

# Study: More pre-teens get vaccines when middle schools require them

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Vaccinations protect against serious, and sometimes deadly, diseases, experts say.

(HealthDay) -- Pre-teens living in states that require vaccinations for incoming middle school students are more likely to be immunized than those in states without such requirements, a new study finds.

Current vaccine guidelines from the U.S. [Centers for Disease Control and Prevention](#) recommend that boys and girls aged 11 to 12 receive three immunizations or boosters: tetanus/diphtheria/pertussis (Tdap); meningococcal conjugate; and three doses of the [human papillomavirus](#) (HPV) vaccine.

In 2008-2009, 32 states required Tdap and three required meningococcal conjugate. One state, Virginia, required HPV vaccination for girls during those years.

About 80 percent of kids aged 13 to 17 received the recommended Tdap vaccine in states that required vaccination for middle school entry compared to 70 percent of kids in states that didn't require it. For meningococcal vaccine, those rates were 71 percent versus 53 percent. Researchers did not report HPV [vaccination rates](#) in Virginia versus elsewhere.

"State requirement for vaccines for middle school entry does have a positive influence on [vaccination coverage](#). Adolescents in their states are more likely to have received these vaccines," said study co-author Shannon Stokley, a CDC [epidemiologist](#).

The study was released online May 7 and is to be published in the June print issue of *Pediatrics*.

School vaccination requirements stretch all the way back to 1855, when Massachusetts became the first state to require [smallpox vaccine](#) for school entry, according to background information in the article. Over the decades the number of vaccines required expanded, the majority of which need to be received before entering kindergarten.

More recently, many states have mandated that pre-teens have certain vaccines for entering middle school.

"Vaccines are vital to the health of the adolescent. They are very, very important, and we've seen from the state-by-state variations that when you place requirements for vaccinations on school entry you increase the rate that parents will seek vaccinations," said Dr. Carrie Byington, a member of the American Academy of Pediatrics' Committee on Infectious Diseases and a professor of pediatrics at the University of Utah School of Medicine.

Yet, even state mandates don't mean every child will be vaccinated. Every state allows a medical exemption for children, and 48 states plus the District of Columbia also allow either religious or philosophical exemptions, while some allow exemptions for both reasons, Stokley said.

Only West Virginia and Mississippi do not allow non-medical exemptions, she added.

Instead of mandates, many states require that schools or public health departments inform

parents about the diseases the vaccines protect against and the current vaccine recommendations. However, the study found states that offered education had no better vaccine rates than those that didn't.

That doesn't mean education doesn't matter, Stokley said.

And though [vaccine](#) mandates appear to work, "state requirements are just one strategy to increase immunization," Byington noted.

Other strategies that can boost vaccination rates include ensuring that kids have access to vaccines and making sure that pediatricians advise parents about the shots, she said. Research has shown that parents trust pediatricians regarding vaccines and are more likely to get their kids vaccinated if the pediatrician recommends it.

For middle schoolers, the vaccines protect against several serious, and even deadly, diseases, including [diphtheria](#), a highly contagious bacterial disease that effects the respiratory system and can lead to swelling of the heart muscle tissue, heart failure and death; tetanus, a bacteria found in the soil that can enter the body through a deep cut and lead to months of serious, painful muscle spasms and lockjaw; and pertussis, or whooping cough.

In 2010, California saw the worst outbreak of whooping cough in 50 years, leading to more than 27,000 people sickened and the deaths of 10 infants. The outbreak led to urgent calls for parents to keep their children's [pertussis](#) vaccines up to date.

Meningococcal disease is a leading cause of bacterial meningitis, an infection around the brain and the spinal cord that kills about one in 10 people who contract it, according to the CDC. "Meningitis is a very serious disease. A person can seem fine, and within hours all of a sudden they can be very ill and potentially die," Stokley said.

Human papillomavirus is a common virus among people in their teens and early 20s and is spread during sex, potentially causing genital warts in men and women. Certain strains cause cervical cancer

in women and also anal cancer, Stokley said.

**More information:** Check out the recommended vaccine schedule for kids and adults at the [U.S. Centers for Disease Control and Prevention](#).

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