

Measles Outbreak of 2019: Symptoms, Transmission, and Vaccines

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Measles Returns

In 2000, measles was declared eradicated from the U.S. Unfortunately, it is back. Measles outbreaks have been on the rise since 2008, and currently several states, including New York, Washington, Texas, Illinois, and California, are experiencing outbreaks. Measles is a highly contagious disease that can cause serious illness including death. According to [U.S. Centers for Disease Control and Prevention \(CDC\)](#) data, there have been more confirmed cases of measles in the U.S. (387 cases) as of March 28, 2019 than there were in all of 2018 (372 cases).

Measles had become relatively rare in our country thanks to the trivalent “MMR” vaccine. Available since 1963, the vaccine protects, or *immunizes*, against measles, mumps, and rubella. [According to CDC](#), widespread use of the vaccine has led to a *greater than 99% reduction* in measles cases compared to the pre-vaccine era. Unfortunately, because measles is still common in other countries, unvaccinated people may bring the disease into the U.S., where it may spread to other unvaccinated individuals. Additionally, some parents are reluctant to have their children immunized with the MMR vaccine for fear of harm, such as autism, even though studies have failed to prove a link between exposure to the vaccine and autism (see [CDC Vaccine Safety](#) webpage). As [we’ve noted before](#), foregoing childhood vaccinations is a dangerous practice that threatens the historic gains of modern disease control efforts.

The [CDC reports](#) there were 17 measles outbreaks in the country in 2018. The majority of cases stemmed from three outbreaks in Orthodox Jewish communities in New York and New Jersey. These outbreaks were associated with travelers from Israel where a large outbreak is occurring. One year prior, in 2017, an outbreak in my state, Minnesota, in a Somali-

American community with poor vaccine coverage was responsible for 75 cases of illness. And a large outbreak in 2014 that resulted in 383 measles cases was centered in unvaccinated Amish communities in Ohio.

Disease rates plummet, and “herd immunity” is achieved when a critical proportion of the population is immunized against an infectious disease. For a very contagious illness such as measles, a high percentage, [95% of the population must be vaccinated](#) to develop herd immunity.

What Does Measles Look Like?

[According to the Washington State Department of Health](#), measles, spread by the rubeola virus, causes runny nose, cough, and a rash. Symptoms appear 7 – 21 days after exposure to the virus. Tiny white spots may appear inside the mouth 2 - 4 days after symptoms begin, and a red or reddish-brown raised and spreading rash appears 3 – 5 days after symptoms appear. During this time, a person’s fever may rise to over 104°F. CDC provides “[Measles Photos](#)” to help raise awareness of the appearance of measles infection. Although potentially serious in all age groups, complications due to measles are most likely in children under the age of five, and adults over the age of 20.

How Is Measles Spread?

Measles is one of the most contagious of all known infectious diseases. Humans are the only living hosts of the virus. It is spread when infected people cough or sneeze. [The World Health Organization](#) notes droplets of infected respiratory secretions may remain in the air or on surfaces for up to two hours. [According to CDC](#), measles is so contagious that if one person has it, up to 90% of the people close to that person who are not immune (unvaccinated or have never had the disease) will also become infected. Measles may be spread to others for up to four days before, and four days after, the rash appears.

Another way the illness spreads is via mucous droplets from infected individuals that settle on frequently touched surfaces. People who unwittingly contact these surfaces and then touch their hands to their mouths or eyes may contract the disease if they are unvaccinated or have never had the disease. Surface disinfection carried out with a 1% solution of sodium hypochlorite (chlorine bleach) destroys the virus, and proper handwashing can help interrupt the path of the virus from hands to the eyes and mouth. Disinfecting frequently touched surfaces and [washing hands thoroughly](#) and often are important measures to be taken if there is any suspicion of measles exposure.

Get Vaccinated to Avoid Measles

The vast majority of people who get measles are unvaccinated, so vaccination is critical. [The CDC recommends](#) children be administered two doses of the vaccine: the first dose at 12 - 15 months of age, and the second dose at 4 – 6 years of age. Teens and adults, CDC notes, should also be up to date on their MMR vaccination. Anyone traveling to a foreign country should ensure their vaccinations are up to date, as the CDC reports measles is common in many parts of Europe, Asia, the Pacific, and Africa.

An Added Benefit to MMR Vaccination

Besides providing protection from the measles, there is another reason to vaccinate: A [2015 study](#) presented evidence that the MMR vaccine also limits other infections resulting from *measles-induced damage to the immune system*—damage that can last over two to three years after the infection. Yes, measles, a preventable disease, can so damage a child’s immune system that she will be less likely to resist and survive other childhood infections.

The key to avoiding measles and its potentially serious and long-lasting complications is to ensure families are vaccinated with the MMR vaccine. Is your family vaccinated against measles?

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