

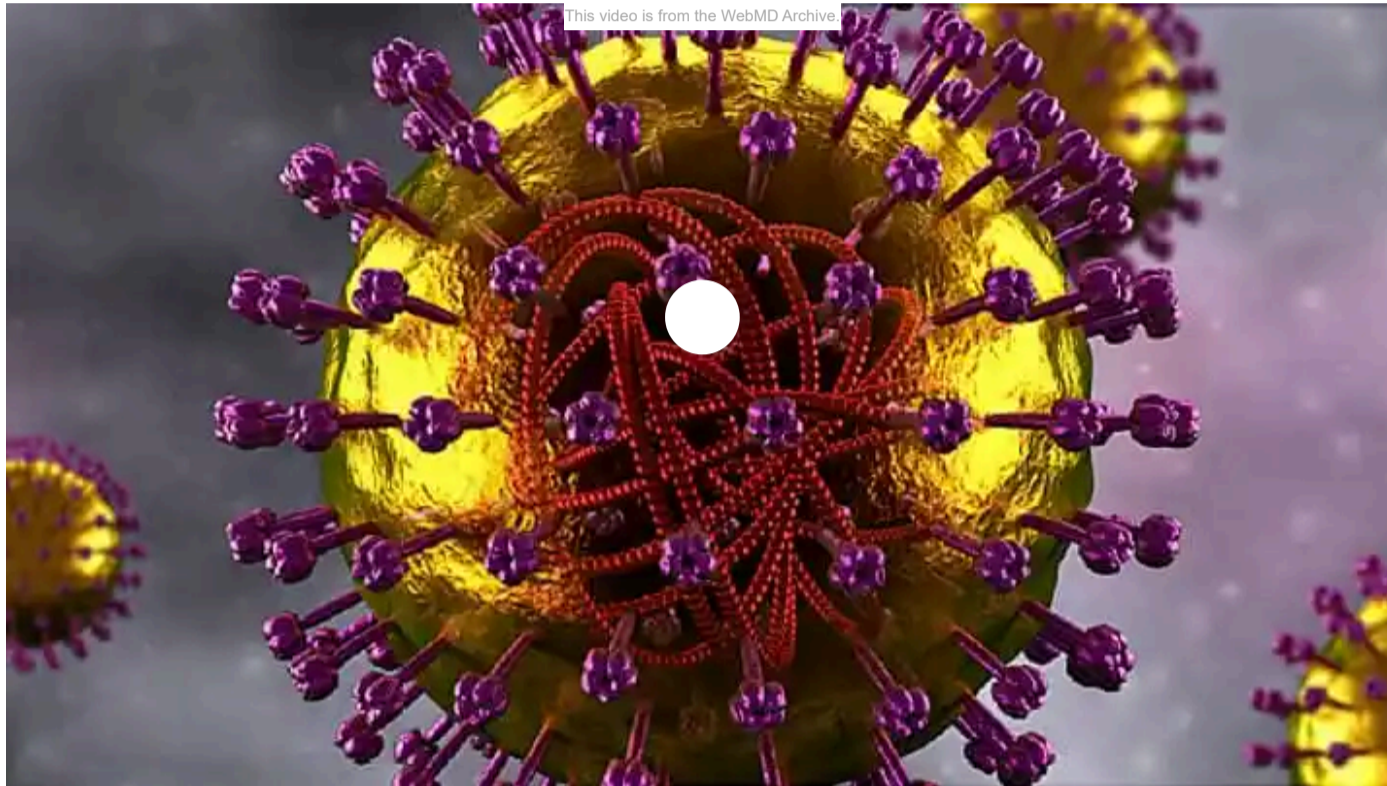
## The Other Vaccine-Preventable Diseases Worrying Doctors Now

Written by [Kathleen Doheny](#)

6 min read

March 12, 2025 – Health officials are worried that measles cases in at least 12 states may be a harbinger of outbreaks of other preventable diseases, including polio, rubella, and mumps.

Measles cases reached [222](#) as of March 6, including one confirmed death and another under investigation. The outbreak has put doctors on alert for other diseases that have been long under control by vaccination.



### Measles: Quick Facts About the Vaccine and How It Spreads

Measles is a contagious virus that mainly affects babies and young children. Learn about how it spreads, dangerous complications, and the vaccine.

“It really is a harbinger,” said Adam Ratner, MD, MPH, director of pediatric infectious diseases at NYU Langone and Hassenfeld Children’s Hospital, New York. “When we start to see a decrease in vaccination rates, measles outbreaks are the first thing you see, and often what follows are the other vaccine-preventable diseases.”

Here’s what else to know about the current outbreak, what might be looming, and how to stay as proactive and healthy as possible.

### Measles Outbreak Indicates Slipping Vaccination Rates

Measles is considered the most contagious childhood disease, so the rapid spread isn’t surprising. The 222 cases in about two months is approaching the 285 total for the entire year in 2024, according to the CDC. Texas now counts [223](#) cases, up from 159 a week ago.

Vaccination rates must be very high to prevent its spread. “The threshold for achieving what people call herd immunity – I prefer the term community immunity – is 95%,” said George Rust, MD, MPH, a professor of medicine and co-director of the Center for Medicine and Public Health at the Florida State University College of Medicine in Tallahassee.

In comparison, about 80% of the population needs to be immunized against polio for community immunity, he said.

The nationwide vaccination rate for measles for the 2022-2023 school year was [93.1%](#), according to the CDC, and the vaccine exemption rate was up, reaching a worrisome threshold of 5% in 10 states.

In the Texas outbreak, 80 of the affected children were not vaccinated, the status of 74 is being investigated, and five were vaccinated with at least one dose, according to [Texas Health and Human Services](#).

“We have pockets of under-vaccinated and sometimes substantially under-vaccinated people,” said William Schaffner, MD, a professor of infectious diseases at Vanderbilt University Medical Center.

In communities with low vaccination rates, he said, people tend to cluster together, going to the same clubs and events. “They reinforce each other’s thinking about vaccinations,” he said. These pockets are a perfect setup for an outbreak.

“I fear we are getting to a place in this country where we have more and more of these pockets,” said M. Anthony Moody, MD, a professor of pediatrics and immunology at the Duke University School of Medicine and member of the Duke Human Vaccine Institute. “And diseases will jump from one place to another.”

### Chickenpox, Mumps, and Measles: Not Just for Kids

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## Chickenpox

## Mumps

Medically Reviewed by [Poonam Sachdev](#) on July 04, 2024

Estimates show that one person [infected](#) with measles can potentially infect 12 to 18 others, on average. For mumps, the average is about 14. For rubella, it's six to seven. And for polio, it's five to seven. (For comparison, someone with COVID-19 can infect about three people, on average.)

The measles virus also hangs around, Rust said. So if someone comes into a room where a person with measles coughed 90 minutes earlier, infection is still likely. The incubation period can be 10 to 14 days before the symptoms (fever, coughing, runny nose, rash) occur, so an infected person is often unaware. Infected people can spread the disease [four days before the rash appears](#).

Once a case is reported, “the critical thing is to prevent that second wave,” Rust said. That requires contact tracing, household isolation, and other measures.

A single dose of measles vaccine, given to children at ages 12 to 15 months, provides 93% protection, said Steven Furr, MD, a family practice doctor in Jackson, Alabama, and board chairman of the American Academy of Family Physicians. A second dose, given at 4 to 6 years old, gives about 97% protection, usually lifelong, an “incredible” result, he said.

The Texas outbreak is bemoaned by experts. “We eliminated measles from the U.S. in 2000,” said Ratner, the author of *Booster Shots: The Urgent Lessons of Measles and the Uncertain Future of Children’s Health*. It doesn’t mean zero cases; it means no ongoing transmission of measles, he said. “What we are seeing now is that wall of immunity is decaying, because people aren’t getting vaccinated.”

Vaccines for serious childhood diseases have been widely available for half a century: The polio vaccine was licensed in 1955, measles in 1963, mumps in 1967, rubella in 1969. In 1971, the MMR vaccine, for mumps, measles, and rubella, was approved.

### Major Concern: Polio’s Return

For Duke University’s Moody, [polio](#) tops the list of diseases to worry about. “It would not take much for polio to get established again,” he said. “Polio is still circulating in different parts of the world. That’s the one that honestly worries me the most.”

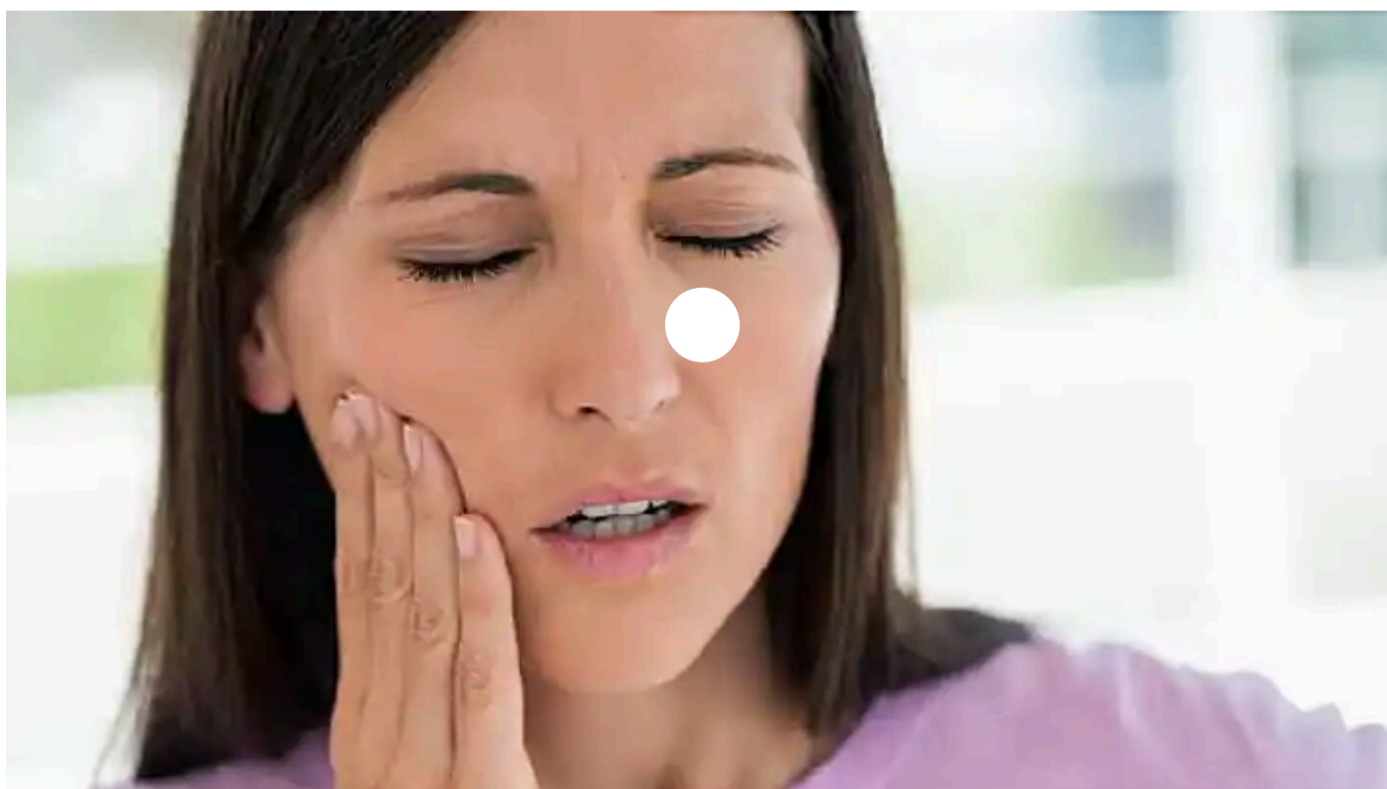
Before the vaccine, there were several epidemics, with about 16,000 cases a year in the U.S. Most people infected with the virus don’t have symptoms, but those who do often have flu-like symptoms such as a fever, fatigue, nausea, and headaches. Some get [meningitis](#), an infection of the covering of the [brain](#) and/or spinal cord; others became paralyzed. Some need a ventilator to help them breathe. In the most severe cases, polio can be fatal.

Four doses of inactivated polio vaccine (IPV) provide more than 99% protection, [according to the CDC](#).

Vaccinations against polio dropped from 95% in 2019-2020 to 92.6% in 2023-2024. While that’s still above the 80% threshold for immunity, experts warn of “pockets” throughout the country where many people are unvaccinated or under-vaccinated.

A case of polio was reported in 2022 in New York, the first in nearly a decade.

According to the [World Health Organization \(WHO\)](#), the U.S. had no reported cases in 2023, the latest year available.



### The Basics: Mumps

Mumps is a contagious disease that can give you a swollen jaw, puffy cheeks, and other problems. How can you avoid it?  
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### Other Concerns: Mumps, Rubella

[Mumps](#) is a viral disease affecting the salivary glands that can be serious. It's spread by contact with saliva or respiratory droplets when an infected person coughs or sneezes, shares items with saliva on them (such as water bottles), or is in close contact with others.

The symptoms – painful swelling of the jaw, a fever, tiredness, loss of appetite, and headaches – can take two to four weeks to show up. Most people recover within about two weeks, but a serious potential complication is brain inflammation.

While rubella, or German measles, is typically less severe than measles in children, it poses a serious danger to pregnant women, Moody said. Getting it during [pregnancy](#) raises the risk of miscarriage, stillbirth, and delivering a [baby](#) with birth defects.

#### **Will the Outbreak Serve as a Wake-Up Call?**

Furr, the family practice doctor, hopes the current outbreak becomes a wake-up call. “Hopefully this will help people realize how deadly these diseases can be, especially for kids.”

He understands the frustration of people who skip the influenza vaccine, noting that the annual vaccine doesn't always match the virus strains that surface during the season. “But for the vaccines that have been around for 20, 30, 40 years, there's really no reason to question these older vaccines that have been shown [effective] over and over.”

“Public health is always a balance between personal autonomy and community responsibility,” Rust said. When the pendulum swings too far toward personal autonomy, the sense of responsibility toward our neighbors can disappear, he said.

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