

# Clinician FAQ: CDC Recommendations for HPV Vaccine 2-Dose Schedules

After the October 2016 ACIP meeting, CDC now recommends that 11 or 12 year olds receive 2 doses of HPV vaccine instead of 3. Parents may have questions about this change. This resource helps explain the reasons for changing the HPV vaccine recommendation, and provides tips for talking with the parents of your patients about the change.

## What has changed in the new HPV vaccine recommendations?

In October 2016, CDC updated HPV vaccination recommendations regarding dosing schedules. CDC now recommends 2 doses of HPV vaccine for people starting the vaccination series before the 15th birthday. Three doses of HPV vaccine are recommended for people starting the vaccination series on or after the 15th birthday and for people with certain immunocompromising conditions.

CDC continues to recommend routine vaccination for girls and boys at age 11 or 12 years. The vaccination series can be started at age 9 years. CDC also recommends vaccination through age 26 years for females and through age 21 years for males. Males age 22–26 years may be vaccinated.

## What is the recommended 2-dose HPV vaccination schedule?

For girls and boys starting the vaccination series before the 15th birthday, the recommended schedule is 2 doses of HPV vaccine. The second dose should be given 6–12 months after the first dose (0, 6–12 month schedule).

**Answering parents' questions:** *We now recommend 2 doses of HPV vaccine for your son or daughter, instead of 3, if your child starts the series before their 15th birthday. I still recommend your child start the vaccination series by age 11 or 12 years for best protection against HPV. He or she will need a second dose 6-12 months after the first dose.*

## Who should still receive a 3-dose schedule?

CDC continues to recommend a 3-dose schedule for persons starting the HPV vaccination series on or after the 15th birthday, and for persons with certain immunocompromising conditions. The second dose should be given 1–2 months after the first dose, and the third dose should be given 6 months after the first dose (0, 1–2, 6 month schedule).

**Answering parents' questions:** *If your child starts the series after his or her 15th birthday or has certain health problems that weaken his or her immune system, he or she will still need the 3-dose series. We will give the second dose 1–2 months after the first, and the last dose 6 months after the first dose.*

## Why did CDC make the recommendation change to a 2-dose schedule?

Over the past year, CDC and the Advisory Committee on Immunization Practices (ACIP) have been reviewing data on 2-dose schedules, including results from studies of HPV vaccines that compared the antibody responses after 2 doses and 3 doses. These studies showed that the antibody response after 2 doses given at least 6 months apart to 9–14 year-olds was as good or better than the antibody response after 3 doses given to older adolescents and young adults, the age group in which efficacy was demonstrated in clinical trials.

**Answering parents' questions:** *CDC and ACIP (a group of experts that make vaccine recommendations) have been reviewing data on 2-dose HPV vaccination schedules for several months. The evidence showed that 2 doses of HPV vaccine given at least 6 months apart in younger adolescents were as good or better than 3 doses. These updated recommendations are an example of using the latest available evidence to provide your child with the best possible protection against serious diseases.*

**Answering parents' questions:** *Since your child received his/her first dose of the HPV vaccine before he/she was 15 years old, we'll only need to give 1 more dose.*

### **Why is the 2-dose schedule change recommended only for girls and boys age 9–14 years?**

ACIP makes recommendations based on the best available scientific evidence. Immunogenicity studies have shown that 2 doses of HPV vaccine given to 9–14 year-olds at least 6 months apart were as good, or better, than 3 doses given to older adolescents and young adults. Studies have not been done to show this in adolescents age 15 years or older.

**Answering parents' questions:** *The data we currently have from scientific studies (clinical trials) showed that 2 doses of HPV vaccine given at least 6 months apart were as good or better than 3 doses in children 9–14 years of age. Older adolescents haven't been studied in the same way, so we don't have information available for that age group. For that reason, the recommendation for number of doses has not been changed for older adolescents.*

### **What is the recommendation for persons with immunocompromising conditions?**

CDC recommends 3 doses of HPV vaccine (0, 1–2, 6 months) for immunocompromised people age 9 through 26 years. People whose immune responses might be lower, for example due to HIV infection, cancer, autoimmune disease, or taking immunosuppressant medications, should receive 3 doses to make sure they get the most benefit. However, children with asthma, diabetes, and other conditions that would not suppress immune response to HPV vaccination can receive a 2-dose schedule.

**Answering parents' questions:** *Even though CDC has recommended just 2 doses of HPV for kids under 15 years, we'll need to give your child 3 doses because he/she has a health problem that weakens his or her immune system.*

### **If a HPV vaccine series was started with quadrivalent HPV vaccine or bivalent HPV vaccine and will be completed with 9-valent HPV vaccine, what are the intervals for the remaining doses in a 3-dose or 2-dose series?**

If the first dose of any vaccine was given before the 15th birthday, vaccination should be completed according to a 2-dose schedule. In a 2-dose series, the second dose is recommended 6–12 months after the first dose (0, 6–12 month schedule).

If the first dose of any vaccine was given on or after the 15th birthday, vaccination should be completed according to a 3-dose schedule. In a 3-dose series, the second dose is recommended 1–2 months after the first dose, and the third dose is recommended 6 months after the first dose (0, 1–2, 6 month schedule).

If a vaccination schedule is interrupted, vaccine doses do not need to be repeated.

### **If a girl or boy received 2 doses of HPV vaccine less than 5 months apart, do they need a third HPV vaccine dose?**

Yes. In a 2-dose schedule of HPV vaccine, the recommended interval is 6–12 months, and the minimum interval is 5 months between the first and second dose. If the second dose is given earlier than 5 months, a third dose should be administered.

**Answering parents' questions:** *The recommended schedule is 2 doses given 6 to 12 months apart. The minimum amount of time between those doses is 5 months. Because your child received 2 doses less than 5 months apart, we'll need to give your child a third dose.*

### **If someone is age 15 years or older and started the vaccination series at age 11 but only received 1 dose, how many more doses do they need?**

This person needs 1 more dose to complete a 2-dose series, which is recommended because the vaccination was started before turning 15 years old. In a 2-dose series, the second dose is recommended 6–12 months after the first dose. In this case, the first dose was given several years ago, so the second dose can be given right away.

### **Is the 9-valent HPV vaccine approved by FDA for use as a 2-dose schedule?**

Yes, in October 2016, FDA approved a 2-dose schedule (0, 6–12 months) of 9-valent HPV vaccine for use in girls and boys age 9–14 years in the United States.

### **What HPV vaccines are currently available in the United States?**

Three HPV vaccines are licensed for use in the United States: 9-valent HPV vaccine, quadrivalent HPV vaccine, and bivalent HPV vaccine. However, after the end of 2016, only 9-valent HPV vaccine will be sold in the United States.