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The preteen visit: An opportunity for prevention

Updated vaccine guidelines for different age groups;
USPSTF recommendations for other interventions

All early adolescents should visit a physician at age 11 or 12 years to receive a set of recommended vaccines. Two vaccines are recommended for boys in this age group—quadrivalent meningococcal conjugate vaccine (MCV4) and tetanus toxoid, reduced diphtheria, and acellular pertussis vaccine (Tdap). Three vaccines are recommended for girls—MCV4, Tdap, and human papilloma virus (HPV) vaccine.

In addition, 2 doses of varicella vaccine are now recommended before age 5 years; both boys and girls at age 11 or 12 who have received only 1 dose should be given a second. **TABLE 1** contains details on each recommended vaccine.

■ Meningococcal vaccine

Quadrivalent meningococcal conjugate vaccine (Menactra) contains antigens for 4 meningococcal groups (A, C, Y, W-135), and is licensed for ages 11 to 55 years. The Advisory Committee on Immunization Practices (ACIP) recommends that all preteens receive 1 dose at age 11 or 12. Unvaccinated older children should receive a dose before entering high school; unvaccinated college freshmen living in dorms should also be vaccinated.

Because of a shortage of vaccine, the Centers for Disease Control and Prevention (CDC) had recommended a

delay in the implementation of routine vaccination at age 11 and 12. The supply situation has now corrected, and this recommendation has been rescinded.

There have been 17 cases of Guillain-Barré syndrome appearing in adolescents and young adults within 33 days of receiving MCV4. The possibility of a cause-and-effect relationship is under investigation. The CDC recommends that preadolescents and adolescents who have a history of Guillain-Barré should not receive MCV4 unless they are college freshmen who live in dorms.

■ Tetanus/diphtheria/pertussis vaccine

There are 2 Tdap products, one licensed for ages 10 to 18 years (Boostrix), the other for ages 11 to 64 (Adacel). The ACIP recommends a single dose of Tdap for those aged 11 to 18, preferably at age 11 or 12. The optimal interval from the last tetanus and diphtheria toxoid (TD or Td) is 5 years but a shorter interval is acceptable. Thereafter, Td boosters are recommended every 10 years. If an 11- or 12-year-old has not previously received a complete series of a tetanus toxoid, diphtheria product tetanus and diphtheria vaccines, they should be given the recommended number of doses—only one of which should be Tdap, the others Td.

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TABLE 1**Vaccines recommended for early adolescents**

VACCINE	ROUTE	SCHEDULE	CONTRAINDICATIONS*	PRECAUTIONS
MCV4	IM	1 dose		Moderate to severe illness
Tdap	IM	1 dose, may need other doses of Td to complete a tetanus and diphtheria series	Encephalopathy within 7 days of previous vaccine not attributed to other cause	Hypersensitivity with prior tetanus toxoid Progressive neurological disorder Latex allergy Guillain-Barré syndrome within 6 weeks of a previous dose of tetanus toxoid Acute moderate to severe illness
HPV	IM	3 doses at months 0, 2, and 6	History of hypersensitivity to yeast	Defer for moderate to severe illness
Varicella	SQ	2 doses 3 months apart (1 month interval is acceptable)	Pregnancy Severe suppression of cellular immunity	Moderate to severe illness Receipt of antibody containing blood product in the preceding 11 months

Complete information for each vaccine can be located on the CDC web site at: www.cdc.gov/node.do/id/0900f3ec8005df1f.

* All vaccines have as a contraindication a previous anaphylactic reaction to the vaccine or vaccine components.

Details on contraindications can be found at: www.cdc.gov/nip/recs/contraindications_vacc.htm#var.

The number and timing of doses can be found at www.cdc.gov/mmwr/preview/mmwrhtml/rr55e223a5.htm.

■ Human papilloma virus vaccine

The HPV vaccine (Gardasil) is licensed only for females aged 9 to 26 years, and is the first vaccine for the prevention of cervical cancer. It protects against HPV types 6, 11, 16, and 18, which are the cause of approximately 80% of cervical cancers. The ACIP recommends routine administration for all females between ages 9 and 26, preferably before the onset of sexual activity. The vaccine requires 3 doses at months 0, 2, and 6; it can be administered concurrently with MCV4, Tdap, and Td.

■ Varicella vaccine

Two doses of varicella are now recommended for all children at ages 12 to 15 months and 4 to 6 years—the same as for the measles, mumps, and rubella vaccine (MMR). A new MMRV product

(Proquad) could reduce the number of injections needed at these ages.

Adolescents and adults who are not immune to varicella should receive 2 doses of vaccine 3 months apart, or 1 dose if they have been vaccinated with a single dose of varicella vaccine. Immunity to varicella is defined as birth in the US prior to 1980, 2 doses of varicella vaccine, or having had a diagnosed case of chickenpox or shingles.

■ Other interventions

This expanding list of recommended vaccines should create an incentive for parents to bring their preteen children to visit a physician. The American College of Physicians (ACP) recommendations are built on the assumption that these vaccines should be part of a routine preventive visit at this age group.

If preteens do visit a physician more frequently, it will provide an opportunity for other health care maintenance interventions, such as measuring height, weight, and blood pressure and providing health education on diet, physical activity,

FAST TRACK

Some interventions with USPSTF “D” recommendations had been supported in various screening guidelines

TABLE 2

US Preventive Services Task Force recommendations on interventions for adolescents

Recommend For

- Screening for chlamydia in sexually active females
- Screening for gonorrhea in those at high risk
- Screening for HIV for those at high risk

Recommend Against

- Routine screening for scoliosis
- Routine screening for testicular cancer
- Routine screening for herpes simplex virus

Insufficient Evidence to Recommend For or Against

- Screening and counseling for alcohol abuse
- Screening for high blood pressure
- Screening for depression
- Screening for family violence
- Screening for gonorrhea and HIV if low risk
- Screening for tobacco use
- Screening for obesity and overweight
- Counseling about physical activity

Reports in Progress

- Screening for abuse of illicit drugs
- Counseling on avoidance of recreational injuries
- Prevention of youth violence

and substance abuse. Unfortunately, the evidence base for the effectiveness of preventive interventions at this age is very weak.

TABLE 2 lists the interventions for the age group 11 to 12 years that have been

evaluated by the US Preventive Services Task Force (USPSTF). This is not a comprehensive list of all possible preventive interventions for young adolescents, only those that have been evaluated by the USPSTF. Those with either an A (strongly recommend) or B (recommend) recommendation are screening tests related to risks involved with sexual activity and will not apply to all young adolescents. Some of those with a D recommendation (recommend against) will surprise many physicians, as they have historically been included in various screening guidelines.

The bulk of the potential interventions are in the I category (insufficient evidence to recommend for or against) or are the subject of an ongoing evaluation. Many of these receive this rating not because the targeted behavior is in question but because it is unclear how effective physician counseling in a clinical encounter is in changing these behaviors—for example, avoidance of tobacco products and maintenance of ideal weight. Many providers will probably choose to provide young adolescents advice on these topics in spite of the meager evidence available.

For more information

For a listing of vaccine components and contraindications see:
www.cdc.gov/nip/recs/contraindications.htm

Vaccine information statements are found at:
www.cdc.gov/nip/publications/VIS/default.htm#hvpv

For a useful chart with information on all vaccines go to:
www.cdc.gov/nip/vaccine/vac-chart-hcp.htm

General information on immunizations is on the CDC web site:
www.cdc.gov/mmwr/preview/mmwrhtml/rr5102a1.htm

The United States Preventive Services Task Force lists current recommendations, rationales, and clinical considerations at: www.ahrq.gov/clinic/uspstfix.htm