

What is it?

Transverse Myelitis is a neurological disorder caused by inflammation of the spinal cord. A child will experience weakness, pain, sensory and autonomic dysfunction. Autonomic, involuntary activities such as breathing, digestion, heartbeat and reflexes can be affected. Symptoms can appear suddenly within hours or progress over a span of several weeks. Approximately 25% of cases are children. A peak in incidence occurs between ages of 10 and 19 and females are at higher risk than men. During an inflammatory response the myelin, or protective fatty coating on nerve cells, is damaged or destroyed. TM can also be the first symptom to diagnose Multiple Sclerosis.



What causes it?

Researchers believe it is the body's immune response, not the infection itself, that causes the inflammatory response. This indicates an auto-immune reaction, where the body attacks its own tissue rather than the infection, is responsible. Research has made connections to the damage of spinal nerves following a viral or bacterial infection, especially those associated with a rash.

According to the *National Institute of Neurologic Disorders and Stroke*, infectious agents suspected of causing TM include Varicella zoster (the virus that causes chickenpox and shingles), Herpes simplex, Cytomegalovirus, Epstein-Barr, Influenza, Echovirus, Human immunodeficiency virus (HIV), Hepatitis A, and Rubella. In some cases, bacterial infections like a middle ear infection and bacterial pneumonia have also been linked.

What are the symptoms?

Symptoms can start slowly and progressively worsen over hours or days. Damage depends on the affected area of the spinal cord. Most cases involve damage at the thoracic level affecting bowel, bladder and legs. Back pain, muscle weakness and tingling sensations can progress to urinary retention, loss of bowel control and even paralysis.

- Pain as primary presenting symptoms
- Sharp, shooting sensation down the leg
- Numbness, tingling
- Difficulty voiding
- Constipation
- Coldness or burning
- Sensitivity to touch
- Temperature sensitivity
- Muscle spasms
- Headache
- Fever
- Loss of appetite

What is the treatment?

There is no current cure for TM. Treatments aim to alleviate symptoms and reduce spinal cord inflammation. Anti-inflammatory cortico-steroid therapy and physical therapy is often prescribed. Recovery usually begins in 2-12 weeks from the first onset of symptoms but may take up to 2 years. About 1/3 of cases experience a full recovery while another 1/3 experience deficits with walking, sensory dysfunction and bowel and bladder control. The remaining 1/3 do not recover and their activities of daily living are extremely limited.

Suggested school accommodations

- PT/OT/Speech services
- Preferential classroom seating (to see board easier, exit class without disturbances)
- Elevator access if needed
- Unlimited bathroom pass
- Modified or limited homework
- Temperature regulations
- Slant board to prop up books
- Close classroom locations
- Note taker or computer
- Educational aid
- Breaks, shortened school day
- Allow to participate in activities and gym per student's symptoms
- Plan classes around fatigue
- Allowing for snacks in class

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
- Orders for catheterization including times and supplies needed
- Orders for temperature regulations if applicable
- Baseline skin assessment
- Ordered orthotics or braces
- Assistance needed with personnel care, transfers, eating, etc. including assigned aid or supervision orders
- Nutrition orders and/or supplements required
- Plan for monitoring fatigue and/or rest break or area
- Safety restrictions for use of stairs, alone in hallways, etc.
- Evacuation plan
- Educate school personnel about nature of disease

Resources & Manuals

Transverse Myelitis Association
<http://myelitis.org>

National Institute of Neurological Disorders and Stroke
<http://www.ninds.nih.gov/disorders/transversemyelitis/transversemyelitis.htm>

Acute Transverse Myelitis– Boston Children's Hospital
<http://www.childrenshospital.org/conditions-and-treatments/conditions/acute-transverse-myelitis/overview>