

U.S. Preventive Services Task Force

Behavioral Counseling to Prevent Skin Cancer: Recommendation Statement

Summary of Recommendations and Evidence

The USPSTF recommends counseling young adults, adolescents, children, and parents of young children about minimizing exposure to ultraviolet (UV) radiation for persons aged 6 months to 24 years with fair skin types to reduce their risk of skin cancer (*Table 1*). **B recommendation.**

The USPSTF recommends that clinicians selectively offer counseling to adults older than 24 years with fair skin types about minimizing their exposure to UV radiation to reduce risk of skin cancer. Existing evidence indicates that the net benefit of counseling all adults older than 24 years is small. In determining whether counseling is appropriate in individual cases, patients and clinicians should consider the presence of risk factors for skin cancer. **C recommendation.**

See the Clinical Considerations section for information on risk assessment.

The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of counseling adults about skin self-examination to prevent skin cancer. **I statement.**

See the Clinical Considerations section for suggestions for practice regarding the I statement.

Rationale

IMPORTANCE

Skin cancer is the most common type of cancer in the United States and is generally categorized

as melanoma or nonmelanoma skin cancer. Melanoma is the fifth-leading type of incident cancer, and 2.2% of adults will be diagnosed with it in their lifetime.¹ Although invasive melanoma accounts for 2% of all skin cancer cases, it is responsible for 80% of skin cancer deaths.¹ Basal and squamous cell carcinoma, the 2 predominant types of nonmelanoma skin cancer, represent the vast majority of skin cancer cases. There were an estimated 3.3 million new cases of nonmelanoma skin cancer in 2012 and an estimated 91,270 new cases of melanoma skin cancer in 2018.¹

RECOGNITION OF RISK STATUS

Exposure to UV radiation during childhood and adolescence increases the risk of skin cancer later in life, especially when more severe damage occurs, such as with severe sunburns. Persons with fair skin types (ivory or pale skin, light hair and eye color, freckles, or those who sunburn easily) are at increased risk of skin cancer. Persons who use tanning beds and those with a history of sunburns or previous skin cancer are also at substantially increased risk of skin cancer. Other factors that further increase risk include an increased number of nevi (moles) and atypical nevi, family history of skin cancer, human immunodeficiency virus (HIV) infection, and history of receiving an organ transplant. Most studies of interventions to increase sun-protection behaviors have been limited to persons with fair skin types.²⁻⁴

See related Putting Prevention into Practice on page 105.

As published by the U.S. Preventive Services Task Force.

This summary is one in a series excerpted from the Recommendation Statements released by the USPSTF. These statements address preventive health services for use in primary care clinical settings, including screening tests, counseling, and preventive medications.

The complete version of this statement, including supporting scientific evidence, evidence tables, grading system, members of the USPSTF at the time this recommendation was finalized, and references, is available on the USPSTF website at <https://www.uspreventiveservicestaskforce.org/>.

This series is coordinated by Kenny Lin, MD, Deputy Editor.

A collection of USPSTF recommendation statements published in *AFP* is available at <https://www.aafp.org/afp/uspstf>.

TABLE 1

Behavioral Counseling to Prevent Skin Cancer: Clinical Summary of the USPSTF Recommendation

Population	Young adults, adolescents, children, and parents of young children with fair skin type	Adults older than 24 years with fair skin type	Skin self-examination in adults
Recommendation	Counsel about minimizing exposure to UV radiation. Grade: B	Selectively offer counseling about minimizing exposure to UV radiation. Grade: C	No recommendation. Grade: I (insufficient evidence)
Risk assessment	UV radiation exposure during childhood and adolescence increases risk of skin cancer later in life, especially when more severe damage occurs. Persons with fair skin type (light hair and eye color, freckles, those who sunburn easily) are at increased risk of skin cancer. Persons who use tanning beds and those with a history of sunburns or previous skin cancer are also at greatly increased risk of skin cancer. Other factors that increase risk include an increased number of nevi (moles) and atypical nevi, family history of skin cancer, human immunodeficiency virus infection, and history of receiving an organ transplant.		
Behavioral counseling interventions	Behavioral counseling interventions target sun-protection behaviors to reduce UV radiation exposure, including use of broad-spectrum sunscreen with a sun-protection factor of 15 or greater; wearing hats, sunglasses, or sun-protective clothing; avoiding sun exposure; seeking shade during midday hours (10 am to 4 pm); and avoiding indoor tanning bed use.		
Other relevant USPSTF recommendations	The USPSTF has issued a recommendation on screening for skin cancer in adults.		

Note: For a summary of the evidence systematically reviewed in making this recommendation, the full recommendation statement, and supporting documents, go to <https://www.uspreventiveservicestaskforce.org/>.

USPSTF = U.S. Preventive Services Task Force; UV = ultraviolet.

BENEFITS OF BEHAVIORAL COUNSELING INTERVENTIONS

Behavioral counseling interventions target sun-protection behaviors to reduce UV radiation exposure. UV radiation is a known carcinogen⁵ that damages DNA and causes most skin cancer cases.⁶ A substantial body of observational evidence demonstrates that the strongest connection between UV radiation exposure and skin cancer results from exposure in childhood and adolescence. Sun-protection behaviors include the use of broad-spectrum sunscreen with a sun-protection factor of 15 or greater; wearing hats, sunglasses, or sun-protective clothing; avoiding sun exposure; seeking shade during midday hours (10 am to 4 pm); and avoiding indoor tanning bed use.

The USPSTF found adequate evidence that behavioral counseling interventions available in or referable from a primary care setting result in a moderate increase in the use of sun-protection

behaviors for persons aged 6 months to 24 years with fair skin types.

The USPSTF found adequate evidence that behavioral counseling interventions available in or referable from a primary care setting result in a small increase in the use of sun-protection behaviors for persons older than 24 years with fair skin types.

The USPSTF found insufficient evidence regarding the benefits of counseling adults about skin self-examination to prevent skin cancer.

HARMS OF BEHAVIORAL COUNSELING INTERVENTIONS

The USPSTF found adequate evidence that the harms related to behavioral counseling interventions and sun-protection behaviors in young persons or adults are small. The USPSTF found inadequate evidence regarding the harms of counseling adults about skin self-examination.

USPSTF ASSESSMENT

The USPSTF concludes with moderate certainty that behavioral counseling interventions have a moderate net benefit for young adults, adolescents, and children aged 6 months to 24 years with fair skin types.

The USPSTF concludes with moderate certainty that behavioral counseling interventions have a small benefit in adults older than 24 years with fair skin types.

The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of counseling adults about skin self-examination.

Clinical Considerations

PATIENT POPULATION UNDER CONSIDERATION

This recommendation applies to asymptomatic persons without a history of skin cancer. Because most trials of skin cancer counseling predominantly include persons with fair skin types, the USPSTF limited its recommendation to this population.

ASSESSMENT OF RISK

Persons with fair skin types (ivory or pale skin, light eye color, red or blond hair, freckles, those who sunburn easily) are at increased risk of skin cancer and should be counseled. Other factors that further increase risk include a history of sunburns, previous use of indoor tanning beds, and a family or personal history of skin cancer. Persons with an increased number of nevi and atypical nevi are at increased risk of melanoma. Persons with a compromised immune system (e.g., persons living with HIV, persons who have received an organ transplant) are at increased risk of skin cancer.

BEHAVIORAL COUNSELING INTERVENTIONS

All studies conducted in children and adolescents focused on sun-protection behaviors; most were directed at parents, and some provided child-specific materials or messages. Half of the interventions included face-to-face counseling, and all included print materials. Three studies provided the intervention in conjunction with well-child visits. The majority of studies conducted in young adults and adults focused on improving sun-protection behaviors, and 2 studies used “appearance-focused” messages. The mode of delivery varied and included

mail-based, face-to-face, or telephone counseling and technology-based (text messages, online programs and modules, personal UV facial photographs) interventions.²

SUGGESTIONS FOR PRACTICE REGARDING THE I STATEMENT

Potential Preventable Burden. Counseling adults about performing skin self-examination appears to result in an increase of such examinations. The potential benefit of behavioral counseling about skin self-examination is uncertain because of the lack of evidence on the link between behavior change and skin cancer or other health outcomes. In addition, there is no evidence about the incremental benefit that might occur with skin self-examination above the benefit from counseling for skin-protective behaviors and from current levels of skin examinations being performed by clinicians.

Potential Harms. Skin self-examination is performed by the patient and is noninvasive. Psychosocial harms, such as anxiety or cancer worry, are possible. If skin self-examination leads to biopsy, procedural harms such as pain, bleeding, scarring, or infection could occur.⁷

Current Practice. The frequency of behavioral counseling for skin self-examination in the asymptomatic population is not well known.

ADDITIONAL APPROACHES TO PREVENTION

The Community Preventive Services Task Force recommends child care center-based, primary and middle school-based, and multicomponent community-wide interventions for the prevention of skin cancer.⁸ These interventions combine school- and community-based communications and policy to increase preventive behaviors (e.g., covering up, using shade, or avoiding the sun during peak UV hours) among certain populations in specific settings.

The U.S. Food and Drug Administration (FDA) provides information to help guide patients and clinicians regarding sun protection and the use and effectiveness of broad-spectrum sunscreen.⁹ The FDA has determined that broad-spectrum sunscreens with a sun-protection factor of 15 or greater, reapplied at least every 2 hours, protect against both UVA and UVB radiation and reduce the risk of skin cancer and early skin aging. The FDA also provides consumer education materials on the dangers of indoor tanning.¹⁰

The Environmental Protection Agency provides a variety of educational tools regarding sun safety, including state-specific information, and interactive widgets and smartphone applications that forecast UV exposure by zip code or city. It also provides sun-safety fact sheets and handouts, including age-appropriate materials.¹¹

USEFUL RESOURCES

The USPSTF has issued a recommendation on screening for skin cancer in adults.¹²

This recommendation statement was first published in *JAMA*. 2018;319(11):1134-1142.

The “Other Considerations,” “Discussion,” “Update of Previous USPSTF Recommendation,” and “Recommendations of Others” sections of this recommendation statement are available at <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/skin-cancer-counseling2>.

The USPSTF recommendations are independent of the U.S. government. They do not represent the views of the Agency for Healthcare Research and Quality, the U.S. Department of Health and Human Services, or the U.S. Public Health Service.

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