



## What is it?

Multiple Sclerosis is a chronic, auto-immune disorder of the central nervous system. The CNS includes the brain, spinal cord and optic nerves that together create our body's messenger system. Each nerve is insulated in a fatty myelin coating. In MS, this myelin coating is attacked. Once attacked, scar tissue is left behind creating lesions that disrupt the normal flow of nerve conduction. The cause is still unknown, but researchers believe there is a genetic connection triggered by infection or bacteria.

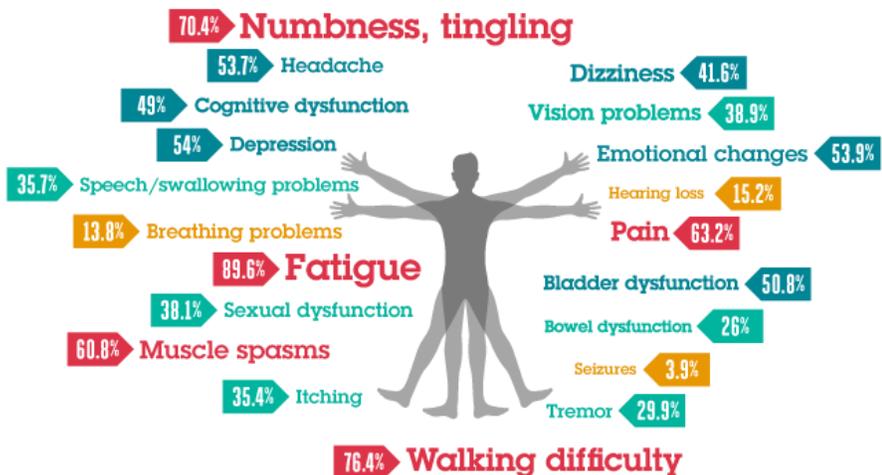
While the disease predominately affects adults, studies show that 2-5% of those affected experienced symptoms before the age of 18. Females are 3 times more likely to be diagnosed as adults than males; in young girls, this diagnosis is even higher. Diagnosis in children can be difficult as symptoms are 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. Regardless, MS is an unpredictable disease where symptoms present without warning, changing from week to week. Symptoms not seen in adults, experienced only by children can include seizure and changes in mental status.

## What are common effects?

MS is an "invisible disease" because symptoms are not always obvious. While no two people experience the same set of symptoms, the most common symptoms can include numbness and tingling in various parts of the body, weakness, dizziness, fatigue, and vision disturbances. MS usually follows a course pattern where symptoms are stable then are 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 trauma. Symptoms can be categorized as causing changes in sensation or changes in muscle function.

- Speech difficulties
- Urinary frequency and urgency
- Constipation
- Thinking and memory problems
- Heat intolerance
- Numbness / Tingling
- Dizziness
- Pins & needles sensation
- Weakness and fatigue
- Difficulty walking
- Imbalance / poor coordination
- Tremors
- Stiffness
- Vision problems



## **What are treatment options?**

There is no cure for MS so treatment options focus on controlling and slowing the progression of the disease and managing symptoms. Medications used to treat adults have also been used in children, although more research is necessary. Many medications aid the body in fighting viral infections and regulating the immune system. Steroids also aid recovery after relapse. Treatment medications may also help with fatigue, tremors, pain, itching, bowel and bladder dysfunction, vertigo, spasticity and emotional changes.

### **Suggested school accommodations**

- PT/OT/Speech services
- Preferential classroom seating (to see board easier, exit class without disturbances)
- Unlimited bathroom pass
- Modified or limited homework
- Multiple sensory learning supports
- Portable air conditioner or fan
- Slant board to prop up books
- Close classroom locations
- Note taker or computer
- Educational aid
- Monitor for memory loss
- Breaks, shortened school day
- Allow to participate in activities and gym per student's symptoms
- Plan classes around fatigue
- Monitor for anxiety, frustration, bullying

### **SHNIC school nurses information:**

#### **Specific health issues for individual health care plans**

- Diagnosis including age and child specific characteristics
- Current medication list including PRN medications for pain, dizziness, itching
- Seizure action plan
- Nutrition orders
- Assigned aid or supervision 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.
- Evacuation plan
- Educate school personnel about nature of disease

## Resources & Manuals

### **National Multiple Sclerosis Society**

<http://www.nationalmssociety.org>

### **Managing school related issues**

[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)