VZV Research Foundation

The VZV Research Foundation supports research and education on chickenpox, shingles and post-herpetic neuralgia (a complication of shingles). Founded in 1991 as a publicly-supported charity, it is guided by its Board of Directors, and has a Scientific Advisory Board consisting of more than 30 international experts on VZV.

For additional copies of this pamphlet, further information on the Foundation and its activities, or to make a tax-deductible contribution to the Foundation, please contact:

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The Chickenpox Vaccine

Answers to Parents' Questions

A public service of the VZV Research Foundation

The world's only nonprofit organization dedicated to fighting the varicella-zoster virus (VZV) and the diseases it causes: chickenpox, shingles and post-herpetic neuralgia (PHN).

Chickenpox: Now Preventable

Chickenpox and childhood. They go together. But they don't have to anymore, thanks to the chickenpox vaccine.

Chickenpox or varicella is a very contagious disease affecting 95 percent of the American population by age 18. Four million cases occur each year in the United States, mainly in children ages five to nine.

Typically, chickenpox means worry and lost workdays for parents. Children feel sick. They have fever. They itch. They miss school and extracurricular activities.

But did you know that chickenpox can lead to hospitalizations and, in rare instances, even death? Chickenpox is especially risky for children with certain diseases, such as leukemia. However, it can be serious or fatal in healthy children too. And there is no way to know beforehand how chickenpox will affect your healthy child.

In March 1995, following more than a decade of development and testing, the U.S. Food and Drug Administration (FDA) approved the country's first chickenpox vaccine for use in children and adults who have not had chickenpox.[1] The FDA concluded that the vaccine is safe and effective. Since then, the American Academy of Pediatrics, Centers for Disease Control and Prevention and American Academy of Family Practitioners have all recommended the chickenpox vaccine for routine use in children and adults who have not had chickenpox. Furthermore, they have added the chickenpox vaccine to the existing, routine schedule of vaccines recommended for all healthy children (e.g., measles-mumps-rubella vaccine).

The VZV Research Foundation does not practice medicine and nothing in this pamphlet should be considered medical advice.

Chickenpox Vaccine: Questions & Answers

- **While millions of Americans have been vaccinated against chickenpox to date, some questions about the vaccine persist. Is the vaccine safe? How long will the immunity (protection) provided by the vaccine last?**
- **Questions such as these are common to all new vaccines. Foolproof answers to these questions will require decades more experience with the varicella vaccine. But they are answered here to the extent possible using data from the U.S. and more than 20 years experience with the vaccine in Japan.**
- **We hope that this information will help encourage you and your doctor to follow the expert recommendations described on the previous page.**

1 WHY SHOULD CHICKENPOX BE PREVENTED?

Despite its reputation as a mild childhood illness, chickenpox is a significant disease. At best, it can cause fever, discomfort, loss of appetite, headache and skin lesions (vesicles or blisters), which can leave scars. At its worst, it can lead to hospitalization and, in rare instances, death.

Bacterial skin infections are the most common chickenpox-related complication, and they are increasing in number and severity. Other complications include inflammation of the brain (encephalitis) and pneumonia, although these are rare in otherwise healthy people.

According to the Centers for Disease Control and Prevention, each year in the U.S., chickenpox complications result in: the hospitalization of about 9,000 otherwise healthy people, 80 percent of them children; and the death of nearly 100 people, approximately half of whom were otherwise healthy.

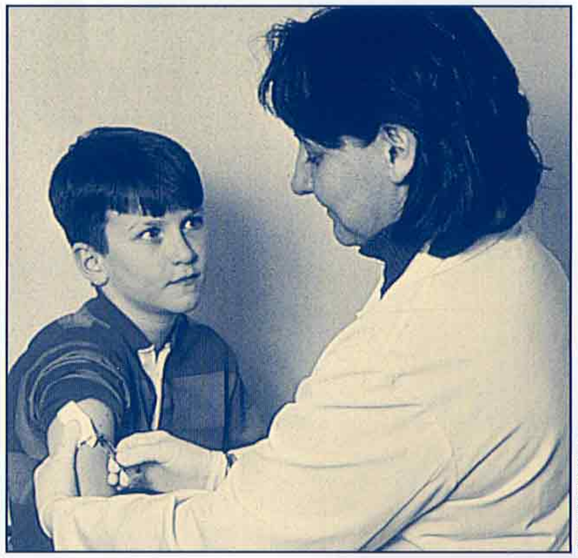
Furthermore, it is believed that more chickenpox-related deaths occur than are reported. Deaths that occur from a chickenpox complication – for example, a bacterial infection that spreads to the bloodstream – are sometimes reported without mention of chickenpox as the underlying cause.

2 IS THE VACCINE SAFE AND EFFECTIVE?

Experience and research to date have shown the chickenpox vaccine to be safe and effective. The U.S. vaccine is derived from the Oka strain vaccine. The Oka strain vaccine was developed in Japan more than 20 years ago and has since been used successfully and safely there and in several other parts of the world.

The vaccine was studied in the U.S. for more than a decade. Since its U.S. approval, side effects have been reported in a small percentage of vaccinated children. They are generally mild and include: pain, redness or a slight rash at the injection site, mild fever and fussiness.

There are certain groups of people, such as children with a weakened immune system or pregnant women, who should not receive the chickenpox vaccine.[2] You should speak to your doctor to determine whether you or your child fall into any of the categories of individuals who should not be vaccinated against chickenpox.



Courtesy Merck & Co., Inc.

The AAP recommends vaccination for children one year or older who have not had chickenpox.

3 HOW LONG WILL THE VACCINE PROTECT MY CHILD AGAINST CHICKENPOX?

The length of protection/immunity that any new vaccine provides is never known when it is first introduced. However, more than 20 years experience and research indicate that varicella vaccine protection lasts at least 20 years, and probably more.

The duration of immunity continues to be studied. If a booster is recommended at a future date, both the medical community and the general public will be informed.

4 ISN'T IT TRUE THAT A VACCINATED CHILD CAN STILL GET CHICKENPOX?

There have been a few reported cases of vaccinated children coming down with chickenpox after exposure to it. It is important to note, however, that these few cases have been very mild (sometimes with only one or two blisters) and have lasted only a short time.[3]

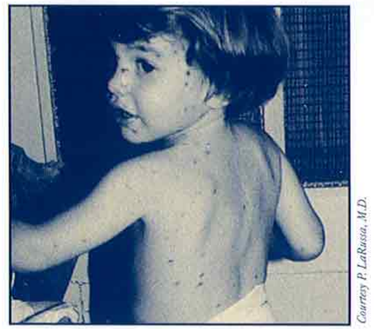
Interestingly enough, studies show that when vaccinated individuals come into contact with a case of chickenpox, their immunity to chickenpox is often increased or boosted.

5 HOW DOES THE VACCINE AFFECT ONE'S CHANCES OF DEVELOPING SHINGLES LATER IN LIFE?

The varicella-zoster virus or VZV, which causes chickenpox, remains silent in the body of everyone who has had chickenpox. In an estimated one out of seven people over the course of an 85-year lifetime, the virus can reappear as a painful rash called shingles.

Many more years of follow-up study in healthy persons are needed to determine the chickenpox vaccine's effect on shingles development in later life. In the meantime, studies in leukemic children indicate that the vaccine may help decrease one's chances for shingles.[4]

The vaccine is also being studied as a prevention for shingles in adults who have had natural chickenpox. A small U.S. study indicated that the vaccine may boost an older person's immunity, potentially decreasing his/her chance for shingles. Scientists soon hope to launch a major study to research this further.



Courtesy P. LaRussa, M.D.

Chickenpox in the healthy child appears as 200 to 500 itchy, blister-like sores, called vesicles, usually on the face, scalp and torso.

IN CLOSING

The VZV Research Foundation believes that the use of the chickenpox vaccine should be considered for all adults and children who have not had chickenpox. The Foundation strongly urges you to discuss the vaccine with your doctor. You may also wish to share this booklet with your doctor.

1. A SINGLE DOSE FOR CHILDREN ONE TO 12 YEARS OF AGE AND TWO DOSES (FOUR TO EIGHT WEEKS APART) FOR THOSE 13 YEARS OF AGE AND OLDER.
2. THE VACCINE CAN BE GIVEN TO SOME CHILDREN WITH UNDERLYING LEUKEMIA WHOSE DISEASE IS UNDER CONTROL.
3. DOCTORS HAVE FOUND THAT SOME CHILDREN WHO DEVELOPED CHICKENPOX FOLLOWING VACCINATION WERE UNKNOWINGLY EXPOSED TO THE VIRUS BEFORE VACCINATION. IN THESE CASES, THE VACCINE WAS GIVEN TOO LATE FOR IT TO DO ITS JOB.
4. IN STUDIES INVOLVING LEUKEMIC CHILDREN, RESEARCHERS OBSERVED THAT THOSE WHO WERE GIVEN THE CHICKENPOX VACCINE WERE NINE TIMES LESS LIKELY TO GET SHINGLES THAN LEUKEMIC CHILDREN WHO HAD NATURAL CHICKENPOX. LEUKEMIC CHILDREN, WHO ARE AT A HIGH RISK FOR CHICKENPOX-RELATED DEATH, BEGAN RECEIVING THE VACCINE SEVERAL YEARS BEFORE IT WAS APPROVED FOR USE IN THE GENERAL PUBLIC.