

# A guide to Acute flaccid myelitis (AFM), the rare, polio-like illness making young children sick

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A fast-acting, polio-like illness has sickened 62 young children, with an average age of 4, in 22 U.S. states so far this fall.

Acute flaccid myelitis, or AFM, starts out as a respiratory condition and may quickly progress to physical disability within hours. Some patients experience long-term paralysis requiring ongoing care, but others may fully recover, according to Carlos Pardo-Villamizar, a neurological disease expert at the Johns Hopkins University School of Medicine who recently authored a paper on AFM published last month in *Developmental Medicine and Child Neurology*.

The cause of AFM is unclear, leaving parents wondering how to protect their children. Pardo-Villamizar and other experts from Johns Hopkins have been sharing what they know about the outbreak and prevention with news outlets recently.

The chief takeaways? Wash your hands, cover your sneezes and coughs, and contact a doctor if your child experiences [muscle weakness](#) in the arms or legs.

## **What is AFM and what are its symptoms?**

Acute flaccid myelitis is a rare condition that attacks the nervous system—specifically the area of the spinal cord called gray matter—causing muscles and reflexes to weaken, according to the Centers for Disease Control.

Patients may suddenly experience weakness in their arms and legs, drooping of the face and eyelids, and slurred speech, along with difficulty breathing, moving their eyes, or swallowing. "In very rare cases, it is possible that the process in the body that triggers AFM may also trigger other serious neurologic complications that could lead to death," according to the CDC website.

## **What causes AFM?**

AFM could be caused by one or more viruses, Pardo-Villamizar told HealthDay, with Enterovirus D68—a virus from the same family as polio—as the chief suspect. That virus was closely linked to the 2014 outbreak, he says.

The damage caused by AFM could also be caused by the immune system, Pardo-Villamizar says in an interview with Kaiser Health News. "At this moment, we don't know if it's a virus that is coming and producing direct damage of the gray matter in the spinal cord, or if a virus is triggering immunological responses that produce a secondary damage in the [spinal cord](#)."

## **Does AFM have a season, like the flu?**

AFM outbreaks coincide with cold and flu season, so it can easily go undetected at first, says Aaron Michael Milstone, an associate epidemiologist and an associate professor of pediatrics at Hopkins.

"Just about every parent who has a young child, sometime in October or the winter, their child will have some cold or low-grade fever or something," Milstone told HuffPost.

"They're presenting with weakness in some part of their body. It could be an arm, it could be a leg, it could be more." he says of the patients' symptoms. "Sometimes it stops there, sometimes it progresses. And as you would expect, it's very scary for parents."

## **Is AFM a new disease?**

No, though the number of confirmed cases has generally been on the rise

2014. From August 2014 through September 2018, the CDC confirmed a total of 386 cases of AFM across the U.S.—120 cases in 34 states in 2014, 22 cases in 17 states in 2015, 149 cases in 39 states in 2016, and 36 cases in 16 states in 2017.

"AFM has been occurring in waves about every two years," according to infectious disease expert Amesh A. Adalja, senior scholar at the Johns Hopkins Center for Health Security, in an interview with SELF. "It always ends up being a new news story. But this isn't something people have been ignoring. It's something they've been actively investigating since 2014."

More than half of all U.S. states have had confirmed or possible cases this year. The states reporting confirmed cases are Arizona, Colorado, Georgia, Indiana, Iowa, Massachusetts, Minnesota, New Jersey, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas, and Wisconsin.

States reporting suspected cases or cases under investigation are Alabama, Arkansas, California, Florida, Illinois, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Montana, Nebraska, Nevada, New York, North Carolina, Oklahoma, and Washington.

## **How concerned are health experts?**

As alarming as the news is, AFM is still unusual. The CDC estimates that less than one out of every 1 million people in the United States will get AFM each year. Pardo-Villamizar told HealthDay that most children who contract an enterovirus only suffer an upper-respiratory infection.

Priya Duggal, a genetic epidemiologist at the Johns Hopkins Bloomberg School of Public Health who is studying whether some patients may have a genetic vulnerability to the virus, told Science that AFM is "pretty

rare, but it's pretty devastating. And it appears that it's cyclical. It's not going away."

## What can parents do to protect their children?

There is no vaccine to prevent AFM. Experts suggest employing the same good hygiene habits used to fight off colds and flu: frequent hand-washing and covering coughs and sneezes. Parents should also watch their sick children for any signs of weakness in the arms or legs, Pardo-Villamizar told HealthDay.

"If children develop an upper-respiratory infection and there is any hint of muscle weakness, those patients need to be evaluated rapidly by a pediatrician and an emergency department," he says. "They need to be followed very carefully, because this is a very aggressive disease. In a matter of hours, the children are paralyzed. They may need respiratory support."

**More information:** Eliza Gordon-Lipkin et al. Comparative quantitative clinical, neuroimaging, and functional profiles in children with acute flaccid myelitis at acute and convalescent stages of disease, *Developmental Medicine & Child Neurology* (2018). [DOI: 10.1111/dmcn.14030](https://doi.org/10.1111/dmcn.14030)

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