Guide to Skin Cancer Prevention: Facts and Myths about Ultraviolet Light and Sun Protection

Emily Y. Chu, M.D., Ph.D.
Assistant Professor of Dermatology and Pathology and Laboratory Medicine
Hospital of the University of Pennsylvania

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Summer is coming...
Protect yourself from the sun

Slip, Slop, Slap, Seek, Slide

Protect yourself in five ways from skin cancer
Protecting your skin from the sun is the best strategy to help prevent melanoma and other skin cancers.
What’s the single best way to protect yourself from the sun?

1) Avoid sun exposure
2) Sun-protective clothing
3) Sunscreen
Sun Avoidance
Early Morning  Noon  Late Afternoon

Earth
Sun's rays at noon have the least distance to travel through the atmosphere.
Early Morning  | Noon  | Late Afternoon

**AVOID**

10 am - 4 pm
Fact or Myth:
Beach umbrellas provide sufficient sun protection over an extended period of time

1. Fact
2. Myth
81 participants – randomized to use beach umbrella only versus sunscreen only

142 sunburns in the umbrella group, vs 17 in the sunscreen group

**CONCLUSION:** A beach umbrella alone may not provide sufficient protection for extended UV exposure
Sun protective clothing
Clothing is better than sunscreen

How to guarantee adequate sun protection for a young sportsperson

Sara Ghazi, Céline Couteau, Laurence J. M. Coiffard

Conclusions: Depending on the type of clothing, the level of sun protection will vary greatly, with UPF values ranging from 30 for a T-shirt to 300 for a club shirt. This type of protection is higher than that obtained by sun creams and does not change over time.
Sun protective clothing: how does it work?

• Construction
  – Dense, tight construction minimizes space between yarns = less UV light passing through

• Dyes
  – Some dyes deflect more UV radiation than others

• Treatments
  – UV absorbing chemicals may be added to clothing
  – Special laundry additives (SunGuard)

• Fiber type
  – Polyester > nylon > wool, silk > cotton, rayon

• Other factors: Stretch, Wetness, Condition
UPF: Ultraviolet Protection Factor

• Rating system used for apparel
  – Indicates how effectively fabrics shield from UV rays
  – Gauges effectiveness against both UVA and UVB rays
  – Higher the UPF, the better the protection

<table>
<thead>
<tr>
<th>Protection</th>
<th>UPF Ratings</th>
<th>Approximate UV Blocked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good UV Protection</td>
<td>15-24</td>
<td>93-96%</td>
</tr>
<tr>
<td>Very Good UV Protection</td>
<td>25-39</td>
<td>96-97%</td>
</tr>
<tr>
<td>Outstanding UV Protection</td>
<td>40-50+</td>
<td>97-99%</td>
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</table>
Where do you find sun protective clothing?

Almost anywhere
Invest in sun protective clothing

Sun Threadz

Do the Summer things you love!

Sun Protection Swim Jacket

Melanoma Monday - First Monday in May! Sun Protection Swim Jacket with signature ruffle neck, cuffs and waist; wear and be sun safe. Consider yourself clothed in sunscreen! Best sunscreen: SPF 98+ Made in USA.

$92.00
SunJacket:
Size: S
Color: Grey

Add to cart

Colleen Dougherty Bronstein
Supporter of Melanoma Program at Abramson Cancer Center of the University of Pennsylvania

The Creative Frontrunner for sun safe clothing. The ONLY designer clothing company for Sun Protective Clothing to promote sun protection and designed by a melanoma survivor and award-winning artist; someone who knows what it means and how it should feel to be truly protected and safe from the sun. These sun protection pieces are designed for YEAR ROUND WEAR whether you are in the city or at the beach. Percentage of all profits will go to the Abramson Cancer Center.

Read More
Facts about sunscreen
Studies have shown that regular sunscreen use decreases risk for squamous cell cancer and melanoma

Most of us do not apply adequate amounts of sunscreen.
“Broad spectrum” refers combined UVA and UVB protection

SPF number only indicates a sunscreen’s effectiveness against UVB rays (the UV light that can burn skin)

How much time you can get the stated SPF level of protection while swimming or sweating:
- Water resistant = 40 minutes
- Waterproof = 80 minutes
FDA regulations on sunscreen labels

- There is a “Skin Cancer/Skin Aging Alert” on the label if:
  - SPF is less than 15
  - Sunscreen is not “broad spectrum”

These products only help prevent sunburn, not skin cancer or early skin aging
SPF: Sun Protection Factor

- Rating system for sunscreen
  - SPF is a ratio of the dose of UV radiation that induces the first perceptible redness on the skin with sunscreen to the dose without sunscreen
  - Higher the SPF, the better the protection

<table>
<thead>
<tr>
<th>SPF Rating</th>
<th>Percentage of UVB blocked</th>
<th>Proportion of UV radiation that reaches the surface of skin</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>93.3%</td>
<td>6.7%</td>
</tr>
<tr>
<td>30</td>
<td>96.7%</td>
<td>3.3%</td>
</tr>
<tr>
<td>60</td>
<td>98.3%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>
Liberally apply sunscreen about 15-30 minutes before activities.

Use a sunscreen with the highest SPF that you ‘like using’.

Make sure to reapply your sunscreen every 1.5-2 hours when outside.
Fact or Myth: Sunscreen is the most effective anti-aging product you can put on your skin

1. Fact
2. Myth
Fact or Myth: Nicotinamide, a B3 vitamin derivative, may help prevent non-melanoma skin cancer

1. Fact

2. Myth
A Phase 3 Randomized Trial of Nicotinamide for Skin-Cancer Chemoprevention

23% reduction in BCC and SCC

No long-term safety data
No data for melanoma prevention

Patients excluded from trial
- immunosuppressed, history of invasive melanoma or metastatic cancer

Polypodium leucotomos extract (Heliocare)

- Polypodium leucotomos = fern plant
- Antioxidative and anti-inflammatory
- Approximate SPF 3-8
- Short study involving healthy volunteers taking 240 mg twice daily for 60 days showed suppression of UV-induced redness
Fact or Myth:
Rigorous sun protection can cause vitamin D insufficiency

1. Fact

2. Myth
Vitamin D Deficiency

• Strict sun protection may lead to Vitamin D deficiency, **BUT** most people who apply sunscreen do not use sunscreen as directed / apply it with the goal of obtaining prolonged sun exposure and therefore do not have vitamin D deficiency

• The American Academy of Dermatology does not recommend unprotected sun exposure to obtain vitamin D
The myth of the “healthy tan”
Sun protection is the healthy alternative!

You don’t have to be naked to be sexy.
-Nicole Kidman

Times change

It is against the law to smoke in this restaurant
Protect yourself from the sun

Protect yourself in five ways from skin cancer:

- Slip
- Slop
- Slap
- Seek
- Slide
Happy Mother's Day!
Thank you!