

Behavioral Counseling to Prevent Skin Cancer: Recommendation Statement

► See related Putting Prevention into Practice on page 773.

This summary is one in a series excerpted from the recommendation statements released by the U.S. Preventive Services Task Force (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 Web site at <http://www.uspreventiveservicestaskforce.org/>.

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

Summary of Recommendations and Evidence

The U.S. Preventive Services Task Force (USPSTF) recommends counseling children, adolescents, and young adults 10 to 24 years of age who have fair skin about minimizing their exposure to ultraviolet (UV) radiation to reduce the risk of skin cancer (*Table 1*).

B recommendation.

The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of counseling adults older than 24 years about minimizing risks to prevent skin cancer. **I statement.**

Rationale

Importance. Skin cancer is the most common type of cancer in the United States and is diagnosed in more than 2 million Americans each year. Most cases are basal cell or squamous cell cancer. Whereas basal cell cancer rarely metastasizes and is not associated with cancer deaths, squamous cell cancer has metastatic potential and does account for a small percentage of all cancer deaths.¹ Melanoma, although less common, is more deadly. Approximately 70,000 cases of melanoma occurred in 2011, and nearly 8,800 deaths. The incidence of melanoma has been increasing among white Americans, from 8.7 per 100,000 persons in 1975 to 27.6 per 100,000 in 2008.²

Link of behavior change to cancer outcomes. Behavior change interventions are aimed at techniques shown to be effective in reducing UV radiation exposure. UV radiation comes from exposure to the sun during midday hours and from artificial sources of UV light (such as indoor tanning). Sun-protective behaviors include using broad-spectrum sunscreen with a sun protection factor of 15 or greater, wearing hats or other shade-protective clothing, avoiding the

outdoors from 10 a.m. to 3 p.m., and avoiding indoor tanning. Utilizing all behaviors is important to minimizing risk.

Epidemiologic evidence links UV radiation exposure with incidence of all three types of skin cancer.³ The USPSTF found convincing evidence linking UV radiation exposure during childhood and youth to a moderately increased risk of skin cancer later in life; for adults, adequate evidence links UV radiation exposure to a small increase in risk of skin cancer.

Recognition of risk status. Persons with fair skin, light hair and eye color, or freckles, and persons who sunburn easily are at increased risk of skin cancer.¹ Most studies of interventions to increase sun-protective behaviors have been limited to populations with a fair skin type.

Benefits of behavioral counseling interventions. For children, adolescents, and young adults 10 to 24 years of age, the USPSTF found adequate evidence that counseling interventions that are available in a primary care setting or are referable from primary care can moderately increase the use of sun-protective behaviors.

For adults older than 24 years, the USPSTF found inadequate evidence to determine the effect of counseling on the use of sun-protective behaviors.

Harms of behavioral counseling interventions. The USPSTF found adequate evidence that no appreciable harms are related to counseling or sun-protective behaviors in young persons or adults. Theoretical concerns about sun-protective behaviors include the risk of vitamin D deficiency in adults living in northern latitudes, but little evidence supports this hypothesis.

USPSTF assessment. The USPSTF concludes that for children, adolescents, and young adults 10 to 24 years of age with fair

Table 1. Behavioral Counseling to Prevent Skin Cancer: Clinical Summary of the USPSTF Recommendation

Population	Children, adolescents, and young adults 10 to 24 years of age with fair skin	Adults older than 24 years
Recommendation	Provide counseling about minimizing exposure to UV radiation to reduce the risk of skin cancer Grade: B	No recommendation Grade: I (insufficient evidence)
Risk assessment	Persons with a fair skin type are at greatly increased risk of skin cancer. Fair skin type can be defined by eye and hair color, freckling, and historical factors, such as usual reaction to sun exposure (always or usually burning or infrequently tanning).	
Behavioral counseling	Effective counseling interventions were generally of low intensity and almost entirely accomplished within the primary care visit.	
Interventions	Successful counseling interventions used cancer prevention or appearance-focused messages (such as stressing the aging effect of UV radiation on the skin) to reach specific audiences.	
Interventions	Behavior change interventions are aimed at reducing UV radiation exposure. Sun-protective behaviors include using a broad-spectrum sunscreen with a sun protection factor of 15 or greater, wearing hats or other shade-protective clothing, avoiding the outdoors during midday hours (10 a.m. to 3 p.m.), and avoiding the use of indoor tanning.	
Balance of harms and benefits	For children, adolescents, and young adults 10 to 24 years of age with fair skin, primary care counseling interventions can increase the use of sun-protective behaviors by a moderate amount, with no appreciable harms.	For adults older than 24 years, there is inadequate evidence to determine the effect of counseling on the use of sun-protective behaviors.
Other relevant USPSTF recommendations	The USPSTF has made recommendations on screening for skin cancer, which are available at http://www.uspreventiveservicestaskforce.org/ .	

NOTE: For the full recommendation statement and supporting documents, go to <http://www.uspreventiveservicestaskforce.org/>.

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

skin, there is moderate certainty that counseling has a moderate net benefit.

The USPSTF concludes that for adults older than 24 years, evidence of the benefits of counseling is sparse and of unknown clinical significance; therefore, the balance of benefits and harms cannot be determined.

Clinical Considerations

Patient population. This recommendation applies to all asymptomatic persons with no history of skin cancer. Because most trials of skin cancer counseling include only persons with a fair skin type, the recommendation for counseling of children, adolescents, and young adults 10 to 24 years of age is limited to this population. Few trials were available to determine the effectiveness of counseling parents or guardians to prevent UV exposure in children younger than 10 years; therefore, the recommendation does not address this population.

Suggestions for practice regarding the I statement. Potential preventable burden: Counseling adults is of uncertain potential benefit because of the unknown effectiveness of counseling interventions in changing behavior and because of the less secure link between behavior change in adulthood and risk of skin cancer. UV exposure after 35 years of age may contribute less

to one's lifetime risk of skin cancer than exposure at a younger age.

Assessment of risk. Skin type can be visually assessed by primary care clinicians. Fair skin type can be defined by eye and hair color, freckling, and historical factors, such as usual reaction to sun exposure (always or usually burning or infrequently tanning).

Effective counseling interventions. Effective interventions were generally of low intensity and were done almost entirely during the primary care interaction or visit. Successful counseling interventions used cancer prevention or appearance-focused messages to reach specific audiences. The latter types of messages were successful at reducing intent to pursue indoor tanning among late-adolescent women (the population most likely to do so). Appearance-focused interventions used various methods, including self-guided booklets, a video on photoaging, and 30-minute peer counseling sessions. One study used UV facial photography as an adjunct to the appearance-focused video.⁴ The UV camera can be used to demonstrate to patients the extent of skin damage from UV exposure.

Other approaches to prevention. The Community Preventive Services Task Force recommends education and policy interventions for the prevention of skin

cancer.⁵ These interventions combine community-based communications and policy and regulation to increase preventive behaviors (such as covering up, using shade, or avoiding the sun during peak UV hours) among populations in specific settings, including primary school and outdoor recreational settings.

The U.S. Food and Drug Administration has information to help guide patients and clinicians on the use and effectiveness of broad-spectrum sunscreens (<http://www.fda.gov/sunscreen>). It has determined that, if used as directed, broad-spectrum sunscreens with a sun protection factor of 15 or greater protect against UV A and UV B radiation, and reduce the risk of skin cancer and early skin aging. The agency also has consumer education materials on the dangers of indoor tanning.

Although outside the scope of this recommendation, community-based interventions to promote and support sun safety, such as direct peer-to-peer support, social marketing initiatives, workplace initiatives, and public policy actions, may offer additional sizeable benefits.

Useful resources. The USPSTF recommendation on screening for skin cancer is available at <http://www.uspreventiveservicestaskforce.org>.

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The "Other Considerations," "Discussion," and "Recommendations of Others" sections of this recommendation statement are available at <http://www.uspreventiveservicestaskforce.org/uspstf/uspsskco.htm>.

The U.S. Preventive Services Task Force 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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