

Acute Flaccid Myelitis

Background

Acute flaccid myelitis (AFM) is a rare but serious neurological condition affecting the body's nervous system; specifically, a part of the spinal cord controlling the body's muscles and reflexes. AFM causes sudden weakness in the arms or legs, sudden loss of reflexes, and sudden loss of muscle tone.

Most children have a mild respiratory illness or fever caused by a viral infection about one to four weeks before developing symptoms of AFM. The trunk, neck, respiratory, bulbar, facial, and extraocular muscles can all be affected. Signs and symptoms of AFM include:

- Sudden onset of arm or leg weakness
- Loss of muscle tone and reflexes
- Paralysis
- Facial drooping
- Difficulty moving the eyes
- Drooping eyelids
- Difficulty swallowing or slurred speech
- Pain in extremities or neck

Diagnosis is often unclear with initial presentation. AFM can resemble Guillain-Barre syndrome, acute transverse myelitis, conversion disorder, stroke, tumor, cord compression or limb injury. Children are often misdiagnosed before returning to the emergency department with more emergent and rapidly progressing symptoms. The most severe symptom is weakness of the respiratory muscles causing respiratory failure.

Since tracking of AFM began following cluster outbreaks in 2014, other AFM outbreaks in the United States have occurred between late summer to fall months (August-November) in even years (2016, 2018).

Currently there is no specific intervention for the treatment or management of AFM. Muscle weakness caused by AFM can continue for months to years. The outcome is variable and follow-up cases range from restoration of full function to complete dependence. Early and intense rehabilitation can improve functional status and quality of life after AFM. Additionally, surgical approaches including tendon or nerve transfer surgery have been successful in individual cases to manage residual impairments.



There is no specific way to prevent AFM but preventing viral infection can help reduce the risk. Performing frequent hand-hygiene, avoiding close contact with people who are sick, and disinfecting frequently touched surfaces will help protect individuals.

School nurses should be vigilant for possible cases by identifying AFM symptoms and gathering a recent health history. Signs of limb injury or weakness in a young child, especially under age five who recently experienced a cold, should be evaluated to rule out diagnosis.

Top Takeaways for School

AFM is a type of acute flaccid paralysis. It is often described as a disabling “polio-like” illness although AFM cases are not caused by poliovirus.

The outcome for AFM is variable and recovery is often incomplete. The student may continue to experience a range of long term neurological, musculoskeletal, respiratory and psychological conditions.

Understanding the student's present level when returning to school will be important. Children diagnosed with AFM could have been previously healthy and may not have a significant medical or educational history.

The student's re-entry planning should consider school staff education and training to meet their unique needs (e.g., medical equipment, mobility, emergency planning).

Considerations for the Individualized Healthcare Plan (IHP)

- Nursing diagnoses: Risk for disturbed sensory perception, impaired physical mobility, ineffective airway clearance, impaired urinary elimination and readiness for enhanced self-care
- Respiratory interventions and equipment (consider tracheostomy brand/size and downsize, suctioning brand/size, frequency of suctioning, ventilator brand, and settings); note location of suctioning, use of private duty nursing if applicable
- Nutrition interventions and equipment (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
- Elimination interventions and equipment (consider catheterization brand/system, French size, frequency, and cleaning techniques; location of procedure; level of assistance)
- Assessment of implanted medical device (consider location, date of surgical placement, and device-specific information)
- 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
- Equipment troubleshooting (consider equipment/device user manual, battery, charger)
- Consider emergency action plans (EAPs) and emergency evacuation plans (EEPs) related to special health care needs, including staff education/training

Discussion Starters for the Educational Team

1. 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?
2. 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)?
3. Does the student need additional adult support to access the academic curriculum in the least restrictive environment?
4. Would schedule flexibility support the student?
5. 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)?
6. 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)?
7. Will staff receive education/training to implement the student-specific emergency plan?

Resources

Kennedy Krieger Institute: International Center for Spinal Cord Injury
[kennedykrieger.org/patient-care/centers-and-programs/international-center-for-spinal-cord-injury](https://www.kennedykrieger.org/patient-care/centers-and-programs/international-center-for-spinal-cord-injury)

Siegel Rare Autoimmune Association
[wearesrna.org](https://www.wearesrna.org)



For more information, please scan the QR code or visit: [KennedyKrieger.org/SHNIC](https://www.KennedyKrieger.org/SHNIC)

