

TOGETHER FOR SUN SAFETY

FAMILY SUN SAFETY PROJECT

Arizona Cancer Center, Behavioral Sciences Program

1997 / Issue 1

An Arizona Family Sun Safety Project

Arizona is both blessed and burdened with over 350 days of sunshine per year. At first, you might wonder how this beautiful, year-round weather could create a burden. However, the state's sunny, cloudless weather conditions help contribute to its high skin cancer incidence. Southern Arizona has the highest rates of skin cancer in the United States and the second highest rates in the world.

Skin cancer is considered an epidemic in the United States. The National Cancer Institute recognized the magnitude of the problem and has responded by funding six research projects, throughout the nation, to study people's sun safety practices. The project sites are:

- ☀ The University of Arizona, Tucson, Arizona
- ☀ Dartmouth Medical School, Hanover, New Hampshire
- ☀ The University of Illinois, Chicago, Illinois
- ☀ San Diego State University, San Diego, California
- ☀ University of California, San Francisco, California
- ☀ Roger Williams Hospital, Providence, Rhode Island

The six studies share two common goals:

- ☀ to determine what local community members and health care professionals already know about skin cancer prevention
- ☀ to educate the public and health care professionals about increasing their sun safety practices.

The Arizona Cancer Center at The University of Arizona is conducting their study in Tucson. The Family Sun Safety Project is working with families who have school-aged children attending public elementary schools or who receive their medical care through local pediatricians.

The four school districts participating in the project are Amphitheater Public Schools, Catalina Foothills School District, Flowing Wells School District, and Tucson Unified School District (TUSD). The participating pediatricians' practices include Canyon Pediatrics, Catalina Pediatrics, Children's Medical Center of Tucson, Orange Grove Pediatrics, and Pueblo Ridge Physicians.

Who Makes Up Our Project Team?

The Family Sun Safety Project began in June 1994 and is directed by David Buller, Ph.D. He is the Director of the Behavioral Sciences Section in the Cancer Prevention and Control Program at the Arizona Cancer Center. He is also a professor in the Department of Communication at The University of Arizona.

A team of eight faculty investigators provide leadership and make decisions about project design, data collection, and evaluation procedures.

Eleven staff members, graduate students, and undergraduate students coordinate the day-to-day activities for this large research effort. They work with the staff at the schools and community pediatricians, oversee the collection of data, conduct training sessions, and develop educational materials for the project participants.

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Twelve professionally-trained interviewers conduct the telephone and onsite interviews with parents.

Our entire team is committed to helping Arizona's families learn more about the sun and sun safety.

What Is Sun Safety?

Sun safety is protecting your skin from the ultraviolet radiation (UVR) produced by the sun's rays and artificial tanning equipment. Overexposure to the sun can cause damage to the skin in the form of aging, sunburn, and skin cancer. By adopting positive attitudes and sun safe behaviors, your family may reduce their chances of these harmful effects!

Between now and the end of the summer, you will receive brochures, further newsletters, and cards containing sun

safety information. For your convenience these items will be mailed to your home. The easy-to-read materials are designed for your whole family to enjoy. Contemporary news, myths about the sun, and ways to encourage you and your family to adopt sun-safe habits are examples of the topics that will be covered in the brochures and newsletters.

We thank you for participating in this skin cancer prevention project and look forward to providing valuable information to you and your family over the next several months. One of our interviewers will call you again in September to conduct a follow-up telephone interview.

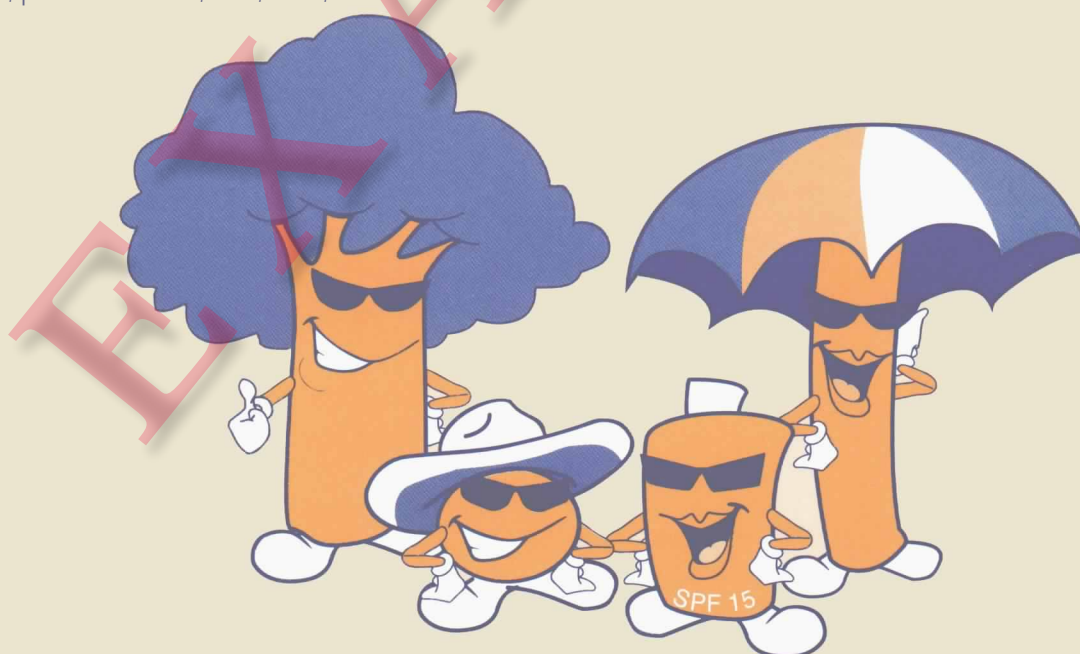
If you have any questions or concerns between now and then, please feel free to call us at the telephone number listed in the Project Information section on page 4 of this newsletter.

Meet the Sun Safety Squad!

We would like to introduce you to our Sun Safety Squad. The squad members will appear on some of the printed materials that you will receive in the mail. We hope they will remind you and your family to practice sun safe behaviors.

Large umbrellas, like Ella Umbrella, provide shade while you are outdoors. Wearing a wide-brimmed hat, like Willie Widebrim, protects the ears, face, nose, and neck from the

sun's damaging rays. Large shade trees (we do have them in Arizona!), like Sherman Shadetree, provide shade and help keep you cool, too. Wearing sunscreen, like Susan Sunscreen, helps protect your skin from the harmful rays of the sun.



Sherman Shadetree, Willie Widebrim, Susan Sunscreen, and Ella Umbrella

Teaching Tools

Teach Sun Safety To Your Child

When baby ducklings are hatched, they mimic the behavior of the first thing they see — usually Mom or Dad duck. Kids seem to act the same way. They model what their parents do. Eating and physical activity patterns, TV-watching habits, even sunbathing can be learned from watching adults. That's why parents can be powerful role models for their children.

But being a parent in the 90's is different than it used to be. Kids today face a lot of pressure in all directions (school, peers, television advertising, etc.). That's stiff competition when you're trying to teach your child to do something that's good for them like practicing sun safety. If you choose to adopt sun-safe behaviors, your child(ren) will likely think they need to also. Here are a few tips to help you become a sun safety role model for your child(ren):

1. Choosing to Be a Sun-Safe Family

Practicing sun safety means protecting yourself and your family from sunburn now and skin cancer later in life. This means limiting the total amount of time you spend in the sun (especially between the peak sun hours of 10 a.m. to 3 p.m.), finding shade, wearing cover-up clothing, and using sunscreen every day. Plan outdoor activities for early in the morning or late in the afternoon. Adopt one new behavior at a time. This will give your child(ren) time to become familiar with it. When a child asks why you are wearing a hat or applying sunscreen, take time to talk about the importance of taking care of the skin by protecting it from the sun.

2. Getting Ready

Keep a supply of sun-safe items at home and in your car so you have them the next time you're going to be outdoors. Look for sources of shade in your backyard. Have your child(ren) play outside when natural shadows provide good shade. You can make your yard more sun safe by adding a patio umbrella, planting a shade tree, or building a ramada.

3. Letting Your Child See You in Action

Your child(ren) will look to you for cues of how to behave in the sun. If you sit in the shade, maybe they will. If you wear a hat, maybe they'll think it's cool, too. So, put on sunscreen and wear sunglasses. Avoid sunbathing or visiting a tanning salon since this sends kids a mixed message!

4. Praising Your Child's Successes

Children love praise! Praising your child(ren) and doing special activities are great ways to reinforce and reward behavior change. Saying "I'm so proud of you" goes a long way toward building self-esteem in children. Try to "catch" your child(ren) doing sun-safe things. Rewards work best when they are unexpected!

Do a quick inventory to see if you have these sun-safe items:

- Sunscreen with an SPF of 15 or more
- Sunscreen lip balm
- Wide-brimmed or flap-in-the-back hat
- Sunglasses
- Sun umbrellas
- Cover-up clothes



A National Cancer Institute-
 designated comprehensive cancer
 center at
 The University of Arizona
 Health Sciences Center

Next Issue: The Truth Behind the Controversies of Sunscreen

How Intense Is the Sun?

Tucson, Sunday, March 24, 1996

WEATHER

TUCSON

For the weather forecast and temperature 24 hours a day, dial **Weatherline®: 851-3333**

Today's forecast: Partly cloudy and becoming windy in the afternoon. Cooler. High in the lower 70s and a low in the mid-40s.

Tomorrow's forecast: Partly cloudy and a bit warmer. Breezy to locally windy in the afternoon. High in the lower 70s and a low in the mid-40s.

High temperature yesterday77
 High temperature a year ago77
 Record high for date (1896)92
 Low temperature yesterday60

Low temperature a year ago50
 Record low for date (1898)25
 Normal high yesterday74
 Normal low yesterday46
 Barometer29.65 to 29.78 inches
 Humidityhigh 31%; low 11%
 (Data at airport, altitude 2,630 feet)

Precipitation

Yesterday to 5 p.m.0.00 inches
 Actual to date1.14 inches
 Normal to date2.11 inches
 Normal annual rainfall12.00 inches

Sun intensity prediction

Minutes in sun today to redden skin:

9 a.m.59	3 p.m.36
10 a.m.34	4 p.m.20
11 a.m.23	Arizona Sun
noon20	Awareness Pro-
1 p.m.20	ject, University of
2 p.m.32	Arizona Cancer
	Center.

Sun intensity information is printed in the weather section of the two major Tucson newspapers everyday. The predictions are based on information gathered locally from an instrument called the Robertson-Berger Sunburn Meter. The meter measures the amount of ultraviolet radiation (UVR) from the sun. These measurements are then converted to the average number of minutes it takes for an untanned Caucasian person's skin to redden or burn at that time of day. Use the sun intensity index daily as a guide for safely scheduling outdoor activities for your family.

Project Information
 The Family Sun Safety Project is funded by the National Cancer Institute and coordinated by the Behavioral Sciences Program at the Arizona Cancer Center. For more information contact the Family Sun Safety Office:

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TOGETHER FOR SUN SAFETY

FAMILY SUN SAFETY PROJECT

Arizona Cancer Center, Behavioral Sciences Program

1997 / Issue 2

Sunscreen: The Truth Behind the Controversies

You may be concerned by news stories that say sunscreen does not give you all of the protection you need to be safe in the sun. Sunscreen is an important part of any sun protection program. It has limitations, however, and must be used properly to ensure good protection.

Sunscreens work in two ways. The chemicals in most sunscreens **absorb** ultraviolet (UV) radiation before it can damage the skin. Some sunscreens block the sun's UV rays by scattering or reflecting them away from the skin.

UVA and UVB are the two types of radiation in UV light that can damage your skin. UVA rays penetrate deeply and damage the skin's lower layers. This leads to wrinkling, early aging of the skin, and skin cancer. UVA rays are strongest between noon and 4:00 p.m. UVB rays damage the skin's outer layer causing sunburn and skin cancer. UVB rays are strongest between the hours of 10:00 a.m. and 2:00 p.m.

All sunscreens absorb UVB. Some sunscreens absorb UVA and UVB. A few sunscreens contain chemicals that physically block UVA and UVB (like clothing blocks the sun's rays). You may see these suncreening compounds on product labels:

UVA Absorbers

Benzophenones
Parsol 1789 (avobenzene)

UVB Absorbers

Salicylates
Cinnamates
Benzophenones
Padimate O and A
Para-aminobenzoic acid (PABA)

Physical Blocks

Titanium Dioxide
Zinc Oxide

Does Using Sunscreen Increase My Chance of Getting Skin Cancer?

Using sunscreen helps prevent skin cancer. However, some people who use sunscreen may spend more time outdoors than they normally would. If they use a sunscreen that absorbs only UVB, they still may be harmed by UVA.

Sunscreen makes good sense especially when used with other sun safe practices. The best protection is to avoid the sun's harmful rays by limiting your time in the sun, wearing protective clothing such as wide-brimmed hats and long sleeves, and using sunscreen.

Choose sunscreen with a sun protection factor (SPF) of 15 or greater. Products that protect against both UVA and UVB are good choices since they provide more complete protection. The term "broad spectrum" means that the sunscreen absorbs all UVA and UVB rays.

Dose a Higher SPF Provide More Protection?

The amount of protection a sunscreen provides depends on how easily you burn, the SPF, and the season. In Tucson's winter sun, fair Caucasian skin burns in about 45 minutes at midday. If you use a sunscreen with SPF 15, you will get $45 \times 15 = 675$ minutes (11¼ hours) of protection. That's all day coverage.

(continued on page 2)

The Bottom Line

Use a sunscreen
with an SPF of at least
15 every
day of the
year.

(continued from page 1)

In Tucson's summer sun, fair Caucasian skin burns in about 15 minutes at midday. If you use sunscreen with SPF 15, you will get $15 \times 15 = 225$ minutes (3 $\frac{3}{4}$ hours) of protection. Using a higher SPF will provide you with longer protection.

Combining sunscreens does not make them stronger. If you put a sunscreen with SPF 30 on over a sunscreen with SPF 15, you will not have the protection of SPF 45. Protection will be provided by the higher concentration of chemicals in the SPF 30 only. Use a sunscreen with a high enough SPF to protect you for the time you will be outdoors.

How Should Sunscreen Be Applied?

Sunscreen should be worn every day all year long in the Arizona sun. Apply sunscreen 30 minutes before going outside so that the chemicals have time to work. Use enough sunscreen to cover your exposed skin with an even coat. Reapply sunscreen after sweating or swimming. Be aware that reapplying sunscreen does not extend the amount of time it will protect you.

Does Sunscreen Block Vitamin D?

In addition to getting Vitamin D from the diet, the sun also helps the body make its own. Vitamin D is needed for health and growth. Sunscreen can keep the body from getting Vitamin D from the sun. But don't worry. Eating a balanced diet provides enough Vitamin D to keep you healthy.

Sun Exposure: The Facts

We Arizonans spend too much of our time outdoors exposed to the sun's rays. While small amounts of sun exposure aren't harmful, overexposure is dangerous and will result in skin damage or even cancer.

The effects of many years of not protecting your skin against harmful sun exposure are ugly, permanent and hazardous to your health. Overexposure will result in more wrinkled and leathery skin. Other more serious effects include scaly skin growths and sores that bleed into the skin like bruises. The most dangerous effect of too much sun exposure is skin cancer: 95% of all skin cancers in the U.S. are attributed to sun exposure.

Skin cancer IS a grotesque growth of skin cells. The radiation in sunlight will change a part of the cell so that the cell makes new abnormal cells instead of healthy ones. Cancerous malignant tumors may result. Treatment of skin cancer involves cutting or burning these tumors from the skin. When the skin cancer spreads to other parts of the body more extreme treatments like chemotherapy are necessary.

Skin cancer IS the most rapidly increasing form of cancer. Skin cancers are now more common than all other cancers combined. Tragically, about 7,300 Americans will die from melanoma, a very serious type of skin cancer, this year alone. Arizona's rate of skin cancer is the highest in the country and second highest in the world. Over 30,000 Arizonans are plagued by skin cancer each year.

Parents must protect their family from skin cancer and skin damage every day. Making educated choices about what your children wear or the activities they engage in are necessary ways you can keep your family healthy and cancer-free.

Sunscreen Makes Good Sense

For Kids at School or Summer Camp:

How Do You Protect Them Against Sunburn?

Because you can't always be there to put sunscreen on your children before recess, lunch, or other outdoor activities, apply sunscreen before they go to school or day camp. Be sure to use a high enough SPF to give them protection throughout the day.



SPF and the UV Index:

How Do I Use Them to Choose Sunscreen?

The first issue of this newsletter introduced the Sun Intensity Index which is printed in our daily newspapers. The intensity information can be used to help you choose an appropriate SPF. For example, in February, a sunscreen with an SPF 15 can provide protection throughout the day since it takes longer for the skin to redden. However, in August the sun's rays are more intense and a sunscreen with SPF 15 will not provide all day protection against sunburn.

Sun Protection Products:

What Is Important

to Consider before Buying?

When shopping for sunscreen, here are some important things to consider:

- check the SPF (an SPF of 15 or greater is recommended)
- look for broad spectrum or UVA/UVB protection
- waterproof products provide more protection when sweating or swimming

Teaching Tools

Responsibility and Sun Safety

According to Drs. Don Dinkmeyer and Gary D. McKay, authors of *Raising a Responsible Child*, responsibility is a gift you give your children. One way to teach your children responsibility is to help them take part in their own health care. Teaching your children how to protect their skin from the sun can bring rewards now and in the future. It is a way to prevent painful childhood sunburns now and reduce their risk of skin cancer later in life.

Children learn responsibility by being given responsibilities. Here are a few tips from *Raising a Responsible Child* that may help:

1. Find Tasks Children Can Do Themselves

Avoid choosing to always do things for your children. Identify tasks that your children can do by themselves. Choosing a favorite long-sleeved shirt or putting on socks with their shoes before going outdoors are examples of sun-safe practices that very young children can perform well.

2. Ask rather than Demand

Asking your children to help with a task increases the chance that they will respond in a positive way. Demands seldom produce enthusiasm. When you ask your children to help you with a project or task, it makes them feel grown up and important. Next time you are putting sunscreen on your children, ask them for help with the "easy-to-reach spots" like the arms and the tops of the feet.

3. Make the Effort More Important than the Outcome

Learning also involves doing things beyond one's current abilities. When you ask your children to do a complex task, focus on the effort they put into it, rather than the actual outcome. For instance, when your children apply sunscreen on a small area of their arm, instead of all exposed skin, tell them how pleased you are to see them using sunscreen.

4. Recognize that Learning Takes Time

Teaching children new skills takes time. Some situations provide better moments for learning than others. It isn't easy to teach your children new skills when everyone is rushing out the door for work and school. Learning works best when the pace is relaxed and when no one feels pressured. Allow extra time to give encouragement and praise. Taking a few extra minutes at home to put on sunscreen may be easier than waiting until you reach the park, playground, or swimming pool when outside distractions compete for your children's attention.

5. Use Natural and Logical Consequences










When your children choose not to do something, your first response may be to nag until they do it. Nagging may result in prompt action but it seldom inspires children to spring into action. Instead of nagging, withdraw from the conflict, and make them aware of the consequences of their choice. For example, if they don't want to wear sunscreen and a hat, then they will have to stay in the shade while their teammates play baseball. This does not mean that your children should "learn the hard way" by getting a painful sunburn.



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Next Issue: The Truth About Artificial Tanning

Sun Safety Recommendations for You and Your Family

-  Limit time spent in the sun.
-  Avoid the sun's rays between 10:00 a.m.-3:00 p.m.
-  Apply a sunscreen with a sun protection factor (SPF) of 15 or greater every day of the year.
-  Wear clothing that protects the skin—long sleeves and long pants, a wide-brimmed hat, and sunglasses.
-  Stay in the shade whenever possible—find shade trees and ramadas, or bring an umbrella.
-  Avoid artificial tanning from booths, beds, or lamps.
-  Be careful not to get a sunburn.
-  Examine your skin regularly.
-  Make sun safety a family habit.

Project Information
The Family Sun Safety
Project is funded by the
National Cancer Institute and
coordinated by the Behavioral
Sciences Program at the
Arizona Cancer Center. For
more information contact the
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TOGETHER FOR SUN SAFETY

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Arizona Cancer Center, Behavioral Sciences Program

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The Truth about Artificial Tanning

"Danger: Ultraviolet Radiation." Enter any tanning salon in Arizona and you may see this statement. It warns you of the dangers of exposure to ultraviolet radiation (UVR). If you look closely, the fine print should tell you who has issued the warning: The Arizona Radiation Regulatory Agency. This agency monitors and inspects tanning salons and other non-solar sources of radiation including nuclear power plants and x-ray equipment.

Sunbathing and tanning bed use are common. Each day over a million people use commercial tanning booths. A recent publication estimates that profits from tanning salons in the U.S. are greater than \$1 billion dollars per year. Surveys show that the popularity of tanning salons has increased since they were first introduced in the 1970s. A study published in 1993 found that one-third of shopping mall patrons reported sunbathing at least once a week. Another recent report revealed that more than one of every three adolescent girls and one of every six adolescent boys reported visiting a tanning salon at least once. Many of these teens reported repeated visits.

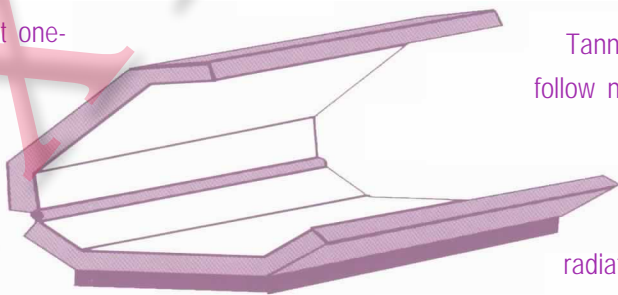
Many teens and adults believe that tanning salons provide a "safe" way to tan and are less dangerous than sun exposure. The ultraviolet-A rays (UVA) from tanning lamps may not burn your skin like ultraviolet-B (UVB), but they

may penetrate your skin more deeply. The UVA rays in tanning booths can be up to ten times as intense as normal sunlight.

Is UVA Dangerous?

Some research suggests that UVA rays can age the skin and cause deep skin damage that can lead to skin cancer. Whether from the sun or a tanning lamp, UVA can cause serious skin damage. Some studies suggest that UVA from artificial sources may increase the risk of developing skin cancer. Recent research shows that UVA can be harmful because it also may:

- ☀ cause the skin to become rough, leathery, and wrinkled;
- ☀ damage deep skin layers which cause early aging and sagging of the skin;
- ☀ cause skin reactions in persons taking certain prescription medications.



Tanning salon operators are required to follow national safety regulations set by the U. S. Food and Drug Administration. However, it is hard to know how much radiation a person receives from a tanning bed. The newest tanning beds have a high intensity discharge lamp that may be very harmful. If not filtered well they can give off UVA, UVB, and UVC radiation. UVC rays from the sun are generally blocked by the ozone layer and do not reach the Earth's surface.

(continued on page 2)

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Take note: Any injuries, discomfort or later problems that result from using a tanning device may be at your own risk and expense. Don't be fooled by claims of "safe tanning" or into thinking that a tan is a sign of good health. Read and observe the danger signs. It is up to you to protect yourself and your family from the dangers of ultraviolet radiation. Practice sun safe behaviors every day and be a good role model for your children.

Wearing Cover-up Clothing Makes Good Sense

Do all clothes provide the same amount of protection from the sun's ultraviolet (UV) rays? No! Two factors affect the protection that clothing provides — style and fabric. All skin covered by clothes is protected from UV radiation (UVR): The larger the area of skin covered, the more protection provided. Long-sleeved shirts are a better choice than short-sleeved shirts, and pants are more protective than shorts.

Both the amount and size of the holes in the fabric determine how much UVR reaches the skin. The fewer the number and the smaller the size of the holes in fabric, the more it protects the skin from UVR. We usually do not think of fabric as having a lot of holes, but fabric is full of tiny holes. You can see the holes if you hold the fabric toward the sun or a light bulb and put it about 6-8 inches from your eyes.

It is easier to see the holes in solid, dark-colored fabrics. Try this with several pieces of fabric. Do you see the pinpoints of visible light coming through the holes? Do the fabrics vary in the number of holes they have? Like visible light, UVR that you cannot see, passes through these holes easily to the skin. When UVR hits the fibers in the fabric, the light can be reflected, absorbed, or scattered. This prevents the harmful UV light from reaching the skin.

Healthy Skin: The Facts

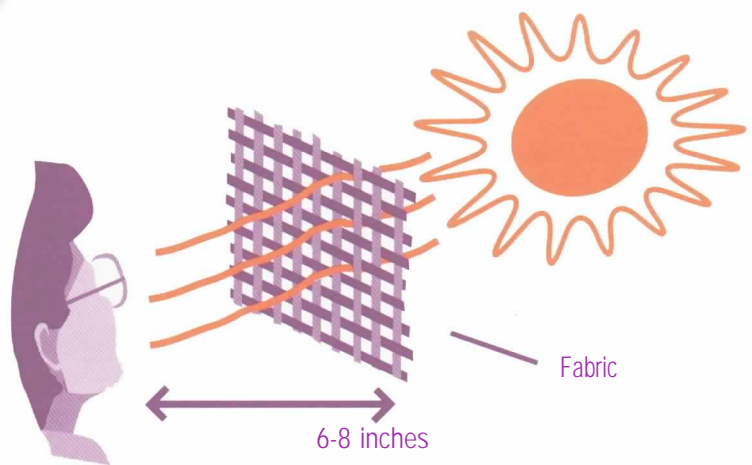
Many of us should worry more about our health and what we can do to live a healthy lifestyle. We should eat well, exercise regularly, manage stress and get enough rest. Living healthier will make most of us feel better and help us to live a little longer.

Healthy skin is a critical aspect of overall health, but is generally overlooked. Your skin plays a crucial role in maintaining health by regulating body temperature, storing water, protecting you from injury, and acting as a sensor of the environment. Tragically, most of us give little thought to the vital health of our skin and how it must be maintained.

Too many of us value time in the sun over the health of our skin. And many also erroneously believe a tan is a sign of good health. However, tanned skin is actually a sign of sun damage. A tan means that your skin is working too hard to protect itself from the sun's damaging rays. When you produce enough melanin (the substance that darkens skin) to create a tan, you are also permanently damaging your skin. There is no such thing as a healthy tan!

As Arizonans we must realize that living well under the sun means avoiding the dangers of sun exposure. Arizona's low latitude, high elevation, and clear skies put everyone in Arizona at increased risk for skin damage. Reducing our sun exposure will help keep our skin healthy for life.

Parents play an extremely important role in keeping their children's skin healthy. The decisions you make daily about what your children wear or the activities they engage in are important ways you will keep your family healthy.



Many different fabrics are used to make clothing. Scientists are developing ways to label clothing. Soon you will know how much sun protection fabrics offer by reading the label.

Teaching Tools

Dealing with Resistance to Sun Safety

Most parents experience some form of resistance from their children at one time or another. Resistance comes in two forms: active and passive. Active resistance is usually direct and confrontational. For example, your children may respond to your request by saying “No-you can’t make us do it!” In contrast, passive resistance is more subtle. When children consciously don’t want to do something, they may keep quiet and hope that you forget about it.

Your first reaction to passive resistance may be to become more observant-to look for times when your children might be trying to get away with something. Acting as a “police officer” often forces compliance for the short term, but not usually for the long term. There are things that parents can do to deal with resistance. Susan Isaacs, an author with Parents’ Magazine, offers a few tips:

1. Do It and Say Why

If something is important for your children to learn, it helps if you show or tell them why it is a good choice to make. Talking with your children and explaining why it is important, is a good way to overcome resistance. “Oops! I almost forgot my wide-brimmed hat! I am going to be outside for a few hours and I don’t want to get a sunburn on my face or the back of my neck.”

2. Look for the Benefits

Children like rewards. Sometimes the things we do seem to have few rewards. Take time to look for the good things that can result from your children’s actions. When you are putting on sunscreen you might say, “Great, now we can enjoy our time outdoors without worrying about getting sunburned.”

3. Talk about Ways you Cope

Resistance can result simply from confusion about the activity itself. Showing your children that you experience and can cope with confusion is important. For example, you might say “I’m not sure what hat to wear to best protect myself from the sun. I think I’ll try on a few to see which one is best.” This helps children know that you feel like they do. You may not fully understand every situation, but you can still cope with it.

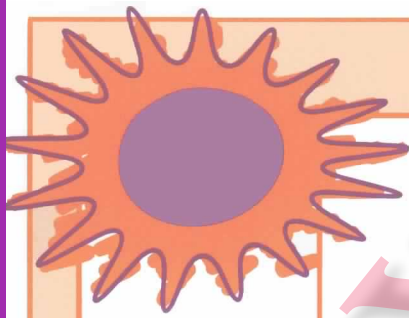
4. Have Faith in the Process

Learning takes time. Exercising patience and being persistent can help overcome many obstacles. Have faith that the small, routine actions that you take now may make a difference in your children’s health in the future. This may provide you with the incentive you need to overcome their initial resistance to limiting time in the sun, staying in the shade, and wearing cover-up clothing and sunscreen.





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Next Issue: The Truth About The Ozone Layer



Hat Safety Index

 sun visor LOW	 baseball cap Shades eyes, face, nose, and head	 tennis or fishing hat (canvas) Shades eyes, face, nose, head, and ears	 flappy-jack hat (cloth) HIGH Shades eyes, face, nose, head, ears, and neck
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SUN SAFETY VALUE

Project Information

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Hats provide good protection from the sun. Those that cover your eyes, face, nose, head, ears, and neck, such as wide-brimmed hats and flappy-jack hats, are the best. However, wearing any kind of hat is better than wearing no hat. Use the Hat Safety Index to see how much protection your hat or hats provide. It also can help you choose sun safe hats for yourself and your family.

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1997 / Issue 4

The Ozone Layer: Why All the Fuss?

Twenty years ago, few of us had heard of the ozone layer. Recently, the ozone layer has been a frequent topic in the news because of "heated" debate surrounding its stability as the Earth's sunscreen. Let's examine this topic in more detail.

What Is the Ozone Layer?

The ozone layer is an invisible blanket of ozone gas in the Earth's atmosphere. It is located 12 to 19 miles above the Earth's surface—just above the air we breathe. The ozone layer acts like a blanket of sunscreen around the Earth. It provides a protective shield that limits the amount of the sun's ultraviolet radiation (UVR) that can reach the Earth's surface. Ultraviolet-C (UVC) rays are blocked from reaching the Earth, but some of the ultraviolet-A (UVA) rays and ultraviolet-B (UVB) rays come through the ozone layer.

Is the Ozone Layer Thinning?

A thinning of the ozone layer has been documented since 1979. Some scientists estimate a 4 to 5 percent decrease in the overall amount of the ozone layer. "Holes" in this protective layer have been discovered near both the North and South Poles. The thickness of the ozone layer varies throughout the year, depending on the strength of the sun's rays. Some evidence suggests that a 40 to 50 percent loss in the ozone layer occurs over Antarctica in the spring. Researchers believe that as the ozone layer continues to thin, more UVB rays may reach the Earth.

What Is Damaging the Ozone Layer?

In general, man-made products are more harmful to the ozone layer than natural particles such as volcanic ash and dust. Chemicals such as chlorofluorocarbons (CFCs) appear to be the biggest threat to the ozone layer. CFCs are commonly found in some plastic products (such as packaging material and foam

products), aerosol cans (such as hairspray and spray paint), and coolants in refrigerators and air conditioners. Other chemicals such as halons, methyl bromine, carbon tetrachloride and methyl chloroform also may lead to the thinning of the ozone layer.

Is the Depletion of the Ozone Layer Related to Skin Cancer?

About 9 out of 10 skin cancers in the U.S. are related to UVR exposure. As a result, some scientists and physicians have become very concerned about the thinning of the ozone layer. The number of cases of skin cancer may increase, in part, because more of the sun's harmful rays will be able to get through this protective shield.

The Skin Cancer Foundation estimates that ozone depletion could result in a 10 percent increase in the amount of UVB that reaches the Earth. The sun's UVB rays damage the skin's outer layer and may cause sunburn and skin cancer. UVB exposure also can lead to snow blindness and cataracts in the eyes.

Recent evidence suggests that skin cancer rates are increasing. Experts predict about 7,500 new cases of skin cancer in Southern Arizona this year. In addition, about one out of every 5,000

Southern Arizonans will develop malignant melanoma—an often fatal form of skin cancer. The Environmental Protection Agency warns that ozone loss could result in 200,000 additional deaths from skin cancer in the U.S. over the next 50 years.

What Can You Do to Prevent Ozone Depletion?

In addition to supporting environmentally friendly legislation, you can: Buy only non-CFC aerosols or pump sprays; try not to buy CFC-made packaging; dispose of refrigerator or air conditioning fluid at hazardous waste collection sites; and recharge old systems with CFC-free fluids.

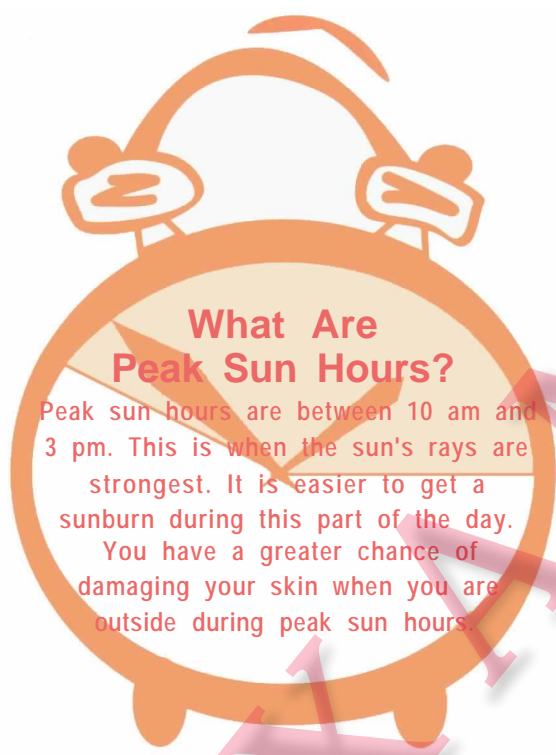
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What Can You Do to Protect Yourself?

Adopting sun-safe practices can help you protect your skin from sun damage. There are four ways to practice sun safety: Limit time in the sun, especially between the hours of 10 am and 3 pm; wear cover-up clothing, such as long-sleeved shirts, long pants, wide-brimmed hats, and sunglasses; stay in the shade when outdoors; and wear sunscreen with an SPF of 15 or more every day of the year.

The ozone layer helps protect people, plants, and animals by keeping many of the sun's harmful rays from reaching the Earth's surface. With the thinning of this protective sunscreen, we likely will see an increase in sunburn, eye damage, and skin cancer. To prevent ozone layer depletion, use safer products. To protect yourself and your family, adopt sun-safe practices for a lifetime.



Tanned Skin: The Facts

At one time or another in your life you've no doubt suffered from a painful sunburn. While the pain was intense, so was the embarrassment of reddened skin. Even worse was the ugly peeling and flaking that followed.

Many of us wrongly think that a tan is "healthy." However, recent studies show that fewer Arizonans value a tan than ever before. While a tan might seem nice now and win you the occasional compliment, your friends won't think you look healthy when that tan leads to sun overexposure, unattractive wrinkles, premature aging of the skin, or deadly skin cancer.

Arizonans are particularly at risk for skin damage due to their constant sun exposure. Practicing safe sun behaviors will provide you with immediate rewards: You won't have to try to soothe your skin with sticky aloe vera, or smelly creams and vinegar. When you use a protective sunscreen and wear cover-up clothing, you will enjoy a baseball game, the desert, and other outdoor activities with your friends and family without the added burden of a sunburn, skin disfigurement, or skin cancer.

If you don't enjoy having a tan, or don't want to have a tan, others will still see you as a desirable person they want to spend time with. Few Americans say a tan looks healthy these days. One-third of all teens and adults never sunbathe. Plus, as you get older, virtually everyone would agree that supple, smooth skin is more attractive than tough, wrinkled, leathery, sun-exposed skin.

Parents must play an important role in keeping their children's skin attractive for life. The decisions you make daily, about what your children wear or the activities they engage in, are critical ways you can help keep your family beautiful and healthy.

Protecting Your Skin Makes Good Sense

In Arizona, we average more than 350 days of sunshine each year. However, some of us forget to protect our skin while we are outside. The sun's UV rays can cause permanent skin damage and wrinkling.

Are wrinkles a normal aging process?

Yes, a few wrinkles are part of getting older. These wrinkles may be caused by the skin losing some of its elasticity (ability to hold its shape). "Normal" wrinkles include the "laugh lines" around the eyes, and creases between the nose and upper lip. Dermatologists believe, however, that most wrinkles are linked to sun exposure. UVA rays may be a major contributor to skin aging. The damage caused by UVA is a slow, silent process that has long-lasting effects.

How can you help prevent wrinkles?

An easy way to prevent wrinkles is to protect your skin from the sun's harmful rays. The skin is the largest organ in the body. It is important to keep it in good shape! A daily skin care habit needs to begin early in life. However, it is never too late to start a sun-safe routine! Practice sun safety by limiting your time in the sun, wearing sunscreen and cover-up clothing, including hats and sunglasses, and staying in the shade. Be sun safe and help keep your skin healthy!

Teaching Tools

Peer Pressure and Sun Safety

Children's peers can be a source of both positive and negative influence. Through their peers children learn about rules, responsibilities, problem solving and norms of behavior. Likewise, children may have friends who pressure them into trying something that can adversely affect their health or safety. Take sun protection, for example. Your children's peers may try to:

- persuade them to lie out in the sun
- tease them about wearing sun-safe clothes
- make fun of them about staying in the shade
- tempt them to play outdoors during peak hours
- ridicule them for not having a tan

Good decision-making skills can help children resist peer pressure. Help your children learn these skills:

1. Build a Knowledge Base

Children need background knowledge on which to base a sound decision. For example, some children may get teased about having freckles not knowing that the sun causes freckles to appear. By practicing sun safety, they could prevent the problem (the freckles and the peer pressure). Teach your children about the harmful effects of the sun's ultraviolet rays and ways to reduce sun damage. This will give them a foundation for making good decisions about their behavior.

2. Recognize the Challenge

Children need to understand and accept that the choices they make may result in other children viewing their behavior as different or unusual. For example, choosing to wear a wide-brimmed hat to school may result in kids teasing them about being different from the crowd. A strong self-image and your support can help

your children make the more difficult decision.

3. Weigh the Consequences

Teach your children to make a list of the potential pros and cons of making a sun-safe decision. Talk about the trade-offs of choosing to behave in a certain way. If they don't want to avoid peak hours, some consequences may include not participating in a group event or having to bring their own sunscreen. Some advantages may include preventing sunburn and keeping their skin attractive.

4. Make Decisions Carefully

Children need to consider three things before making a final decision. These include taking **time** to make a careful choice, making sure the decision is **meaningful** to them, and having the **confidence** that they can carry out their decision (this involves having the necessary skills as well as the desire). Help your children process their alternatives through these channels before making a final decision.

5. Respond to the Source of Pressure

Encourage your children to approach the people creating the pressure, get their attention, make sure they are listening and then suggest an alternative plan. For example, propose that instead of going to see a movie in the morning and playing soccer in the afternoon, that they avoid peak sun hours by playing soccer first and then going to a movie. This is a skill you can practice with your children. Try role-playing. Take turns being the person giving and resisting the peer pressure.



A national Cancer Institute-
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 The University of Arizona
 Health Sciences Center

How Intense Is the Sun?

The sun intensity index shows how many minutes an untanned Caucasian person can stay in the sun without protection before getting sunburned. It is important to consider both the time of day and the time of year when using this index. The sun's UV rays are strongest during the middle of the day (peak sun hours) and during summer months. Use the index to help you take the appropriate steps to protect yourself and your family from the sun every day, all year long.



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Project Information

The Family Sun Safety Project is funded by the National Cancer Institute and coordinated by the Behavioral Sciences Program at the Arizona Cancer Center. For more information contact the Family Sun Safety Office:

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