

# UPF Fashion! New Options to Keep UV Rays at Bay

## **INTRODUCTION**

Nobody wants skin cancer, so why is the most preventable form of cancer the most prevalent? Most people do not believe the danger is significant. According to the American Academy of Dermatology, only two of every five people use sunscreen consistently. Why? Laziness, low fatalities and lack of information. Many believe a “healthy glow” from the sun is good. But one in five Americans will develop skin cancer in their lifetime, and one American dies every hour from this devastating disease.

Why not use your clothing to your advantage? It provides protection that does not evaporate or rub off

in water, and clothing with an ultraviolet protection factor (UPF) rating screens out ultraviolet radiation (UVR). Fabrics typically used in clothing may only offer a UV protection level of 5, significantly less than the usual recommended level of 15.

## **WHAT IS UVR?**

UVR, ultraviolet radiation, is a portion of the electromagnetic spectrum with wavelengths shorter than visible light. The sun produces UVR, which is commonly split into three bands: UVA, UVB, and UVC.

## **What are UVA, UVB, and UVC?**

UVA rays penetrate more deeply into the skin. UVA damage is long-term and cumulative. It contributes to premature aging of the skin and skin cancers. Protection is needed all year. Tanning salons generally emit more UVA rays than natural sunlight, but do offer protection from UVB rays.

UVB is the most powerful and potentially harmful form of radiation. It affects mainly

*Look for the label at left. This is an example of a certifying agency's hang tag for products that undergo testing.*

**UPF 50+**  
**EXCELLENT UV PROTECTION**  
**UV-TESTED**

AMC  
Cancer Research Center  
**CERTIFIED**  
SUN PROTECTIVE PRODUCT

YOUR PURCHASE HELPS FUND CANCER RESEARCH

AMC Cancer Research Center certifies that the protective material in this product:

- Has been tested & labeled according to current & pending industry standards (AATCC & ASTM)
- Blocks at least 98% of harmful UV rays
- Reduces exposure to harmful UVA & UVB rays
- Protects only skin that is covered by the product

**NO PRODUCT PROVIDES 100% SUN PROTECTION!**

**To Be Safest in the Sun:**

- Limit your time in the sun, especially between the hours of 10am to 3pm
- Wear hats with wide brims, sunglasses and clothing designed to cover the most skin
- Apply sunscreen to exposed skin every day of the year, even when cool or cloudy
- Shade infants under 6 months old since sunscreen should not be used on babies

LOOK FOR ASPA MEMBERS' PRODUCTS WITH THE AMC CERTIFIED SEAL

For sun safety product information, visit ASPA on the web: [www.aspa.amc.org](http://www.aspa.amc.org)

AMC Cancer Research Center  
1600 Pierce Street • Denver, CO • 80214 • [www.amc.org](http://www.amc.org)

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outer skin layers, causing sunburn while contributing to aging, wrinkling, and skin cancer. UVB is stronger in the summer than winter, and higher at midday.

The ozone layer that surrounds the atmosphere usually screens out UVC radiation. Ozone depletion has created a growing ozone “hole” near the South Pole. Without this UVC screen, intensity and frequency of sun-related cancers will increase.

Increased exposure to all UV rays occurs at higher altitudes and proximity to the equator. Mountainous areas usually have the highest readings. In addition, cloudy or foggy conditions can reflect up to 80 percent of the sun’s UV rays. Sand, snow, and water also radiate significant UV rays, as do sidewalks and paved roads.

### **Overexposure can lead to . . .**

Excessive exposure and burns to the cornea increase the incidence of cataracts and blindness. All skin colors burn, and damage is cumulative. No matter the skin type, UV also damages the immune system.

### **Who is at risk?**

- Children: Much of the skin damage occurs before age 18.
- Outdoor workers: Farmers, fishermen and construction workers need protection.
- Sports enthusiasts and participants: Anyone who spends time outside is at risk.

### **TAKE PROTECTIVE MEASURES**

**Simple methods can be used to minimize risk:**

- Slip on a shirt (cover the body).*
- Slop on sunscreen.*
- Slap on a hat.*

### **WHAT IS UPF?**

UPF (ultraviolet protection factor): a measure of a fabric’s effectiveness at blocking UVA and UVB rays. UPF is similar to, but not the same as the SPF in sunscreens. UPF ratings can be as low as 4 or as high as 50. UPF ratings are not affected by temperature, altitude or geography. UPF-rated fabrics protect when wet or dry.

### **UPF for fabrics**

A UPF rating indicates the clothing or fabric has undergone tests subjecting it to conditions that simulate normal wear and care cycles. Check the product labeling information; the label or hang tag will tell you whether the certified rating is Good, Very Good, or Excellent and will report test methods.

The processes used to make fabrics UV protective use fluorescent brighteners, resins, compounds, dyes, and weave to enhance a fabric’s ability to absorb or reflect UV. Most of these processes would be undetectable to consumers. The UPF rating system was developed to help consumers know what to expect from a fabric in terms of protection.

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### **Other fabrics can offer protection**

Fabrics or clothing not rated by UPF protocol may offer the same or similar protection as those tested. Even clothing in your closet could provide protection. To check, hold the fabric up to a light: The less the light shows through, the better the protection value.

### **What to look for in the closet**

The variables that affect the amount of protection a fabric provides include:

*Fabric thickness:* The thicker the fabric the more difficult it is for ultraviolet radiation to penetrate. Added layers of clothing compensate for thinner fabrics.

*Composition of the fiber:* Polyester fiber protects from UV rays due to its chemical composition. Nylon and other synthetic fibers increase protection when UV absorbers are added. Cotton and other natural fibers need treatment to increase their UV protection.

*Tightness of the weave:* Knitted or woven fabrics alter protection due to interlacings – the open spaces where yarns cross. These tiny gaps let the fabric breathe, increasing comfort, and unfortunately increasing UV transmission as well. Stretched areas in a garment pull at the interlacings, permitting UV to penetrate. Higher thread count fabrics, such as synthetics, offer increased protection.

*Color:* Color plays a significant role in UV absorption. Fabric dyes absorb UV rays. To create darker colors, more dye

is used. Dark colors are recommended because of the extra protection provided by the dye. Light colors are generally cooler to wear, but do not protect as well.

*Apparel design:* To give maximum protection, clothing should cover the body surface, but comfort must be considered as well. Clothing provides an even, non-sticky form of protection that does not have to be reapplied.

*Wet or dry:* Wet fabrics are more transparent and permit more UV to penetrate. Swimming or working in humid environments reduces protection provided by typical fabrics. As long as clothing stays dry, the level of protection it provides will be the same.

### **NEW PRODUCTS**

Laundering garments with detergent containing optical fluorescent brighteners will improve UV protection. Brighteners work in a manner similar to dyes.

RIT Sun Guard® contains a chemical that binds to fibers without altering the fabric's look or feel. It absorbs 96 percent of ultraviolet radiation, with a UPF rating of 30 after one treatment. The treatment can be repeated to raise the protection level. The additive lasts 20 wash cycles before re-treatment is required and is equally effective wet or dry. It has been tested for skin sensitivity and is safe for all ages.

ATSKO produces UV Block, a spray that is designed to increase the UPF value of

any fabric. For more information, call 1-800-845-2758 or visit: [www.atsko.com](http://www.atsko.com).

Consumers who use chemical treatment for their clothing should plan to use a tracking method to schedule re-treatment. Refreshing protection at set intervals is advisable.

## **Q & A**

### **Are UPF labeled garments difficult to care for?**

Be sure to follow the care label sewn into the garment for laundering information. Typically, avoid bleach and other harsh chemicals, and avoid rough surfaces that can abrade the fabric. Rinse swimwear thoroughly after each use.

### **Who regulates product labeling?**

The Federal Trade Commission monitors product labeling, and the Consumer Product Safety Commission oversees safety issues relating to products. The Food and Drug Administration regulates products claiming medical benefits.

FTC Web site: [www.ftc.gov/ftc/consumer.htm](http://www.ftc.gov/ftc/consumer.htm)

CPSC Web site: [www.cpsc.gov/](http://www.cpsc.gov/)

FDA Web site: [www.fda.gov/](http://www.fda.gov/)

### **Do all T-shirts provide the same protection?**

Variances between similar types of garments have been tested. *Consumer Reports* compared a UPF 30-rated T-shirt with “beefier” type T-shirts. Several brands were tested. The thicker shirts performed as well as the UPF rated shirts, but thinner fabric T-shirts rated poorly.

### **Can sun-protective fabrics be purchased for fashion sewing?**

Yes. Sources include: Solarweave Fabric, [www.solarweave.com](http://www.solarweave.com); The Rain Shed, 541-753-8900; and Rockywoods Outdoor Fabrics, 970-663-6163.

For more information about certified UV protected products contact the American Sun Protection Association at: [www.americansun.org](http://www.americansun.org)

## **ULTIMATELY, PROTECT YOUR SKIN**

- **Slip:** Select clothing to cover the skin.
- **Slop:** Use sunscreen.
- **Slap:** Wear a hat.

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

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