

CDC seeks cause of acute flaccid myelitis as cases spike

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Federal health officials have confirmed 62 cases of acute flaccid myelitis (AFM) in 22 states this year, most of which have been in children.

The Centers for Disease Control and Prevention (CDC) is investigating an additional 65 cases of the rare but serious disease that is characterized by sudden muscle weakness. A common thread linking the cases has not been found.

“We’re certainly escalating our response this year to make sure we’re basically considering everything possible and doing everything we can,” said Nancy Messonnier, M.D., director of the CDC’s National Center for Immunization and Respiratory Diseases.

AFM is **defined** as

- acute onset of flaccid limb weakness **and**
- MRI showing spinal cord lesion largely restricted to gray matter spanning one or more vertebral segments (confirmed case) or cerebrospinal fluid with pleocytosis (probable case).

Among the 62 confirmed cases, 90% are under age 18, and the average age is 4 years. Officials expect the case count to continue to grow since reporting and verification take time to complete. The spike is similar to those in 2016 and 2014, years that saw 149 and 120 cases, respectively.

Still, chances of getting AFM are less than one in a million, according to Dr. Messonnier. She recommends people protect themselves from illness by washing their hands, staying up to date on vaccines and wearing insect repellent. Anyone who experiences sudden weakness or loss of muscle tone should seek immediate medical attention.

Pediatricians and hospitalists should be vigilant and consider AFM if they see a patient with those symptoms. Patients also may present with a droopy face or difficulty swallowing or speaking.

“It’s important, particularly in this season where we’re seeing more cases, that this is thought of as a possibility so that a proper diagnostic workup can happen,” said Kevin Messacar, M.D., FAAP, a pediatric infectious disease physician and researcher at Children’s Hospital Colorado and the University of Colorado.

That workup should include MRI, spinal tap and **collection of respiratory, stool and spinal fluid samples** for testing. Providers should report suspected cases to their state or local health department so the CDC can track them.

The CDC is continuing to investigate the causes of AFM. In 2014, the uptick in cases occurred during an outbreak of enterovirus D68 (EV-D68), but not all patients had the virus. Other viruses, environmental toxins and genetic disorders also potentially can cause AFM.

This year, enteroviruses and rhinoviruses have been among the causes identified in patients, while none have tested positive for poliovirus or West Nile virus. Although causes have been identified for some individual cases, there hasn't been a common thread that would explain the spike this year.

"There is a lot we don't know about AFM, and I'm frustrated that despite all of our efforts we haven't been able to identify the cause of this mystery illness," Dr. Messonnier said. "We continue to investigate to better understand the clinical picture of AFM cases, risk factors and possible cause of this increase in cases."

In Colorado, 11 of 15 AFM cases have been linked to enterovirus A71 (EV-A71), according to the state health department. Colorado also experienced cases tied to EV-D68 in 2014.

"I think amongst the long list of things that can cause this, the non-polio enteroviruses seem to be the driving predominant factor in what we've seen over the last (four) years," Dr. Messacar said.

Since 2014, there have been advances in understanding AFM, including animal models showing D68 can cause spinal cord infection leading to paralysis and studies looking at long-term outcomes. Those with AFM linked to EV-A71 this year are recovering more quickly than those whose disease was tied to EV-D68 in 2014, Dr. Messacar said. Some of the earlier patients have experienced ongoing disability.

He hopes to see work continue on prevention and treatment. EV-D68 vaccine studies are in early stages, and there is no consistently effective treatment for AFM.

"Rather than panic," Dr. Messacar said, "I think this should drive us to action to say this has happened every other year (in recent years) . What can we be doing to prepare if this comes back?"

Resources

- [CDC website on acute flaccid myelitis \(AFM\) for health care providers](#)
- [AAP AFM website](#)
- [Information for parents on AFM from HealthyChildren.org](#)