

Introduction

Dermatologists of The Los Angeles Metropolitan Dermatological Society are alarmed by the epidemic of skin cancer in this country. In the year 2002 more than one million Americans will be diagnosed with skin cancer. 9,800 will die from it. The incidence of malignant melanoma, the most deadly of common skin cancers, has been increasing at a rate faster than for any other type of cancer. We clearly have a very serious problem and one which is getting worse.

Why are so many skin cancers occurring? Studies have shown that childhood sun damage, particularly sunburning, is mostly to blame. The American Academy of Dermatology estimates that the average person acquires 80% of his/her lifetime total sun exposure prior to age 18. A peer-reviewed statistical analysis concludes that 78% of skin cancers could be prevented by sun avoidance and sun protection during childhood.

While sunlight has many obvious beneficial effects in nature, it can wreak havoc with human skin. The only known health benefit of sunlight on the skin is its role in the manufacture of Vitamin D. The American diet generally provides sufficient Vitamin D, or a daily multivitamin can be taken. By contrast, the sun's ultraviolet (UV) rays penetrate the skin's cells, causing mutations in some of the cellular DNA. As with other carcinogens, it may take many years of exposure or a long lag period before cancer occurs. Yet the evidence for this association is so strong that both the US National Institutes of Health (NIH) and the World Health Organization (WHO) list solar radiation as a "Known Human Carcinogen." This places UV radiation alongside other known carcinogens such as arsenic, tobacco smoke, and asbestos. Parents should do their best to educate and protect their children from carcinogens. Schools, camps, and parks share this responsibility during the time children are entrusted to their care. According to the CDC,

"Schools need to be sun-safe places to reduce children's exposure to UV radiation. Schools also can teach students the knowledge, motivation, and skills they need to adopt and maintain sun-safe behaviors for a lifetime. School-based programs on sun safety are an effective way to teach children at an early age how to protect themselves and help decrease their risk of developing skin cancer as adults."

Sun Safety for Kids provides detailed, user-friendly guidance covering all three of the major yet interconnected concerns which are crucial to a comprehensive sun safety program:

- * Educational Curriculum
- * Policy
- * Environmental Support

EDUCATIONAL CURRICULUM

Children, especially teenagers, commonly show little concern for how their behavior today might affect them in their later years, particularly if the consequences are somewhat vague to them. Many still think that a suntan makes them look more healthy and attractive without realizing that a tan is merely the skin's way of reacting to UV assault in its attempt to protect itself from further

damage.

Fortunately, excellent educational curriculum materials on sun protection for use by classroom teachers are available for all grade levels, Pre-school - 12. Very young children will not hear about cancer but will learn how to practice the most effective methods of sun protection. High school students, by contrast, will see a very graphic and shocking demonstration of the serious consequences of excessive sun exposure. This has been shown to have a significant impact on their attitude toward tanning.

We have evaluated available instructional materials and give recommendations appropriate for each grade level. At the secondary level, sun safety lessons fit well with health or science courses. Correlations of the recommended curricula with California educational standards are being developed and will be posted to this website as soon as available. Some of the curricula are free; none are expensive. Contact listings for more information and purchase are provided in the Curriculum section.

POLICY

Education, while certainly very important, will not be enough. This is why it is so important for schools to develop policies which will encourage and perhaps eventually require students to take sun-protective measures while in school. Even if some children don't fully comprehend the necessity for sun protection, they will directly benefit from an adequate school sun safety program since they will be exposed to less carcinogenic radiation during their time spent outdoors at school. Once habituated to sun safe practices as a result of the school policy, children may be more likely to take better precautions outside school as well.

The recent passage of SB310, which requires that California schools must allow pupils to wear a hat and sun-protective clothing when outdoors, will result in the need for revision of the dress code at most schools. This presents a timely opportunity for school administrators to consider the greater issue of sun safety and to install a comprehensive program of policy and curriculum to complement the accommodation of SB310, as outlined in the SSK Guide.

Australia, with the unfortunate honor of having one of the highest skin cancer rates in the world, has taken the lead in skin cancer prevention. Beginning in the early 1980's, the Sun Smart program for schools was developed which combines school policy changes and educational curriculum to promote sun protection. Their "Slip! Slap! Slop!" slogan reminds children that before going out to the school yard they should Slip! on a long sleeved shirt, Slap! on a hat, and Slop! sunscreen on uncovered areas. Australia's efforts are beginning to pay off as the latest statistics are showing a slight decrease in their skin cancer incidence.

Particularly here in Southern California, our sunny climate and our love for outdoor recreation present a compelling need for programs similar to those successfully established in Australia.

Considering the serious consequences of skin cancer and death from melanoma, schools, camps, and parks are urged to develop policies to protect children from solar assault while under their care.

One of the most difficult choices to make in formulating a sun safety policy will be to decide whether the children are permitted, are encouraged, are strongly encouraged, or are required to cover up and wear sunscreen when outdoors. In Australia, children are not permitted to play outdoors at "Sun Smart" schools unless they Slip! Slop! Slap! This would be the ideal goal for American children as well but depending on the initial level of motivation among students and their parents it might prove more successful to begin your sun safety program by emphasizing sun safety education and setting policies of relatively gentle encouragement combined with positive incentives. The degree of encouragement could gradually increase over time. Pre-school programs might choose right away to develop more strongly protective policies knowing that good habits acquired at a young age will likely carry on.

Our policy recommendations are divided into sections such as hats, sunscreen, long clothing, etc. In each section, background information is provided which includes a discussion of reasonable policy options. This is followed by a policy development worksheet in which options are presented in graduating degrees of strength for your consideration. You may adopt the ones best suited to your institution's circumstances or use them merely as a suggestion for writing your own policy in the blank space provided.

You will be prompted to consider sun safety policy for staff as well as children. This is important not only for the direct protection of staff personnel in the performance of outdoor duties but also because staff members serve as important role models for the children. For these reasons a higher level of safety compliance might be expected of the staff.

ENVIRONMENTAL SUPPORT

Environmental support refers to the ways in which shade options can be provided in order to lessen children's exposure to UV radiation.

Shade is a very important and highly desirable element at any school, camp, park, or recreational facility. Any outdoor area where children congregate or play could be evaluated for shade development. Lunch areas should definitely be covered. Consideration should be given to the feasibility of eventually providing shade for as many recreational areas as possible. Shade can be provided by trees, shade structures, or architectural elements.

Another method for providing environmental support is with the scheduling of outdoor activities. Resources are always limited but during the hours of highest UV intensity between 10:00 a.m. and 4:00 p.m. efforts should be taken to make as many indoor areas and indoor activities available to children as possible.

No existing tree should be removed without considering the impact it would have on shade reduction. The planting of new shade trees is highly recommended.

We provide specific references for shade structure dealers and for recommended shade trees including wholesale growers.

Dermatologists repeatedly hear the same refrain from skin cancer patients: "When we were

young, no one told us we should stay out of the sun." We hope that the current generation of children will be unable to make that claim when they grow up.

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Administration

Where and how to begin? The first and most important step in developing a sun safety program is simply to acknowledge the seriousness of the problem. Although skin cancer is the most preventable of all cancers, the incidence continues to rise relentlessly in our country, due mostly to sun exposure during childhood. If you agree that children deserve to be informed about the health threat of exposure to solar radiation, deserve to be educated about how to protect themselves and given opportunities to do so, then the conviction to develop a comprehensive sun safety program will naturally follow.

To begin, we recommend that a Sun Safety Committee be created. For schools, typically the Principal would establish the committee, name a coordinator, and allow the committee to provide guidance to the school's Governance Council. Candidates for the Coordinator position might include one of the school administrators, the school nurse, a physical education, health, or science teacher, or an officer of the P.T.A. Any member of the school staff who has had personal experience with skin cancer, or has a strong interest in skin cancer prevention, might be an ideal candidate to coordinate this new program.

The first challenge for the Sun Safety Coordinator will be to assemble a membership for the committee. The committee should provide representation from as many sectors of the school community as possible, e.g.:

- Administration
- Physical Education
- Health instruction
- Nursing
- Science instruction
- Parents
- Student leaders

We stress the importance of including students in the decision making process, particularly on issues such as hat and clothing policies. For example, the hats policy could flop if students perceived their only option to be "some dorky hat." Securing the cooperation of student leaders in choice and implementation will increase the probability of compliance by the general student body.

Once formed, the committee will be able to address and prioritize the various sun safety issues presented in this Guide.

SUN SAFETY PROGRAM

ADMINISTRATION WORKSHEET

POLICY RECOMMENDATION

WRITE YOUR POLICY

<hr/> <p>(Name of school) is dedicated to promoting sun safety for all students and staff.</p>	
<hr/> <p>(Name of individual & title, or committee) shall be responsible for monitoring and managing our school's sun safety program and policies.</p>	
Our Sun Safety program and policies will be reviewed, and necessary revisions made, on a regular basis at least every _____ months.	

Sample Letter to Parents Regarding Your School's Sun Safety Program

RE: Sun Safety

Dear Parent,

Here at (School) we are very concerned about safety, including sun safety.

The National Institutes of Health (NIH) has declared that solar radiation (sunlight) is a Known Human Carcinogen. The evidence is clear that nearly all skin cancers are due to overexposure to the sun. Statistics reveal that we have a very serious problem with skin cancer in our country and it's getting worse. More than 1 million Americans will develop skin cancer this year. There will be more skin cancers diagnosed than all other forms of cancer combined. The incidence of the most serious skin cancer, melanoma, continues to rise at a rate faster than for any other cancer and studies show that most were caused by **overexposure to sun during childhood**. Thus skin cancer is preventable! Please join us in the fight against skin cancer by helping your child to be adequately prepared for outdoor activities while at school.

Start by making sunscreen application a normal daily routine for your child prior to coming to school. While in school we encourage the students to "cover up" before going outdoors by putting on a sun-protective hat, slipping on long clothing, and re-applying sunscreen to areas of their skin that are not covered. Please be sure to provide your child with an appropriate hat, outdoor play clothes and sunscreen to keep among their school supplies.

We're taking additional steps to improve shade options at our school which include changes in the scheduling of outdoor activities in order to minimize midday sun exposure. We will provide more opportunities for activities in shaded areas or indoors. Remind your child to choose the shade when there's an option. If you feel strongly about skin cancer prevention please contact (Name of contact & contact info.) and offer your assistance with our efforts to acquire a shade structure or to help with a tree planting drive.

Please talk to your child about the danger we face if we're not careful about sun exposure during childhood. Explain that sunburns are very serious because they increase the risk of skin cancer. Also explain that there's no such thing as a "healthy tan." A suntan is the skin's method of demonstrating that it has been damaged. Tanning results in blotchy wrinkled old-looking skin which also is at increased risk for skin cancer. Point out that only those people who don't know better would still try to get a suntan. Based on what we now know about sun damage, a suntan has become a badge of ignorance or bad judgment. "Not cool!" With proper protection, we can still enjoy our favorite outdoor activities but suntanning, whether outdoors or at a tanning parlor, is unsafe and unwise.

Sincerely,

Sun-protective Hats

Bearing in mind that sunscreen does not provide complete protection, wearing an appropriate hat outdoors is an excellent way to reduce ultraviolet radiation to the face, head and neck. If children can become accustomed to wearing a hat outdoors at school, it will be a tremendous step toward the development of improved sun protection lifestyle habits.

For quite some time hats have been prohibited at most schools due to concerns regarding gang association or sloppy attire. At some schools, children could not even wear a hat with a doctor's note. To overcome this obstacle, legislation was initiated and sponsored by the William S. Graham Foundation for Melanoma Research. California Senator Don Perata (East Bay / Oakland) introduced the bill which was designated as California SB310 (Billy's Bill for Sun Safety.) The bill passed and became effective January 1, 2002. SB310, added as Section 35183.5 to the California Education Code, requires that:

- (a) Each schoolsite shall allow for outdoor use during the school day, articles of sun-protective clothing, including, but not limited to, hats.
- (b) Each schoolsite may set a policy related to the type of sun-protective clothing, including, but not limited to, hats, that pupils will be allowed to use outdoors pursuant to subdivision (a). Specific clothing and hats determined by the school district or schoolsite to be gang-related or inappropriate apparel may be prohibited by the dress code policy.

SB310 effectively grants discretion to parents and pupils to decide for themselves whether the child will wear a sun-protective hat for outdoor activities at school. Yet schools retain significant authority to define the type or style of hat that will be allowable, to prohibit gang-related and other inappropriate hats, and to prohibit the wearing of hats indoors. Conscientious school administrators will recognize this as an opportunity to establish policies and explore incentives which encourage as many students as possible to wear hats while outdoors in order to reduce their risk for the later development of skin cancer.

While the importance of a hat as part of any sensible sun protection program cannot be overstated, there might be resistance, particularly in secondary schools, if policy should be abruptly reversed from one which prohibits hats to one which requires them. By contrast, a firm requirement of "No hat, No outdoor play" might be enthusiastically endorsed by parents of pre-school and some elementary school students, particularly during summer sessions. For most schools, we recommend a gradual phase in of sun-protective hats. Start by communicating to parents the cancer prevention rationale for your new hat policy and ask parents to encourage their children to wear a hat outdoors not only at school but for all outdoor activities. Notify and occasionally remind parents of the new policy, ask student leaders to start wearing a hat outdoors, and offer incentives. After a few months, evaluate the level of cooperation to determine whether there is any need for refinement either to your policy or to the hat selection. This could be the first step toward making sun protective hats more strongly encouraged or perhaps required at some time in the future.

In consultation with representative students, parents, and staff, the school administration should

set the revised hats policy to include not only the definition or description of what hat(s) are allowable but also the recommended method(s) of acquisition. Some schools may allow students to wear an appropriate hat acquired from any source of the student's choosing. Other schools may direct students to a single distributor while still other schools may purchase hats in bulk quantity for resale to students on campus. Some schools may allow an unlimited variety of hats under the premise that any hat is better than no hat. Others may restrict the choice to a single uniform hat. Unfortunately, a severely limited allowance of styles, particularly if the selection is made without student input, might inhibit student cooperation which would defeat the goal of reducing their exposure to carcinogenic solar radiation.

Q: What features should one look for in selecting or recommending a good sun-protective hat?

A: Ideally, it should shield as much of the face and neck as possible. Baseball hats, visors, and caps are less effective although certain children with long hair covering the neck may still derive significant protection from a wide brimmed visor. The hat should be constructed of material which has a UPF or SPF of 30 or more. If not labeled, it should not allow light to shine through when held up to a light source. Among the best choices are:

- A wide-brimmed hat
Brim of 3 to 4 inches wide all around

— OR —

- A legionnaire (flappy-jack) hat
Styled like a baseball cap but with a wider visor and a fabric flap covering the neck.

Other considerations might include the hat's ability to retain its usefulness after being stuffed into a pocket or backpack, whether the hat is washable, how well it stays in place during outdoor activities, and whether it's difficult for children to bend it out of shape and thereby defeat its sun blocking capacity.

Resources and images of a wide variety of sun-protective hats are listed on our website at [**www.SunSafetyForKids.org**](http://www.SunSafetyForKids.org).

Both for their own protection, and with consideration given to their position as role models, school staff members should always wear a sun-protective hat when outdoors between 10:00 a.m. and 4:00 p.m.

Encourage student leaders to wear a hat when outdoors and consider rewards for groups or individuals with the best hat compliance.

Schools may choose to order sun-protective hats for re-sale. Dress code policy could be set which would strongly encourage the specific hat(s) offered by the school to be worn for outdoor activities. Engaging students in the choice of style, fabric, and colors for the hat should result in

more enthusiastic compliance and could boost school spirit as well. The hat could be custom designed with the school's insignia, mascot, or school colors. (Sun Safety for Kids has negotiated with several of the hat manufacturers on our list to accept custom orders and/or provide wholesale prices to schools.) Proceeds from hat sales could be designated for supporting the acquisition of other needed sun-protection items such as trees or shade structures.

Hats could also be used as merchandise in a fund-raising program similar to chocolate bar sales campaigns. In contrast to the negative health benefits of chocolate bars, encouraging students to sell the school's sun-protective hats would reinforce the sun safety message to the students and also create an opportunity for them to serve as proponents of a more healthy lifestyle for everyone.

The bottom line is that fewer of today's children will have to face the morbidity or mortality of melanoma as adults if they have been adequately protected from ultraviolet radiation during their youth. Developing the habit of wearing a hat outdoors is an important step toward achieving that goal.

HATS POLICY WORKSHEET

FOR REVISIONS TO SCHOOL POLICY AND DRESS CODE

Circle or edit your choices from our policy suggestions
or write your own policy in the blank areas.

POLICY SUGGESTIONS	WRITE YOUR POLICY
<p>1. Allowable Hat Definition In the space to the right, describe or designate the specific sun-protective hat or hat style(s) which are allowable for outdoor wear during the school day at your schoolsite.</p> <p>Indicate whether certain or all other hat types are not permitted.</p>	
<p>2. Hat acquisition (Select one or more)</p> <ul style="list-style-type: none"> ● The school will offer our approved sun-protective hats for sale on campus. (Establish a fund with designated application for proceeds.) ● Students may purchase or order a hat which meets our school's specifications from the designated dealer(s) on a list provided by the school. (Attach list.) ● Students may obtain a hat from any source so long as it meets our approved criteria as described in Item #1 above. 	
<p>3. Select and set a student hat usage policy</p> <ul style="list-style-type: none"> ● Students are encouraged to wear a sun-protective hat when outdoors. ● Students are strongly encouraged to wear a sun-protective hat when outdoors. ● Students are required to wear a sun-protective hat when outdoors. "No hat, stay in the shade or stay indoors." 	

<p>4. Set staff hat usage policy</p> <ul style="list-style-type: none">● Staff are strongly encouraged to wear a hat when outdoors● Staff are required to wear a hat when outdoors.	
<p>5. Field Trips (List hats policy in parental permission slip.)</p> <ul style="list-style-type: none">● Sun-protective hats are strongly encouraged for outdoor field trips● Sun-protective hats are required for outdoor field trips.	

Sun-protective Clothing and Sunglasses

We have put so much emphasis on sunscreens that the effectiveness and importance of clothing in protecting from sun damage has been somewhat overlooked. Many people mistakenly believe that so long as they wear sunscreen, they'll have nothing to fear from even prolonged or intense sun exposure. A recent study of actual sunscreen usage revealed a high rate of sunburns at the beach even among individuals who used sunscreen. Clothing should be in the first line of defense against ultraviolet radiation with sunscreen serving as a backup.

When outdoors, full length clothing should be worn which covers as much skin as possible. The ideal outfit would include a long sleeved shirt or blouse with a collar, long pants or dress, closed shoes and socks. The most frequent objection to the suggestion to cover up is that it would be "too hot." Yet if loose fitting lightweight garments are chosen, long clothing can still be comfortable in hot weather. Certain fabrics "breathe" while still retaining sun blocking capacity.

A system for measuring the ability of a fabric to block ultraviolet light was developed in Australia. Results are reported in units of "UPF" which stands for Ultraviolet Protection Factor. A fabric with a UPF of 20 allows 1/20th (5 %) of the sun's UV radiation to pass through it to the skin. UPF ratings range from 15 to 50+. At UPF 50, only 2 % of the sun's UV radiation passes through. A UPF rating of 40 or higher is recommended for good sun protection. The Dow corporation has a similar UPF rating system for their "CoolMax" fabrics. Other fabrics may claim an SPF value which is similar to the SPF rating system for sunscreens. Despite the original UPF or SPF rating on a garment, it may diminish when wet, stretched, or worn out.

When shopping for outdoor clothing, look for a UPF or SPF rating on the label. If none is given, remember that those fabrics with a tighter weave and darker colors are more effective in blocking ultraviolet light. Hold the fabric up to the light and look for light shining through. Superior sun protective clothing allows little or no light to pass through. Fabrics such as denim, polyester or wool tend to better shield the skin from harmful UV rays.

Schools must decide whether to simply encourage or to require students to cover up when outdoors. In Australia, schools are setting policies to require children to "Slip!" on a long sleeved shirt, "Slap!" on a hat, and "Slop!" sunscreen on un-covered skin before going outdoors. A child who does not comply must remain indoors or in the shade.

To encourage compliance, children might be advised to keep a long sleeved garment or "play shirt" at school. Long sleeved shirts or pullovers with a high UPF could be ordered by the school in the school's colors and/or embossed with the school logo. Resale proceeds could be applied to the acquisition of a shade structure for the school grounds.

We are having difficulty in finding distributors of school gym uniforms who offer comfortable lightweight but full-length sun protective garments. This poses a challenge for secondary schools wishing to recommend a sun protective uniform for their physical education program. If you discover a supplier whose catalog includes sun protective garments, please let us know by contacting us at www.SunSafetyForKids.org.

Sun exposure is also a health concern for the eyes. The lens of a young child's eye does not completely block UV from reaching the retina. Cumulative sun exposure contributes to future development of cataracts. Schools should consider encouraging or requiring students and/or staff to "Slide!" on a pair of sunglasses that filter out 95 - 100% of the UV rays. As with hats, sunglasses in the school's colors or with the school logo could be sold on campus.

SUN-PROTECTIVE CLOTHING AND SUNGLASSES POLICY WORKSHEET

POLICY SUGGESTIONS	WRITE YOUR POLICY
<p>Students: (choose one)</p> <ul style="list-style-type: none"> • are encouraged to • are strongly encouraged to • must <p>wear a long sleeved shirt or blouse with collar whenever they are outdoors</p>	
<p>Students (choose one)</p> <ul style="list-style-type: none"> • are encouraged to • are strongly encouraged to • must <p>wear long pants or a long dress whenever they are outdoors</p>	
<p>Sleeveless shirts or blouses are</p> <ul style="list-style-type: none"> • discouraged • prohibited <p>from being worn outdoors except as part of an approved uniform for physical education</p>	
<p>Shorts are</p> <ul style="list-style-type: none"> • discouraged • prohibited <p>from being worn outdoors except as part of an approved uniform for physical education</p>	
<p>Students without proper sun protective attire will be</p> <ul style="list-style-type: none"> • encouraged to • required to <p>conduct their outdoor activities in shaded areas or remain indoors</p>	

SUN-PROTECTIVE CLOTHING AND SUNGLASSES POLICY WORKSHEET

POLICY SUGGESTIONS

WRITE YOUR POLICY

<p>For their own protection, and to set a good example for students, all school staff, when outdoors,</p> <ul style="list-style-type: none">• are strongly encouraged to wear• must wear<ul style="list-style-type: none">• a sun protective hat• sun protective clothing• sunglasses	
<p>Students</p> <ul style="list-style-type: none">• are permitted to• are encouraged to• are strongly encouraged to• must <p>wear UV-protective sunglasses when outdoors</p>	