compared to sensory and motor symptoms. Cognitive impairment can progress more rapidly in children and includes difficulty with concentration, attention, and memory.

Changes in vision are among the most common manifestations of MS. Reading and writing can also be impacted.

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## Kennedy Krieger Institute's Specialized Health Needs Interagency Collaboration

The Specialized Health Needs Interagency Collaboration (SHNIC) program is a collaborative partnership between Kennedy Krieger Institute and the Maryland State Department of Education.



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## Considerations for the Individualized Healthcare Plan (IHP)

- Nursing diagnosis of impaired physical mobility, fatigue, risk for disturbed sensory perception and impaired urinary elimination
- Current diagnosed health condition including date of diagnosis, progress of disease process and other chronic health conditions
- Current medication and treatment orders (consider schedule, equipment needs and side effects)
- Nutrition interventions and equipment needs (consider brand/size of feeding tube, tube replacement, water flushes, fluid intake goal and supplements); note school district policy on tube replacement and consider keeping backup feeding tube kit at school if applicable
- Temperature regulation considerations in school setting and transportation
- Use of specialized equipment, adaptive equipment, and orthotics
- Activity, positioning, transferring (consider precautions and/or restrictions)
- Skin check, pressure relief techniques
- Consider emergency care plan(s) (ECP) and emergency evacuation plan(s) (EEP) as related to medical needs in the school setting, and staff education/training, as appropriate

## Discussion Starters for Educational Team

1. Has the school staff been trained to implement the student-specific emergency plan?
2. Would the student benefit from evaluations or assessments in any of the following areas: physical therapy, occupational therapy, speech and language therapy, assistive technology, adapted physical education, functional behavior, psychology, hearing and vision?
3. Would the student benefit from additional academic support and/or modified education (e.g., copies of notes, extra time, reduced workload, simplified instructions, alternative formats for presentation of material, 504/IEP)?
4. Would schedule flexibility support the student?
5. Does the classroom environment support the student's needs and/or equipment (e.g., desk/seating options, maneuverability space, electrical outlets, flash pass for bathroom or nurse)?
6. Is the physical school environment safely accessible for the student's mobility needs (e.g., entry and exit, ramps, location of classes, access to elevator, doorways)?

## Resources

National MS Society  
[nationalmssociety.org/](http://nationalmssociety.org/)

Students with MS in the Academic Setting: A Handbook for School Personnel  
[nationalmssociety.org/NationalMSSociety/media/MSNationalFiles/Brochures/Brochure-Students-with-MS-and-the-Academic-Setting-A-Handbook-for-School-Personnel.pdf](http://nationalmssociety.org/NationalMSSociety/media/MSNationalFiles/Brochures/Brochure-Students-with-MS-and-the-Academic-Setting-A-Handbook-for-School-Personnel.pdf)



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