

# Expert Answers to Questions About Vaccines

Robert Frenck Jr., MD, Professor of Pediatrics in the Division of Infectious Diseases at Cincinnati Children's, offers insight on vaccines based on evidence drawn from proven scientific studies.

Vaccines decrease the frequency of vaccine-preventable illnesses by over 90%

## What are the benefits and risks of childhood vaccinations?

**Infectious diseases continue to be the leading cause of death in children worldwide.** Vaccines have been a very effective preventive measure, decreasing the frequency of vaccine-preventable illnesses by over 90%. Today, most young people in the United States have never seen a case of polio, measles, mumps, rubella or whooping cough. This is due to the vaccines. However, when a disease isn't seen, it's hard to perceive a benefit of prevention. So people have focused on the possible risks of vaccines. The vast majority of risks are not severe and resolve within one to two days. The most common risks include pain and redness at the injection site and low-grade fevers.

## Do vaccines cause autism?

**No.** Numerous studies have been published showing that autism is not associated with receiving vaccines.

## What are the risks of delaying a child's vaccinations or delaying certain vaccinations?

**Strong evidence shows children who have vaccinations delayed are less likely to ever "catch up."** There is no known benefit from delaying vaccinations and no increased risk of receiving multiple vaccines at one time.

## There has been speculation that recent outbreaks in some cities, such as measles, are a direct reaction to parents not vaccinating their children. What could this mean for the future if more parents are choosing not to vaccinate?

**This is not speculation. It is a fact.** Multiple examples can be cited regarding the consequences of not vaccinating, including large-scale outbreaks of whooping cough in Britain and Japan and an epidemic of polio in sub-Saharan Africa. With the ability to travel around the world in under a day, this means anyone could be exposed to any infection before the contagious person even begins to show symptoms. In 2019, over 1,200 cases of measles were reported in the United States. Children who had not been vaccinated against measles were 20 times more likely to develop measles compared to children who were vaccinated. Similar examples have occurred with whooping cough and polio.

## What is the Cincinnati Children's point of view on vaccine policies in schools?

Cincinnati Children's follows the guidance of the Centers for Disease Control and Prevention (CDC) and the American Academy of Pediatrics (AAP) regarding vaccine administration. These two organizations have a harmonized immunization schedule regarding recommended vaccinations for children. All the vaccines in the recommended schedules are rigorously tested prior to being added to the schedule and safety continues to be followed after a vaccine is licensed and used in routine clinical practice. With the exception of children with valid medical or religious exemptions, children should receive all recommended vaccines to attend school. State laws establish vaccination requirements for school children. These laws often apply not only to children attending public schools but also to those attending private schools and day care facilities.



*The face of a boy with measles on the third day of the rash. Courtesy of Centers for Disease Control and Prevention.*

Source: Red Book® 2018



*Measles*

Source: Red Book® 2018