



Doug Campos-Outcalt,
MD, MPA
University of Arizona,
Phoenix

dougco@email.arizona.edu

USPSTF update: New and revised recommendations

Behavioral interventions for obese kids and teens can improve weight for up to a year, and a new analysis reverses previous advice on scoliosis screening.

Over the past year the US Preventive Services Task Force made 14 recommendations on 12 conditions (TABLE 1¹⁻¹²). One of these pronouncements was the unusual reversal of a previous “D” recommendation against screening for scoliosis in adolescents, changing it to an “I” statement (insufficient evidence).

Affirmative recommendations

Four interventions were given an “A” or “B” recommendation this past year. Both grades signify a recommendation to perform the service, with “A” reflecting a higher level of certainty or a higher level of net benefit than “B.”

Recommend folic acid to prevent neural tube defects (A)

The evidence is very strong that folic acid intake prevents neural tube defects. In 2009 the Task Force recommended folic acid supplementation for women of childbearing age. In 2017 this recommendation was updated and slightly reworded to advise that all women who are planning a pregnancy or capable of becoming pregnant take a daily supplement containing 0.4 mg to 0.8 mg (400-800 mcg) of folic acid.

In the United States many grain products have been fortified with folic acid since 1996. This step has reduced the prevalence of neural tube defects from 10.7 cases per 10,000 live births to 7 cases per 10,000 live

births in 2011.¹ However, in spite of food fortification, most women in the United States do not consume the recommended daily amount of 0.4 mg (400 mcg) of folic acid. This supplementation is most important from one month before conception through the first 3 months of pregnancy.

Screen for obesity in children and adolescents (B)

Nearly 17% of children and adolescents ages 2 to 19 years in the United States are obese, and almost 32% are overweight or obese.² Obesity is defined as a body mass index (BMI) \geq 95th percentile, based on year-2000 growth charts published by the Centers for Disease Control and Prevention. Overweight is defined as a BMI between the 85th and 94th percentiles.

Obesity in children and adolescents is associated with many physical problems, including obstructive sleep apnea, orthopedic problems, high blood pressure, hyperlipidemia, and diabetes, as well as psychological harms from being teased and bullied. Obesity that continues into adulthood is associated with diabetes, cardiovascular disease, and orthopedic problems.

The Task Force found that intensive behavioral interventions for obesity in children \geq 6 years of age and in adolescents can lead to moderate improvements in weight status for up to 12 months. Intensive behavioral interventions need to include at least 26 contact hours over 2 to 12 months. The recommenda-

TABLE 1

Recent recommendations from the USPSTF¹⁻¹²

A and B recommendations	
Prescribe a daily supplement containing 0.4 mg to 0.8 mg (400-800 mcg) of folic acid for all women who are planning or capable of pregnancy. (A)	
Screen for obesity in children ≥6 years of age and adolescents, and offer (or refer for) comprehensive, intensive behavioral interventions to promote improvements in weight status. (B)	
Screen for preeclampsia in pregnant women with blood pressure measurements throughout pregnancy. (B)	
Perform vision screening at least once in all children 3 to 5 years of age to detect amblyopia or its risk factors. (B)	
D recommendations	
Avoid using combined estrogen and progestin for the primary prevention of chronic conditions in postmenopausal women.	
Avoid using estrogen alone for the primary prevention of chronic conditions in postmenopausal women who have had a hysterectomy.	
Avoid screening for ovarian cancer in asymptomatic women. (This recommendation applies to asymptomatic women who are not known to have a high-risk hereditary cancer syndrome.)	
Avoid screening for thyroid cancer in asymptomatic adults.	
I statements	
Vision screening in children <3 years of age.	
Screening for obstructive sleep apnea in asymptomatic adults.	
Screening for celiac disease in asymptomatic individuals of any age.	
Performing screening pelvic examinations in asymptomatic women for the early detection and treatment of a range of gynecologic conditions.	
Screening for adolescent idiopathic scoliosis in children and adolescents ages 10 to 18 years.	
C recommendation	
Individualize the decision to advise behavioral counseling to non-obese adults without hypertension, dyslipidemia, abnormal blood glucose levels, or diabetes to promote a healthful diet and physical activity.	

USPSTF grading system for its recommendations

Grade	Definition	Suggestions for practice
A	USPSTF recommends the service. There is a high certainty that the net benefit is substantial.	Offer or provide this service.
B	USPSTF recommends the service. There is a high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	USPSTF recommends selectively offering or providing this service to individuals based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on individual circumstances.
D	USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I	USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

USPSTF, US Preventive Services Task Force.

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Perform vision screening in all children 3 to 5 years of age to detect amblyopia or its risk factors.

Avoid screening for ovarian cancer in asymptomatic women without a high risk of hereditary cancer.

tion statement includes a more detailed description of the types of programs that have evidence to support them.²

The Task Force did not recommend the use of either metformin or orlistat because of inadequate evidence on the harmful effects of metformin and because of sound evidence that orlistat causes moderate harms, such as abdominal pain, cramping, incontinence, and flatus.

Screen for preeclampsia (B), but dipstick testing is unreliable

Preeclampsia occurs in a little more than 3% of pregnancies in the United States.¹³ For the mother, this condition can lead to stroke, eclampsia, organ failure, and death; for the fetus, intrauterine growth retardation, preterm birth, low birth weight, and still birth. Preeclampsia is a leading cause of maternal mortality worldwide. Adverse health outcomes can be prevented by early detection of preeclampsia and by managing it appropriately.³

In 1996 the Task Force recommended screening for preeclampsia during pregnancy, and it reaffirmed that recommendation last year. The Task Force recommends taking blood pressure measurements at every prenatal visit, but does not recommend testing for urine protein with a dipstick because of the technique's low accuracy.

Since 2014 the Task Force has also recommended using low-dose aspirin after Week 12 of pregnancy to prevent preeclampsia in women who are at high risk.¹⁴

Conduct vision screening in all children ages 3 to 5 years (B)

One of the more nuanced recommendations involves vision screening in children. The Task Force recently reaffirmed its 2011 recommendation to perform vision screening at least once in all children ages 3 to 5 years to detect amblyopia or its risk factors. But it found insufficient evidence to test children <3 years of age.

Amblyopia is a "functional reduction in visual acuity characterized by abnormal processing of visual images; [it is] established by the brain during a critical period of vision development."⁴ Risk factors associated with the development of amblyopia include strabismus (ocular misalignment); vision loss caused

by cataracts; refractive errors such as near and far sightedness, astigmatism ("blurred vision at any distance due to abnormal curvature of the cornea or lens"); and anisometropia ("asymmetric refractive error between the ... eyes that causes image suppression in the eye with the larger error").⁴

Physical exam- and machine-based screening tests are available in the primary care setting (TABLE 2).⁴

At first glance it appears that the Task Force recommends screening only for amblyopia, but the addition of "risk factors" implies a more comprehensive vision evaluation that would include visual acuity. This interpretation more closely aligns the Task Force recommendation with that of a joint report by the American Academy of Pediatrics, American Association for Pediatric Ophthalmology and Strabismus, American Academy of Certified Orthoptists, and American Academy of Ophthalmology, which recommends testing for a variety of vision problems in children.¹⁵ Nevertheless, the Task Force maintains that the evidence of benefit in testing more extensively before age 3 is insufficient, while the other organizations recommend starting testing at age 6 months.

Negative "D" recommendations

Equally as important as affirmative recommendations for effective interventions are the "D" recommendations advising against interventions that are ineffective or cause more harm than benefits. This past year, the Task Force recommended against 4 interventions. Two pertain to the use of estrogen or combined estrogen and progestin for the primary prevention of chronic conditions in postmenopausal women.⁵ This topic has been discussed in a recent *JFP* audiocast (<http://bit.ly/2IxIH45>). Also receiving "D" recommendations were screening for ovarian cancer in asymptomatic women,⁶ discussed in another *JFP* audiocast (<http://bit.ly/2q8JTMR>), and screening for thyroid cancer in asymptomatic adults.⁷

The "D" recommendation for thyroid cancer screening was based on the low incidence of thyroid cancer, the evidence showing no change in mortality after the introduction of population-based screening, and the likelihood of overdiagnosis and overtreatment that

TABLE 2

Primary care screening tests for vision abnormalities⁴

Category	Screening test	Description
Visual acuity	Picture identification	Figure identification from various distances (eg, the LEA Symbols chart uses a circle, apple, square, and house; symbols gradually get smaller)
	HOTV identification	Identification of the letters HOTV, which gradually get smaller
	Snellen	Letter or number identification; characters gradually get smaller
	Tumbling E	Identification of the direction of arms of the letter E; the letter gradually gets smaller
Stereoacuity	Contour stereotest	Use of polarized glasses and stereo cards to determine whether a child can correctly identify a 3D image (eg, Frisby, Random Dot E, Randot Stereo Smile, Titmus Fly)
	Moving dynamic random dot stereosize test	Computer-generated moving stereotest dots
Ocular alignment	Corneal light reflex (Hirschberg test)	Symmetric light reflex in both pupils from light held 2 feet away; can also detect cataracts and tumors
	Cover-uncover test (cross-cover test)	Alignment changes when covering or uncovering a single focusing eye
	Red reflex test (Bruckner test)	Equal red reflexes when viewed through ophthalmoscope; can also detect cataracts and tumors
Photoscreening (multiple categories)	Photoscreening	A trained observer evaluates images of corneal light reflexes from a calibrated camera; binocular; can assess ocular alignment, media opacity, and visual acuity
Autorefraction (automated visual acuity test)	Autorefractive screening	Estimates refractive error using an automated device; monocular; does not assess ocular alignment

would result from screening. The screening tests considered by the Task Force included neck palpation and ultrasound.⁷

Insufficient evidence

In addition to the previously mentioned “I” statement on vision screening for children <3 years of age,⁴ 4 other interventions lacked sufficient evidence that the Task Force could use in determining relative levels of harms and benefits. These interventions were screening for obstructive sleep apnea in asymptomatic adults,⁸ screening for celiac disease in asymptomatic patients of all ages,⁹ screening with a pelvic examination in asymptomatic women,¹⁰ and screening for adolescent idiopathic scoliosis in children and adolescents ages 10 to 18 years.¹¹

The lack of evidence regarding the value of a routine pelvic exam for asymptomatic women is surprising given how often this procedure is performed. The Task Force defined a pelvic exam as an “assessment of the external genitalia, internal speculum exami-

nation, bimanual palpation, and rectovaginal examination.”¹⁰ The Task Force found very little evidence on the accuracy and effectiveness of this exam for a range of gynecologic conditions other than cervical cancer, gonorrhea, and chlamydia, for which screening is recommended.¹⁰

The “I” statement on screening for adolescent idiopathic scoliosis in children and adolescents is an unusual revision of a “D” recommendation from 2004. At that time, the Task Force found that treatment of adolescent idiopathic scoliosis leads to health benefits in only a small proportion of individuals and that there are harms of treatment such as unnecessary bracing and referral to specialty care. For the most recent evidence report, the Task Force used a new methodology to assess treatment harms and concluded that the evidence is now inadequate. That finding, along with new evidence that “suggests that brace treatment can interrupt or slow scoliosis progression” led the Task Force to move away from a “D” recommendation.¹¹

The enigmatic “C” recommendation

Perhaps the most difficult recommendation category to understand and implement is the “C” recommendation. With a “C” intervention, there is moderate certainty that the net benefit of universal implementation would be very small; but there are some individuals who might benefit from it, and physicians should offer it selectively.

The Task Force made one “C” recommendation over the past year: for adults who are not obese and who do not have other cardiovascular disease (CVD) risks, the net gain in referring them to behavioral counseling to promote a healthful diet and physical activity is small. However, the harms from such referrals are also small. Counseling interventions can result in healthier habits and in small improvements in intermediate outcomes, such as blood pressure, cholesterol levels, and weight. The effect on overall CVD mortality, though, has been minimal.¹² The Task Force concluded that “[those] who are interested and ready to make behavioral changes may be most likely to benefit from behavioral counseling.” **JFP**

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The “I” statement on screening for adolescent idiopathic scoliosis in children and adolescents is an unusual revision of a “D” recommendation from 2004.

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