

# What parents need to know about the COVID-19 vaccine for kids

November 1 2021, by Laura Castañón

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On October 29, the U.S. Food and Drug Administration (FDA) gave emergency authorization for a child-size dose of Pfizer's COVID-19 vaccine for use in kids ages five to 11. Some 28 million children could

be eligible by early November for the two-shot regimen administered three weeks apart.

Daniel Rauch, a professor of pediatrics at Tufts University School of Medicine and chief of pediatric hospital medicine at Tufts Medical Center, spoke with Tufts Now about how vaccines get developed for children and why he will recommend this one.

## **Tufts Now: We've had COVID-19 vaccines approved for adults for almost a year. How is the testing of vaccines different for children? Why has it taken longer to approve children's vaccines?**

Daniel Rauch: Kids are not simply small adults. We can see that with this disease because we know that kids react differently to COVID-19 than adults do. So it's not surprising that we're being careful about vaccine development for kids, as opposed to just saying the adult vaccine is good for everybody.

Probably the most important reason to take more time is that any long-term side effect that you're worried about is going to be potentially longer in a kid, because they have more of their life ahead of them. So not only do you want to pay special attention to safety, but the duration of time you may want to watch is longer.

Another problem in [pediatric trials](#) is getting consent and getting kids enrolled. Parents are always a little bit more hesitant to sign their kids up for things than they are to participate themselves. So getting the number of kids to even equal the number of people who participate in the adult trials is a challenge.

## **How are dosages determined for different groups of**

## children?

There's some estimating involved—by age and weight, by [immune response](#), by what they're seeing in adults, and by how other vaccines have performed—to get a dose that works. Then you have to test it to make sure that you get what you think is a good response. We can measure antibody production and see if the response at a given dose is equal to what we're seeing in adults, but ultimately you only know if a vaccine works if it prevents disease. You have to give the vaccine to a lot of people who might be exposed to the virus.

## **So how is the Pfizer vaccine for ages 5 to 11 different from the version for teens and adults?**

It's the same technology; it's a different dose. The Pfizer data being submitted used a third of the dose for the 5 to 11 age group as they are using for everyone 12 and above.

## **Are there any side effects people are looking for?**

Based on our experience with the vaccine already, I think the one that's most concerned people is the cardiac side effects. Fortunately, the incidence of that seems to be around one in 10,000 for young adult males. Hearing that there may be risk to the heart is scary, although all the people who were affected have recovered and the younger age group will be receiving a much smaller dose.

They didn't see cardiac side effects in the trial data Pfizer brought to the FDA this week, so that is good. But there weren't 10,000 kids in the trial, so that means a one-in-10,000 incidence wasn't likely to be picked up. And that's why after every vaccine is approved, they have post-approval surveillance, and there are mechanisms that the government puts into

place to find these rare events.

## **What should people know about the development of this vaccine?**

People should know that this vaccine went through the same development and testing process as all prior vaccines. The only thing missing is the long-term follow-up. We now have that for the adult vaccines, which is why they have full approval now, instead of emergency approval. We'll get there for kids. But the data that's been made public is extremely reassuring that the same rigorous process has been gone through. For people who are of the opinion that this is experimental, they've never done this before: None of that is true. It's the same rigor.

## **Children seem to be less likely to become seriously ill from COVID-19 than adults. Why is it still important for them to get vaccinated?**

There are two reasons. One is your kid is probably going to be fine, but they may not be. Although COVID-19 infection is much better tolerated by children, we do see very sick kids. There have been deaths. And we don't know much about long COVID in kids. We know the teens and young adults who've gotten heart problems from the vaccine got better very quickly. We know that there are some kids who get heart problems from the disease that seem to have long-term effects. So why would you take that chance, if we had something that could protect them?

The other part of it is that we're members of society. We owe each other certain obligations, and part of that is to protect each other. So even if my kid is fine, and they get the disease and they're fine, I don't want them spreading it to anybody else. And I expect that other people will get

immunized to protect my kids.

Pertussis, for example, is a nasty disease to get, but adults do fine with it. When babies get it, they can die. When you bring a newborn home, you make sure that all the rest of the providers are up to date on their pertussis vaccine. And we don't blink it at that. I'm not sure why the public debate has changed in this case.

## **What are you hearing from parents? Are people eager to have a vaccine available for their kids?**

It really runs the spectrum, and you get a good feel for whether the parents themselves have been vaccinated.

The people who have been vaccinated and are looking to get their kids back in activities are looking for the vaccine, because they want that extra level of protection. Parents who've had bad experiences with the disease themselves or have people in their household who are at high risk for the disease—multi-generational households with grandparents or somebody who's immunocompromised—are looking for that protection.

And then we see the other side: Parents who haven't gotten themselves vaccinated and they don't want it for their kids.

## **As a pediatrician, how do you talk to parents who are hesitant about the COVID vaccine?**

We try to find out the reason for their hesitancy. A fair number of parents have unfortunately been tainted by the hoax connecting the measles vaccine and autism. There's no scientific evidence for that whatsoever, but unfortunately it poisoned the perception of vaccines for a whole generation of people and caused people to become vaccine-

hesitant and avoid things which are for their benefit. And some people have experiences like a cousin, an uncle, someone in the family, got sick after getting a vaccine.

We just try to educate them, explain to them what the mechanism is and what the safety profile is. And I throw in at the end that I got every vaccine available for my children.

## **Do you have young kids? Are you planning to get them vaccinated when COVID-19 vaccines are approved for their age group?**

My children are now adults. But they both got the [vaccine](#) as soon as it was possible. My daughter is a high school teacher and she's very much looking forward to getting kids vaccinated. She wants to see their faces in school. Being in-person with a mask is better than virtual, but there's no question it inhibits the learning environment. Getting kids vaccinated is only going to help it be better.

Thankfully, my daughter is young and healthy. But there are other teachers who are elderly or have other risk factors for getting severe disease. And, as a parent, I don't think I could live with myself if I knew that my child was a vector spreading illness and it got someone else seriously sick.

Provided by Tufts University

Citation: What parents need to know about the COVID-19 vaccine for kids (2021, November 1) retrieved 23 May 2024 from <https://medicalxpress.com/news/2021-11-parents-covid-vaccine-kids.html>

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