

# MULTIPLE SCLEROSIS

## What is it?

Multiple Sclerosis (MS) is an auto-immune disorder affecting the central nervous system; including the brain, spinal cord, and optic nerves that together create the body's messenger system. Each nerve is insulated in a fatty myelin coating, but with MS the myelin coating is attacked. Once attacked, scar tissue is left behind creating lesions that disrupt the normal flow of the nerve conduction. There seems to be no one single cause, but there are several risk factors that make MS more likely to occur. It is thought that, in people who have an underlying genetic tendency, which is triggered by other risk factors, such as a viral infection, smoking, or a lack of vitamin D.

MS predominately affects adults, more females than males, and occurs in most ethnic groups, but is more common in Caucasians of Northern European decent. Pediatric Onset Multiple Sclerosis (POMS) occurs in 3-5% of the diagnosed cases of MS before the age of 16. Diagnosis in children can be difficult as symptoms are similar to many other pediatric diseases and the MS diagnostic criteria is limited.

According to the National MS Society, almost all children are diagnosed with Relapsing- Remitting MS (RRMS). RRMS is defined by temporary periods of inflammatory attacks where new symptoms appear but there is partial or total recovery. It is thought that a child's developing brain protects it from a rapidly progressing form. MS is an unpredictable disease where symptoms present without warning, changing from week to week. Children experience seizures, and changes in their mental status.

## What are the symptoms?

Everyone experiences different symptoms depending on which parts of the brain or spinal cord have been affected. They may begin suddenly although this is not always the case. Common symptoms in children include numbness and tingling in various parts of the body, weakness, dizziness, fatigue, and visual disturbances. MS usually follows a course pattern. Symptoms are stable then followed by a period of worsening or new symptoms. This period is called "attacks" or "flare-ups". Attacks are more likely to occur after infection or emotional stress but not physical trauma. Symptoms can be categorized as causing changes in sensation or changes in muscle function.

- Blurred vision
- Numbness, tingling or other unusual sensations usually in the arms or legs that don't go away
- Difficulties with cognitive functions which may include needing more time to work something out or difficulty thinking of the right word
- Anxiety and depression can be MS symptoms or be a consequence of dealing with MS
- Fatigue which is a feeling of exhaustion, either physically or mentally, that is out of proportion to the activities recently undertaken
- Problems with moving which affect just one side of the body, perhaps a hand, arm or leg
- Difficulties with balance or coordination
- Weak leg muscles, tremors or spasms

## What is the treatment?

There is no cure for MS so treatment options focus on controlling and slowing the progression of the disease and managing symptoms. Steroids, plasma exchanges, and medications that slow the disease progression of the disease are often prescribed. Treatment medications may also help with fatigue, tremors, pain, itching, bowel and bladder dysfunction, vertigo, spasticity and emotional changes. Physical, Occupational and Speech therapy are also part of the treatment plan for children with MS.



Kennedy Krieger Institute

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

## Suggested school accommodations

MS is unpredictable and understanding the flare up of symptoms affecting cognition, muscle strength, neurological status, and mood is important. Supporting students with this condition in the school require educators and parents/guardian to work as a team. Some accommodations to consider for a 504/IEP could include:

- PT/OT/SLP evaluations
- Audiology/impaired vision consultations
- Modified or flexible school day
- Plan for absences and make-up work
- Adapted PE
- Consider temperature control setting in all environments (including transportation)
- Adaptive technology
- Bathroom pass
- Modified or limited homework
- Access to counselor
- Physical accommodations such as close classroom locations, elevator key
- Copies of notes
- Breaks
- Monitor for anxiety, frustration and bullying
- Staff education/training as appropriate
- Emergency Evacuation Plan (EEP)

## Specific health issues for Individualized Healthcare Plan

- Diagnosis including age and child specific characteristics
- Current medication list including PRN medications for pain, dizziness
- Nutrition orders
- Location and times for rest breaks
- Temperature control orders for classroom, transportation, field trips, etc.
- Safety restrictions for use of stairs, alone in hallways, etc.
- Communicate with school staff, parents/guardian, and provider any changes or concerns about the disease
- Emergency Care Plan(s) (ECP) related to medical needs in the school setting and staff education/training as appropriate for each

## Resources & Manuals

### National MS Society

<https://www.nationalmssociety.org/>

### Managing School Related Issues– A Guide for Parents with a Child or Teen Living with MS

[http://www.nationalmssociety.org/NationalMSSociety/media/MSNationalFiles/Brochures/Brochure-Managing-School-Related-Issues\\_-A-Guide-for-Parents-with-a-Child-or-Teen-Living-with-MS.pdf](http://www.nationalmssociety.org/NationalMSSociety/media/MSNationalFiles/Brochures/Brochure-Managing-School-Related-Issues_-A-Guide-for-Parents-with-a-Child-or-Teen-Living-with-MS.pdf)