

# VARICELLA (CHICKEN POX)

## What Parents Need to Know



**P<sup>h</sup>C** PHYSICIANS  
FOR INFORMED  
CONSENT  
*Delivering Data on Infectious Diseases & Vaccines™*

Available in other languages at:  
[physiciansforinformedconsent.org/varicella](https://physiciansforinformedconsent.org/varicella)



### 1. WHAT IS VARICELLA?

Varicella is a viral infection.

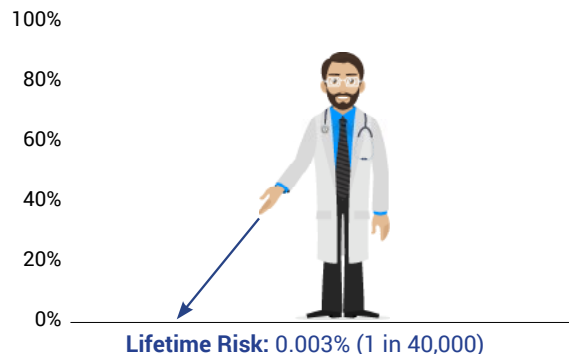
- Varicella symptoms include fever, itching, and a skin rash throughout the body. Symptoms typically resolve after a few days.<sup>1</sup>
- More than 96% of new varicella infections are benign and not reported to public health departments.<sup>2</sup>
- Before the varicella mass vaccination program was introduced, about 90% of the population contracted varicella and obtained lifetime immunity by age 15.<sup>3</sup>
- In rare situations, varicella can be fatal. Most fatal cases of varicella occur in adults age 20 or older.<sup>4</sup>



- More than 96% of new varicella infections are benign.<sup>2</sup>
- Before the introduction of the varicella vaccine, 90% of the population acquired lifetime immunity by age 15.<sup>3</sup>

For some people, varicella virus can remain in their body after they recover from chicken pox, and the virus can reactivate later in life and cause shingles. However, severe complications or death from shingles is very rare.<sup>6</sup>

**Figure 1: Lifetime Risk of Contracting a Fatal Varicella Infection<sup>5</sup>**



### 3. WHAT TREATMENTS ARE AVAILABLE FOR VARICELLA?

Because varicella resolves on its own in almost all cases, usually only rest and hydration are necessary. Immune globulin is also available for immunocompromised patients who are exposed to chicken pox, such as those on chemotherapy.<sup>3</sup>



### 2. WHAT ARE THE RISKS?

About 3 in 1,000 or 0.3% of varicella cases are hospitalized.<sup>5</sup> Fatal cases of varicella are rare in the United States. Before the introduction of the varicella vaccination program, 1 in 40,000 or 0.003% of varicella cases were fatal (Fig. 1).<sup>5</sup>



Immune globulin is available for immunocompromised children exposed to varicella.<sup>3</sup>



#### 4. WHAT ABOUT THE VARICELLA VACCINE?

The varicella vaccine was introduced in the U.S. in 1995. It has significantly reduced the incidence of reported (i.e., noticeable) cases of varicella infections; however, the Centers for Disease Control and Prevention (CDC) states, “It is not known how long a vaccinated person is protected against varicella,” and, “Several studies have shown that people vaccinated against varicella had antibodies for at least 10 to 20 years after vaccination. But, these studies were done before the vaccine was widely used and when infection with wild-type varicella was still very common.”<sup>7</sup> In other words, it’s possible that the antibody counts observed in vaccinated populations were affected by exposure to wild-type varicella.

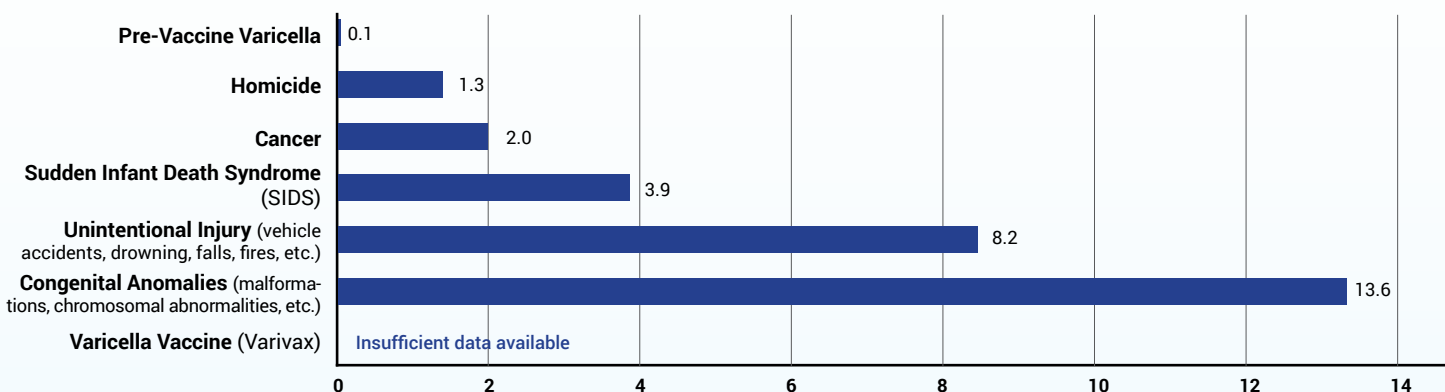


“It is not known how long a vaccinated person is protected against varicella.”

– Centers for Disease Control and Prevention (CDC)<sup>7</sup>

The manufacturer’s package insert contains information about vaccine ingredients, adverse reactions, and vaccine evaluations. For example, “Varivax Refrigerated has not been evaluated for its carcinogenic or mutagenic potential, or its potential to impair fertility.”<sup>8</sup> Furthermore, the risk of permanent injury or death from the varicella vaccine has not been proven to be less than that of varicella (Fig. 2).<sup>9</sup>

**Varicella Mortality vs. Leading Causes of Death in Children Under Age 10 (per 100,000 Population)<sup>9-11</sup>**



**Figure 2:** This graph shows the varicella mortality rate before the vaccine was introduced and compares it to the leading causes of death in children under age 10 today. Hence, in the pre-vaccine era, the varicella mortality rate per 100,000 was 0.1 for children under age 10. In 2015, the mortality rate per 100,000 for homicide was 1.3, followed by cancer (2.0), SIDS (3.9), unintentional injury (8.2), and congenital anomalies (13.6). The rate of death or permanent injury from the varicella vaccine is unknown because the research studies available are not able to measure it with sufficient accuracy.

All references and the Varicella Vaccine Risk Statement (VRS) are available at [physiciansforinformedconsent.org/varicella](https://physiciansforinformedconsent.org/varicella).

These statements are intended for informational purposes only and should not be construed as personal medical advice.



## REFERENCES

- Centers for Disease Control and Prevention. Epidemiology and prevention of vaccine-preventable diseases. 14th ed. Hall E, Wodi AP, Hamborsky J, Morelli V, Schillie S, editors. Washington, D.C.: Public Health Foundation; 2021. 330. <https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/varicella.pdf>.
- Centers for Disease Control and Prevention. Epidemiology and prevention of vaccine-preventable diseases. 13th ed. Hamborsky J, Kroger A, Wolfe S, editors. Washington, D.C.: Public Health Foundation; 2015. 359, Appendix E5. <https://physiciansforinformedconsent.org/cdc-pink-book-13th-edition-and-appendix-e-2015-combo>; in the early 1990s, annually there were about 4 million cases, of which about 150,000 (3.75%) were reported.
- Centers for Disease Control and Prevention. Epidemiology and prevention of vaccine-preventable diseases. 13th ed. Hamborsky J, Kroger A, Wolfe S, editors. Washington, D.C.: Public Health Foundation; 2015. 359, 374. <https://physiciansforinformedconsent.org/cdc-pink-book-13th-edition-2015/>.
- Meyer PA, Seward JF, Jumaan AO, Wharton M. Varicella mortality: trends before vaccine licensure in the United States, 1970–1994. *J Infect Dis.* 2000 Aug;182(2):383-90. <https://pubmed.ncbi.nlm.nih.gov/10915066/>.
- Centers for Disease Control and Prevention. Epidemiology and prevention of vaccine-preventable diseases. 13th ed. Hamborsky J, Kroger A, Wolfe S, editors. Washington, D.C.: Public Health Foundation; 2015. 356, 359. <https://physiciansforinformedconsent.org/cdc-pink-book-13th-edition-2015/>; in the early 1990s, annually there were about 4 million cases, of which about 11,000 (0.3%) resulted in hospitalization and 103 (0.003%) were fatal.
- Centers for Disease Control and Prevention. Washington, D.C.: U.S. Department of Health and Human Services. Zoster (shingles) vaccine: addressing common questions about shingles vaccination for adults; updated 2016 May [cited 2023 Nov 3]. <https://www.cdc.gov/vaccines/hcp/adults/downloads/fs-shingles-hcp.pdf>.
- Centers for Disease Control and Prevention. Washington, D.C.: U.S. Department of Health and Human Services. About the varicella vaccines; [cited 2023 April 7]. <https://www.cdc.gov/vaccines/vpd/varicella/hcp/about-vaccine.html>.
- Merck Sharp & Dohme, Corp. Whitehouse Station (NJ): Merck & Co, Inc. Varivax Refrigerated: Varicella Virus Vaccine Live (Oka/Merck); 2016 Sep 02. 8. <https://physiciansforinformedconsent.org/merck-varivax-refrigerated-varicella-virus-vaccine-live>.
- Physicians for Informed Consent. Newport Beach (CA): Physicians for Informed Consent. Varicella (chicken pox) – vaccine risk statement (VRS). Varicella vaccine: is it safer than varicella (chicken pox)? 2023 Sep; updated 2023 Nov. [physiciansforinformedconsent.org/varicella-vrs](https://physiciansforinformedconsent.org/varicella-vrs).
- Meyer PA, Seward JF, Jumaan AO, Wharton M. Varicella mortality: trends before vaccine licensure in the United States, 1970–1994. *J Infect Dis.* 2000 Aug;182(2):383-90. <https://pubmed.ncbi.nlm.nih.gov/10915066/>; in the early 1990s, annually there were about 38 fatal cases of varicella under age 10 out of a population of about 40 million children (0.1 per 100,000 children under age 10).
- Centers for Disease Control and Prevention. Washington, D.C.: U.S. Department of Health and Human Services. 10 leading causes of death by age group, United States—2015; [cited 2017 Jun 21]. [https://www.cdc.gov/injury/images/lc-charts/leading\\_causes\\_of\\_death\\_age\\_group\\_2015\\_1050w740h.gif](https://www.cdc.gov/injury/images/lc-charts/leading_causes_of_death_age_group_2015_1050w740h.gif).