



## Public Health Brief

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## Can You Prevent Measles from Attacking Your Family?

When I was in 4<sup>th</sup> grade (ancient history!), I lined up with everyone else to receive the newly available oral polio vaccine. My parents were grateful to see my sister and I protected against the disease causing lifelong paralysis in persons most severely impacted. In those days, there was a legitimate fear of the disease. Jump to today – we have lost our fear of vaccine-preventable diseases, because we have not seen them due to the incredible success of vaccines which have eliminated them from our experience. Instead, we are now faced with a fear of vaccines!

### Why vaccinate against measles?

Vaccination against measles is safe, effective, and cost-effective. Receiving two doses of the MMR vaccine provides the highest level of protection against disease at 97% effectiveness. Even if only one dose is received, protection is still extremely high at 93% effectiveness. The immune system needs up to two to three weeks after immunization to provide the best protection.

Unvaccinated people have a very high likelihood, about 90% risk of contracting measles, if exposed. If infected with measles, some people may suffer from severe complications, such as pneumonia (infection of the lungs) and encephalitis (swelling of the brain). They may need to be hospitalized and could die. Unvaccinated young children and pregnant persons are at highest risk of severe measles complications.

### Who should get vaccinated?

- **Young children** should get two doses of MMR vaccine, starting with the first dose at 12 to 15 months of age, and the second dose at 4 to 6 years of age. Children can receive the second dose earlier than 4 years of age if at least 28 days have passed since the first dose.
- **Infants at least 6 months old who are traveling internationally** should receive one dose before their 1st birthday and at least two weeks before departing for international travel.



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- **All older children (K–12), college-age students and adults** who are not up to date on their MMR vaccine.

### What's recommended for international travel?

Vaccination is especially urgent for people planning international travel this spring and summer, as many other countries are currently experiencing outbreaks. [Infants are typically at highest risk](#) of falling ill because most do not get the first dose of the MMR vaccine until 12-15 months of age.

Whether you're visiting family or exploring the world, plan to receive the MMR vaccine. It takes your body 2-3 weeks to get the most protection against measles after vaccination.

Before international travel:

- Babies 6-11 months of age should receive one dose of MMR vaccine.
- Ensure everyone 12 months and older are up to date with 2 doses of MMR vaccine. If they're not up to date, they should get two doses at least 28 days apart.

### Do adults need a measles booster?

While most of us are protected, some groups could benefit from another shot, especially before international travel or going to an area with a known outbreak.

For those of us born before 1957, we most likely have ample protection, as it is assumed that we have natural immunity due to widespread measles exposure and probably infection. (I still remember mine!)

For persons born after 1957 and vaccinated before 1968, the single-dose inactivated measles vaccine used from 1963 to 1967 was later found to not be as effective or long-lasting as the currently used live-attenuated vaccine. Anyone who received an inactivated vaccine between 1963 and 1967 is recommended to receive a dose of the current MMR vaccine.

For persons who were entering kindergarten prior to 1996 or 1997, you probably only received a single dose of MMR vaccine, as the 2-dose recommendation started in 1996/1997.

Another group of people who may want to consider a measles booster are those in regular contact with people ineligible for the MMR vaccine. Unvaccinated pregnant women and people who are immunocompromised rely on others to stay safe against the virus.

Finally, healthcare workers should have two documented doses of MMR vaccine.



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The Centers for Disease Control and Prevention (CDC) recommends that adults who aren't at high risk of exposure still have at least one documented dose of MMR or other evidence of immunity\*, such as a positive measles immunoglobulin G (IgG). If a person is unsure of whether they have received the full measles vaccine series or whether they have had a natural measles infection, they can consider checking a measles titer to clarify if they should receive a measles vaccine. However, if there are no medical contraindications, it's not unreasonable for someone to get a booster shot just to be safe, especially before international travel or going to a domestic area with a known outbreak.

\*Evidence of immunity:

- Written documentation of adequate vaccination
- Laboratory evidence of immunity
- Laboratory confirmation of measles
- Born in the U.S. before 1957

### What should you do if you suspect you or someone else has measles?

Measles typically starts with fever, red watery eyes, runny nose, and cough, followed by a red rash that spreads from the face to the rest of the body. Call a healthcare provider immediately before going anywhere (such as a doctor's office, urgent care, emergency room, pharmacy, etc.) so that they can provide advice while minimizing the risk of exposure to other people.

If you are unvaccinated and may have been exposed to someone with measles, you can receive the MMR vaccine up to 72 hours after exposure to help prevent or reduce the severity of an infection.

If you suspect you have measles while travelling:

- Wear a well-fitting mask (N-95) and minimize contact with others.
- Inform a flight attendant, cruise staff, or border services officer upon arrival.

There is no treatment for measles, but you can take actions to feel better and prevent complications. Hydration, rest, avoiding harsh light, and taking a fever reducer or pain reliever can also help relieve symptoms.

### What is "herd immunity"?

Herd immunity occurs when the majority of a population develops protection from a contagious disease either through vaccination or due to a previous infection. This significantly reduces the likeliness of a person sharing an infection with another. Persons with compromised immune systems who cannot be vaccinated depend on herd immunity to prevent illness, and even protects those who refuse vaccines based on personal beliefs.



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Herd immunity, also known as population or community immunity, is a public good that requires high participation to be effective. It does not come from an individual's immune system, but from the collective protection afforded by the immune majority which makes it much harder for outbreaks to occur. In the case of measles, 95% of the population needs to be protected for herd immunity to be achieved.

And now the controversy! Should we allow measles – or any contagious disease – to spread unchecked to encourage herd immunity? That seems to be the leaning of the new administration, including Robert F. Kennedy Jr. (Secretary of the US Department of Health and Human Services) and Jay Bhattacharya (National Institutes of Health). A significant driver of current skepticism about vaccines has been Robert F. Kennedy Jr. and the nonprofit organization he led, Children's Health Defense, which has [spread vaccine mistrust](#) and misinformation for years.

Ultimately, both Kennedy and much of unvaccinated America are receiving a crash course on the topic of herd immunity. The ability of a minority to remain unvaccinated has always depended on the decisions of a vast majority to protect them. Now, as we confront more outbreaks, one lesson is clear: Community immunity is not just a personal choice, it is a collective responsibility. As a country, we have a choice – use a safe and effective vaccine to protect our population from infection, or encourage natural infection, with the risks of hospitalizations, pneumonia, encephalitis, SSPE (see Part 1 of this series), pregnancy complications, immune amnesia, and death!

My vote is for all of us to be vaccine champions. We do not want to be known as the nation that made measles great again after eliminating it 25 years ago!

Only YOU Can Prevent ~~Wildfires~~ Measles!

<https://alpinecountyca.gov/516/Public-Health-Briefs>

<https://www.cdc.gov/measles/about/index.html>

[https://www.cdc.gov/han/2025/han00522.html?ACSTrackingID=USCDC\\_486-DM145546&ACSTrackingLabel=HAN%20522%20-%20Health%20Advisory%20\(for%20COCA%20partners\)&deliveryName=USCDC\\_486-DM145546#msdyntrid=xQaOJi\\_cx2TaB4AaDo1We4y6N6WF9w2sV1h\\_SvI341c](https://www.cdc.gov/han/2025/han00522.html?ACSTrackingID=USCDC_486-DM145546&ACSTrackingLabel=HAN%20522%20-%20Health%20Advisory%20(for%20COCA%20partners)&deliveryName=USCDC_486-DM145546#msdyntrid=xQaOJi_cx2TaB4AaDo1We4y6N6WF9w2sV1h_SvI341c)

<https://www.cdc.gov/vaccines/vpd/mmr/hcp/recommendations.html>

<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/measles.aspx>



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