



# Acute Flaccid Myelitis

Enteroviruses belong to a common family of illnesses that include cold symptoms and rashes as well as polio. Starting in 2014, there has been a sharp increase in the number of enterovirus D68 cases and with it, an increasing number of clusters of children sick with breathing problems leading to paralysis associated with the malady known as acute flaccid myelitis (AFM).

According to the CDC, the median age of the children impacted by acute flaccid myelitis is about seven, and most patients had a fever and or respiratory illness before the neurological symptoms began. The paralysis that sometimes develops is different from transverse myelitis because TM usually affects upper motor neurons, resulting in muscle tightness rather than the flaccidity that results from damage to lower motor neurons.

The symptoms begin as a cold and develop into a respiratory infection. It can then develop into a flaccid muscle paralysis with polio-like symptoms. Researchers and doctors have not yet been able to make a definite connection between this enterovirus and the polio-like symptoms that sometimes follow the respiratory infection. While two thirds of the patients with acute flaccid myelitis have had some improvement in symptoms, one third has not yet improved; one patient has fully recovered.

Acute flaccid myelitis (AFM) had affected 90 patients in the United States in 2018 (as of mid-November) and another 252 cases are being investigated, according to new data from the Centers for Disease Control and Prevention. The number of confirmed cases is triple that seen in 2017. Nearly all of the patients (90%) were children aged 2-8 years, and 99% experienced a fever and /or respiratory illness 7-10 days before the onset of symptoms. But although the early symptoms and seasonality of AFM suggest an infective process, only 54% of the patients tested positive for the virus, Nancy Messonnier, MD, said during a briefing held by CDC officials. The most common findings were the enteroviruses EV-A71 (29%) and EV-D68 (37%); other viruses were recovered in the remaining pathogen-positive cases.

Source: CDC Transcript of Media Briefing 11/13/18 <https://www.cdc.gov/media/>

## Websites

### **Acute Flaccid Myelitis Association**

[www.afmanow.org](http://www.afmanow.org)

AFMA is a non-profit organization created by parents of children with AFM. It offers information, support and advocacy. A list of rehab facilities that have treated AFM patients is available. Grants up to \$1,000 are awarded on a monthly basis. Grants can be used for equipment, medical costs, respite care and any other associated costs with an Acute Flaccid Myelitis diagnosis.

### **Centers for Disease Control and Prevention: Acute Flaccid Myelitis**

<https://www.cdc.gov/acute-flaccid-myelitis/index.html>

### **Centers for Disease Control and Prevention: Acute Flaccid Myelitis for Parents of Children with AFM**

<https://www.cdc.gov/acute-flaccid-myelitis/parents/index.html>

### **Transverse Myelitis Association: Acute Flaccid Myelitis**

<https://myelitis.org/living-with-myelitis/disease-information/#afm>

### **Transverse Myelitis Association: Acute Flaccid Myelitis Information Sheet**

[https://archive.myelitis.org/resources/Information\\_Sheets/About\\_AFM.pdf](https://archive.myelitis.org/resources/Information_Sheets/About_AFM.pdf)

### **American Academy of Pediatrics News: CDC releases guidance on acute flaccid myelitis**

[https://archive.myelitis.org/wp/wp-content/uploads/2014/11/aapnews.20141112-1.full .pdf](https://archive.myelitis.org/wp/wp-content/uploads/2014/11/aapnews.20141112-1.full.pdf)

11/12/14

### **Medicinenet.com: Acute Flaccid Myelitis**

[https://www.medicinenet.com/acute\\_flaccid\\_myelitis\\_afm/article.htm?ecd=mnl\\_spc\\_102218](https://www.medicinenet.com/acute_flaccid_myelitis_afm/article.htm?ecd=mnl_spc_102218)

## Articles

### **CNN Health: CDC warns parents to be on the lookout for acute flaccid myelitis in children.**

<https://www.cnn.com/2020/08/04/health/acute-flaccid-myelitis-afm-cdc-warning-wellness/index.html>

### **Dennis, Brady. “Mystery Paralysis in Children is Perplexing Parents—and Researchers.” Washington Post. 2 Mar. 2015.**

[http://www.washingtonpost.com/national/health-science/mystery-paralysis-in-children-is-perplexing-parents--and-researchers/2015/03/02/20e1113a-b69d-11e4-aa05-1ce812b3fdd2\\_story.html](http://www.washingtonpost.com/national/health-science/mystery-paralysis-in-children-is-perplexing-parents--and-researchers/2015/03/02/20e1113a-b69d-11e4-aa05-1ce812b3fdd2_story.html)

### **Medscape and Centers for Disease Control and Prevention: Acute Flaccid Myelitis in US Children**

<http://www.medscape.com/viewarticle/837730>

**Greninger, Alexander, et.al. “A Novel Outbreak Enterovirus D68 Strain Associated with Acute Flaccid Myelitis Cases in the USA (2012–14): A Retrospective Cohort Study.” The Lancet. 30 Mar. 2015.**

<http://www.thelancet.com/journals/laninf/article/PIIS1473-3099%2815%2970093-9/abstract>

**Hurley, Dan. “Cases of Acute Flaccid Myelitis in Children Suspected in Multiple States, Prompting Comparisons to Polio.” Neurology Today. 21 Oct. 2014.**

<http://journals.lww.com/neurotodayonline/blog/breakingnews/pages/post.aspx?PostID=392>

First seen in California, and then in Colorado, cases of acute flaccid myelitis marked by strikingly consistent MRI evidence of gray matter damage in the spinal cord are now believed to be affecting children in multiple states across the United States, according to neurologists tracking the outbreak. The reports have provoked grave concern among some specialists that the syndrome could affect even more patients next year.

**The American Academy of Pediatrics. “CDC releases guidance on acute flaccid myelitis.” AAP News. 12 Nov. 2014.**

<http://aapnews.aappublications.org/content/early/2014/11/12/aapnews.20141112-1>

New interim guidance from the Centers for Disease Control and Prevention (CDC) suggest that no targeted therapies or interventions have “definitive efficacy” in the treatment or management of acute flaccid myelitis. The CDC has fielded numerous requests on how to manage and treat children with this illness. Because there is no clear evidence that therapies intended to modify the immune system (e.g., corticosteroids, immune globulin, plasmapheresis), clinicians are instead advised to use basic standards of care for children with severe neurologic disease, along with physical and occupational therapy.

**Mysterious, Polio-Like Illness in Children Caused By Widespread Virus, Researchers Say**

<https://www.studyfinds.org/virus-caused-polio-like-illness-children/>

**Washington Post 9/21/16: A Mysterious Polio-Like Illness That Paralyzes People May be Surging this Year**

<https://www.washingtonpost.com/news/to-your-health/wp/2016/09/21/a-mysterious-polio-like-illness-that-paralyzes-people-may-be-surging-this-year/>

**National Institutes of Health: NIH awards contract for AFM natural history study**

<https://www.nih.gov/news-events/news-releases/nih-awards-contract-acute-flaccid-myelitis-natural-history-study>

**New York Times 10/10/18: Acute Flaccid Myelitis Cases in Children Are Investigated in at Least 5 States**

<https://www.nytimes.com/2018/10/10/health/myelitis-illness-acute-flaccid.html>

**MDEdge Pediatric News: More Acute Flaccid Myelitis cases confirmed by CDC 11/13/18**

[https://www.mdedge.com/pediatricnews/article/184430/infectious-diseases/more-acute-flaccid-myelitis-cases-confirmed-cdc?utm\\_source=Breaking%20News%20Division\\_CR\\_eNL\\_111318\\_F&utm\\_medium=email&utm\\_content=Breaking:%20More%20acute%20flaccid%20myelitis%20cases%20confirmed%20by%20CDC](https://www.mdedge.com/pediatricnews/article/184430/infectious-diseases/more-acute-flaccid-myelitis-cases-confirmed-cdc?utm_source=Breaking%20News%20Division_CR_eNL_111318_F&utm_medium=email&utm_content=Breaking:%20More%20acute%20flaccid%20myelitis%20cases%20confirmed%20by%20CDC)

### **Webinars/Podcasts**

**Siegel Rare Neuroimmune Association (formerly Transverse Myelitis Association). “Acute Flaccid Myelitis: Understanding the Recent Outbreak – Q&A with Dr. Benjamin Greenberg and Dr. Teri Schreiner.” [Undated]**

<https://myelitis.org/acute-flaccid-myelitis-understanding-recent-outbreak/>

With the recent increase in reports of children being hospitalized due to a respiratory virus, enterovirus D68, there have been many reported cases of acute myelitis from across many states in the U.S. Dr. Benjamin Greenberg (University of Texas Southwestern and Dr. Teri Schreiner (Children’s Hospital, Colorado) share their experiences.

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