

2011 Immunization Issue Brief

Faces of Vaccine-Preventable Diseases: Varicella (Chickenpox)

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This is Melissa. Melissa suffers from severe chronic nerve and muscle pain due to a secondary bacterial infection she developed as a result of Varicella (Chickenpox). At the time of the infection, she was hospitalized and lucky to live. When Melissa contracted varicella, there was not a vaccine for it. **Varicella is not a safe children's disease.**

Understanding the Disease. Varicella (chickenpox) is an infection caused by the varicella-zoster virus.

The infection usually starts as a rash on the face that spreads to the rest of the body. The typical case of chickenpox begins 10 to 14 days after exposure and is often associated with fever. The rash is very itchy; there may be 10 to 1,500 blisters but the usual child will have about 300 lesions.

Serious complications from chickenpox include bacterial infections which can involve many sites of the body including the skin, tissues under the skin, bone, lungs (pneumonia), joints and the blood. Other serious complications are due directly to the virus infection and include viral pneumonia, bleeding problems and infection of the brain (encephalitis). **Many people are not aware that, before a vaccine was available, there were approximately 11,000 hospitalizations and 100 deaths from chickenpox in the U.S. every year. One child and one adult died each week.**

Chickenpox can cause pneumonia (23 out of every 10,000 cases) and is an important risk factor for developing severe invasive "strep" (group A streptococcal disease), commonly referred to as "flesh-eating disease." Treatment of this deep infection requires antibiotics and surgery to remove the infected tissue. **Complications of chickenpox include bacterial infections** (up to 5% of cases), **decreased platelets, arthritis, hepatitis, and brain inflammation** (1 in 10,000 cases), which may cause a failure of muscular coordination. Another complication of chickenpox is encephalitis (brain inflammation with abnormal gait and clumsiness that may last for a number of days), which occurs in about 1 in every four thousand cases of chickenpox. Complications are more common among adolescents and adults, and in immunocompromised persons of all ages, than in children.

Exposure Parties - Chickenpox Parties. Before the vaccine became available, "chickenpox parties" were considered a way to get a child protected from serious chickenpox at an age when the infection is ordinarily less severe. Since chickenpox is generally thought to provide lifelong immunity, prior to an available vaccine, 'chickenpox parties' were a strategy to reduce the risk of acquiring chickenpox as an adolescent or adult when the disease is much more severe. **This strategy has gone from bad to worse. It is troubling to intentionally sicken a child when a vaccine is available to prevent the disease.**

Since the introduction of the chickenpox vaccine in 1995, the number of cases of chickenpox in the U.S. have decreased by 89%.

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Children can obtain immunity against chickenpox *without* the risks of natural infection and complications. While chickenpox is generally milder in children, severe disease with serious complications does occur. Indeed, most serious disease occurs in previously well children. It is never possible to predict who will have a mild case of chickenpox and who will have a serious or even deadly case of disease. **Now that there is a safe and effective vaccine available, it is not worth taking this chance.**

Protection of Children with Cancer and Other Immune Problems. Children with immune problems, such as those being treated for leukemia, may develop a very severe form of chickenpox. **They are best protected by not being exposed to chickenpox; that is, by their brothers, sisters and classmates being immunized.**

Children who develop chickenpox, despite having received the vaccine, are less contagious than unvaccinated children who develop chickenpox, largely as a consequence of having fewer lesions, and are, therefore, less likely to infect an immunocompromised classmate. A recent study found that even under the circumstances of intense exposure in a household, chickenpox vaccine was about 80% effective in preventing all disease and reduced the number of persons with large numbers of lesions.

Key References and Sources of Additional Information

- American Academy of Pediatrics, Committee on Infectious Diseases. (2000). **Varicella vaccine update.** *Pediatrics*, 105(1), 136-141.
- Centers for Disease Control and Prevention (CDC). (1998). **Chickenpox vaccine: What you need to know** [Vaccine Information Statement (VIS)].
- CDC, NIP. (2000). Varicella (chickenpox). In **Vaccine-preventable childhood diseases** [Online fact sheet].
- National Network for Immunization Information (2004). **Immunization Science: Varicella (chickenpox) vaccine.**

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