

Preventing measles outbreaks in the US through vaccination

August 28 2023, by Deb Balzer

Measles



Credit: Mayo Clinic News Network

The Centers for Disease Control and Prevention (CDC) lists India as the top country for measles outbreaks, with more than 57,500 reported cases. In the U.S., there have been 19 cases of the highly infectious virus this year.

"Measles is a viral infection that is highly contagious if you're not

immune to it," says Dr. Nipunie Rajapakse, a pediatric infectious diseases physician with the Mayo Clinic Children's Center. "It's generally characterized by fever, cough, [runny nose](#) and a pretty characteristic rash that can involve much of the skin surface."

Measles was declared eliminated in the U.S. in 2000 through a successful [vaccine](#) program, yet it persists globally. People can bring it to the U.S. if they're not vaccinated and get infected when they travel. The CDC says travelers should seek [medical care](#) if they develop symptoms of measles, including a rash, [high fever](#), cough, runny nose or red, watery eyes.

"Measles is one of the most contagious infectious diseases out there. If you're in the same airspace as someone with measles, if they were there two hours ago and you're not immune to it, you can still contract measles, even without ever coming in face-to-face contact with that person. That's why the vaccination is so important. It gives you baseline immunity," says Dr. Rajapakse.

"Measles used to be a relatively common childhood illness. Since we've introduced very effective immunization, measles is quite rare to see here in the U.S.," says Dr. Rajapakse. "It can infect the brain, for example, resulting in something called encephalitis. It can cause severe pneumonia. We're trying to avoid these complications by vaccinating children before they get sick with it."

Children under the age of 5, adults over 20, [pregnant women](#) and those with compromised immune systems are more likely to have complications from infection.

Complications from measles include:

- Diarrhea and vomiting.

- Ear infection.
- Bronchitis, laryngitis or croup.
- Pneumonia.
- Encephalitis.
- Pregnancy problems, including premature or low-birth-weight babies.

The CDC says that out of every 1,000 children with measles, about 1 to 3 die due to breathing and brain problems.

Reducing measles outbreaks

"Measles vaccination is a component of the measles, mumps, rubella (MMR) vaccine that is routinely given between 12 to 18 months of age, and then again in the preschool vaccines between 4 to 6 years of age," Dr. Rajapakse says.

Two MMR vaccine doses are 97% effective against measles, while one is about 93% effective.

Before the 1963 measles vaccination program, around 3 to 4 million people got [measles](#) every year in the U.S., according to the CDC.

Provided by Mayo Clinic

Citation: Preventing measles outbreaks in the US through vaccination (2023, August 28) retrieved 28 April 2024 from <https://medicalxpress.com/news/2023-08-measles-outbreaks-vaccination.html>

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