

UPF Fashion: Leader's Guide

INTRODUCTION

UPF-rated apparel is giving consumers new ways to protect the skin while enjoying outdoor activities. Educating ourselves and our children about ultraviolet radiation (UVR), its health effects, and necessary protection measures helps ensure a healthy future for everyone. Although one American in five will develop skin cancer in their lifetime, UV-related health effects are preventable when sun protection practices begin early in life and are followed consistently.

This program will teach consumers about:

- the benefits of using clothing as protection against UV.
- new information about UPF ratings.
- what the ratings mean.

This packet of materials presents a message applicable to all age groups. It is appropriate for use with a variety of audiences, including schools, day care centers or other child care facilities. Also consider places where people work or play outdoors: local recreational areas, water parks, amusement parks, and swimming pools.

LEADER MATERIALS

- CD-ROM with program materials used in electronic presentation. (Requires no software installation.)
- Laptop PC and LCD projector.
- Flip chart, *UPF Fashion! New Ways to Keep the Sun's Rays at Bay*, available from local K-State Research and Extension offices.
- A UPF brochure and stickers are available from Kansas State University's Department of Apparel, Textiles, and Interior Design at 785-532-5781.

PARTICIPANT MATERIALS

MF-2521: *UPF Fashion! New Ways to Keep the Sun's Rays at Bay*.

This lesson is about new developments for fabrics that can protect skin from the damaging effects of ultraviolet radiation. The program outlines the new UPF (ultra-violet protection factor) fabric rating system, what to look for on a hang tag or label, and how to expand protection of clothing already in the closet.

Lesson Objectives
Participants will:

1. Become aware of damage ultraviolet radiation imposes on the skin.
2. Learn how to adjust their lifestyles to use the protection factors provided by fabrics and apparel choices.

*By Marla Day
Department of Apparel,
Textiles and Interior Design*

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NEW FRONTIERS IN UVR PROTECTION

AATCC TM 183-1999 Transmittance or Blocking of Erythemally Weighted Ultraviolet Radiation Through Fabrics: the performance test used to verify fabric properties.

Glare marathon: lets in less than 3 percent of UV light. A spectrophotometer measures the transmission of UVR and simulates sunlight exposure on a textile under controlled conditions.

Wash out: clothes must retain sun protection after 40 wash cycles. The test measures the percentage change before and after washing to simulate two years of seasonal use.

Chlorine zap: similar to wash tests, but tested in chlorinated water. Swimsuits are tested when fabric or apparel claims sun or UV protection.

ASTM D 6544-00 Standard Practice for Preparation of Textiles Prior to UV Transmission Testing: describes procedure for exposing textiles to laundering, simulated sunlight, and chlorine prior to testing for UV transmission.

ASTM D 6603-00 Standard Guide for Labeling of UV-Protective Textiles: describes the labeling requirements for textile products intended for the protection of humans from UVA and UVB radiation. It supplements Care Labeling Rules monitored by the Federal Trade Commission.

Australian UPF Standard AS/NZ 4399:1996
The Australian Radiation Laboratory was the first to develop standards for testing UV protection in fabrics used for clothing, and coined the term UPF. Their standard served as a model for the U.S. industry until 2001. Manufacturers may still be in transition from using this procedure for product information and care labels to the new ASTM standards.

The standards are now voluntary, but could become mandatory if not adopted by the industry. The American Association of Textile Chemists and Colorists and the American Society for Testing and Materials developed these specifications to determine whether a material, product, system, or service meets specified requirements.

Consumers should look for the test methods listed on product information, keeping in mind that tests only relate to the fabric: Design, fit, and the amount of body covered are not considered but will affect the protection level.

UPF ratings: ***What the numbers tell us***
Classification Category: textiles or fabrics are tested and assigned a UPF classification category of Good, Very Good, or Excellent Protection, based on test results.

Approximate Average Percent UV Blocked: the range of UV values the fabric is able to block. No fabric provides 100 percent protection.

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UPF Values for Labeling: the distribution of the values by category. Manufacturers that give a specific UPF value must round down to numerical increments of five (15, 20, 25 ... up to 50+). For example, if the UPF of a product is 38, the manufacturer must report the value as a UPF of 35, not 40.

UPF Range for Classification Category: range of UPF scores within each category.

Check statements made by manufacturers for reliability of test methods. UV protected and UPF protected do not mean the same thing. UV protected clothing does not undergo the same testing as UPF rated clothing.

UPF rated garment labels must include the classification category (Good, Very Good, or Excellent) and the UPF value

Look for the label below. It is an example of a certifying agency's hang tag for tested products.

| | |
|---|---|
| <p>AMC Cancer Research Center certifies that the protective material in this product:</p> <ul style="list-style-type: none">• 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 <p>NO PRODUCT PROVIDES 100% SUN PROTECTION!</p> <p>To Be Safest in the Sun:</p> <ul style="list-style-type: none">• 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 <p>LOOK FOR ASPA MEMBERS' PRODUCTS WITH THE AMC CERTIFIED SEAL</p> <p>For sun safety product information, visit ASPA on the web: www.aspa.amc.org</p>  <p>AMC Cancer Research Center 1600 Pierce Street • Denver, CO • 80214 • www.amc.org</p> | <p>AMC Cancer Research Center certifies that the protective material in this product:</p> <ul style="list-style-type: none">• 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 <p>NO PRODUCT PROVIDES 100% SUN PROTECTION!</p> <p>To Be Safest in the Sun:</p> <ul style="list-style-type: none">• 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 <p>LOOK FOR ASPA MEMBERS' PRODUCTS WITH THE AMC CERTIFIED SEAL</p> <p>For sun safety product information, visit ASPA on the web: www.aspa.amc.org</p>  <p>AMC Cancer Research Center 1600 Pierce Street • Denver, CO • 80214 • www.amc.org</p> |
|---|---|

(between 15 and 50+). Labels must also include the statement "Product labeled according to ASTM D 6603."

FDA approval is needed for products that claim a medical benefit. FDA-approved fabrics are guaranteed to reduce UV radiation by at least 97 percent.

OTHER PRODUCTS ON THE HORIZON

Coral sunscreens

A sunscreen using coral's natural defense against UV could be on the market by 2005, according to scientists at the Australian Institute of Marine Science. The sunscreen is the first of its type and is based on the natural ultraviolet blocking compound found in coral reefs.

Algae cellular repair

Published in the Proceedings of the National Academy of Sciences, the research works with nature's least refined organisms - lowly plankton. The tiny algae spend their lives at the ocean surface, constantly exposed to UVR. Over time, the algae developed a molecular shield against harmful light in the form of phytolyase, an enzyme that helps them repair DNA damage.

Scientists have been able to reduce 45 percent of the harmful effects to the skin in controlled experiments replicating the phytolyase enzyme. Products containing phytolyase enzyme should be in stores soon.

OTHER RESOURCES AND IDEAS

- Additional programs on skin cancer protection have been developed. Contact K-State Research and Extension county offices for program materials and a tabletop display – *Fry Now, Pay Later* – by Deanna Munson. Publications include MF-2410 *Fry Now, Pay Later - Participant*; MF-2410A *Fry Now, Pay Later - Contract*; and MF-2411 *Fry Now, Pay Later - Teaching Guide*.
- Contact The American Academy of Dermatology for pamphlets about UV related skin damage at www.aad.org.
- Contact the American Cancer Society and schedule the Mobile Classroom for a visit to your city at www.cancer.org/state/heartland/index.html or 800-606-0227.
- Schools and child care facilities may contact the following agencies for educational programs and instructional materials:
 - U.S. Environmental Protection Agency Sun Wise School Program at www.epa.gov/sunwise/index.html.
 - AMC Cancer Research Center for instructional materials and a guide to assist schools in developing and promoting sun-safe behaviors at www.amc.org.

End-of-Program Evaluation

At the end of the program, ask participants to raise their hands if they agree or disagree with the statements listed below. Record the number of participants attending the program, and the number of hands raised for each statement.

| Number attending program _____ | Strongly Disagree | Disagree | Agree | Strongly Agree |
|---|-------------------|----------|-------|----------------|
| I learned something I can use in my home. | | | | |
| I have the information I need to make decisions about fabrics to protect the skin from UV. | | | | |
| I plan to use the information and model sun-safe behavior to family, co-workers, and friends. | | | | |
| I will recommend this information to someone I know. | | | | |

Please send this form to Marla Day, Textile Associate, ATID, Kansas State University, 236B Justin, Manhattan, KS 66506.

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