

Recommendations and sun protection

PHOTOPROTECTION

BASIC

Exposure to solar UV radiation is the most important environmental risk factor for all types of skin cancer, the most common type of cancer in light-skinned populations in many parts of the world. One could imagine that sun exposure should be easily modifiable through behavioral intervention and that change in behavior should have an impact on decreasing cancer incidence.¹

Sun exposure habits and the propensity to undertake sun protection differ between individuals.

Previous studies have shown that individuals with high skin UV-sensitivity and blond or red hair, tend to protect themselves from the sun more than those with low skin UV-sensitivity and dark hair.²

Dermatologists, pediatricians, general practitioners and other healthcare professionals play an important role in skin cancer prevention by advising patients on lifestyle behavior. However, several studies reported that sun-protection counseling ranks among the lowest topics of primary prevention discussed between physician and patients.^{3,4}



How physicians are recommending sun-protection?

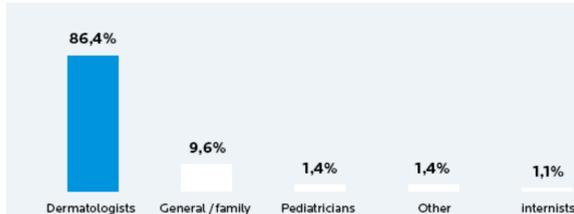
A recent publication⁵, compiling information from 18.30 billions patient visits, reported that:

Sunscreen was recommended at 0.07%, mostly for patients in their eighth decade of life (21.8% of visits associated with sunscreen recommendation).

In contrast, sunscreen was recommended the least for children younger than 10 years. The frequency of sunscreen recommendation was 12 times greater for patient visits associated with a diagnosis of skin disease.

Although sunscreen was most frequently recommended by dermatologists, the mention of sunscreen was recorded at 1.6% of all dermatology visits.⁵

In addition, dermatologists mentioned sunscreen at 11.2% of visits associated with a diagnosis of active or remote history of skin cancer.⁵



Appointments associated with sunscreen recommendation⁵

This low frequency of sunscreen recommendation by dermatologists is of concern because:

Dermatologists saw more than 20 times the number of patients with a history of skin cancer (7.1 million) compared with general/family physicians (320 000).⁵

Moreover, the frequency with which dermatologists recommended sunscreen to this population of patients was significantly less than that of general/family physicians (11.2% vs 55.5%).⁵

The top 10 list of diagnoses associated with sunscreen recommendation was similar among all specialists:

- Actinic keratosis was the most common diagnosis reported at visits during which sunscreen was recommended, accounting for nearly a quarter (20.9%) of diagnoses.⁵
- This was followed by acne (8.1%), benign neoplasm of the skin (6.8%), other dermatitis due to solar radiation (5.6%), and malignant neoplasm of the skin (5.2%).⁵



Children and adolescents were recommended sunscreen the least compared with all patient age groups

Up to 80% of sun damage is thought to occur before age 21 years, and sunburns in childhood greatly increase the risk for future melanoma.^{6,7}

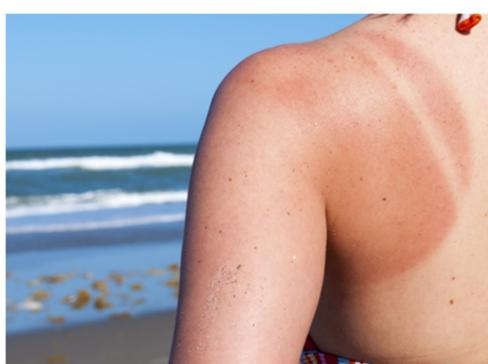
The findings are concerning because they get the most sun exposure of any age group, as they tend to spend much of their time playing outdoors.

International guidelines advise pediatricians to discuss sun protection at least yearly during health maintenance examinations and to familiarize themselves with medications with photosensitizing effects.⁸

What make patients follow recommendations about sunscreen?

Adults

A review of the skin cancer prevention literature found that sun-protective behaviors were positively associated with a range of factors: **female gender, higher education levels, personal and family histories of skin cancer, self-estimated sun-sensitive phenotype, greater perceived risk of skin cancer, greater perceived benefits of sun protection or screening, and doctor recommendation for screening.**^{9,10}



Teenagers

A recent study¹¹ reporting on awareness, attitudes and behavior of teenagers to sunlight has showed that the vast majority of student knew that there is a relationship between skin cancer and sun exposure. Surprisingly not, 61.2% of students reported frequent sunbathing during the past year, 63.1% of the students reported sunburn during last summer and 15.8% of students reported sunburn with blisters. **Only 28.9% of students were always or almost always exposed to the sun at some time between 12 and 5 pm.** Sun protection measures were taken by 62.4% of the students. **The correct approach (always use the cream, reapply it every two hours and protection factor >40) had not been adopted by 98.7% of the global student population.** One explanation appears to be the major interest of adolescents, described by some authors as an obsession in achieving a tan.¹¹

Children

A recent German study showed that larger families, lower household equivalent income, marginally employment/unemployment, darker skin type, sunburn history and less frequent use of other sun protection measures were significantly associated with inadequate sun protection use.¹² A study conducted in Australia showed that **up to 43% of parents agreed with at least one of the less supportive statements: protecting their child was too much trouble, suntans were attractive, or that their child was resistant to wearing hats or sunscreen.** Interestingly, the same study showed the parent's use of specific sun-protection behaviors was associated with the child's use of the same protective behavior.¹³

This might suggest that **campaigns targeting adults (and hence parents) may have a wider benefit in improving children's sun protection.**¹⁵



The American Academy of Dermatology, the National Institutes of Health, and the American Cancer Society, recommend physicians provide patient counseling regarding sun exposure and sun-protective behaviors:¹⁴

- Seeking shade and avoiding the sun, especially between 10 AM and 4 PM;
- Wearing sun-protective clothing, including long-sleeved shirts, pants, sunglasses and wide-brimmed hats;
- Use extra caution near water, snow and sand;
- Avoiding artificial UV light;
- Applying and reapplying sunscreen.



What's to be done in practice tomorrow?

Multiple professional organizations recommend **sun-protection education, including sunscreen use.**

However, only a **small percentage of physicians are implementing these recommendations** into their practice.

The **high incidence and morbidity of skin cancer could be greatly reduced with the implementation of sun-protective behaviors, which patients should be educated about at outpatient visits.**¹⁵

The necessity of adapted solar protections to preserve from sun exposure seems well accepted and understood by the vast majority of the population since education and correct information is delivered. Gender, age, educational level and skin type appear to be important factors affecting sun exposure habits and sun protection behavior, which supports the idea of appropriate mapping of these factors in patients in order to individualize sun protection advice according to the individual patient situation and capabilities.¹⁵

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