ACSM Information On…

SUN PROTECTION FOR OUTDOOR SPORTS

Outdoor sports are fun and good for our health, but many of them are warm weather activities where athletes wear only minimal clothing, thus risking skin damage from sun exposure, which can be short term (sunburn) or long term (skin cancer, photoaging).

A Complete Physical Activity Program

A well-rounded physical activity program includes aerobic exercise and strength training exercise, but not necessarily in the same session. This blend helps maintain or improve cardiorespiratory and muscular fitness and overall health and function. Regular physical activity will provide more health benefits than sporadic, high intensity workouts, so choose exercises you are likely to enjoy and that you can incorporate into your schedule.

ACSM's physical activity recommendations for healthy adults, updated in 2011, recommend at least 30 minutes of moderate-intensity physical activity (working hard enough to break a sweat, but still able to carry on a conversation) five days per week, or 20 minutes of more vigorous activity three days per week. Combinations of moderate- and vigorous-intensity activity can be performed to meet this recommendation.

Examples of typical aerobic exercises are:

- Walking
- Running
- Stair climbing
- Cycling
- Rowing
- Cross country skiing
- Swimming

In addition, strength training should be performed a minimum of two days each week, with 8-12 repetitions of 8-10 different exercises that target all major muscle groups. This type of training can be accomplished using body weight, resistance bands, free weights, medicine balls or weight machines.

As many jobs have migrated indoors to a computer work station from outside manual labor, there is more temptation for those with sedentary jobs to get outside and exercise. Organized sports events often are not scheduled to avoid peak sun exposure hours. Athletes and exercise enthusiasts are therefore at increased risk for sun related skin damage.

Golden Rules of Sun Protection

Prevent sun damage with broad spectrum sunscreens with SPF greater than 30. Sunscreens should be applied one half hour before going outdoors. Reapply every hour or more often if sunny, if swimming, if perspiring. Even water resistant sunscreens should be reapplied every one to two hours. Wear effective sun protective clothing (long sleeve shirts), sunglasses, wide brimmed hats (with a four inch brim). Avoid sun exposure between 10:00 a.m. and 3:00 p.m. Plan outdoor activities early in the morning or late in the afternoon. Just because you use sunscreens, do not plan to stay out longer. They were not designed so that you could stay out longer in the sun. Dark skin is at risk as well as fair skin, it may take longer to see a sunburn in dark skinned individuals, but everyone is at risk and should use sunscreen. Skin cancers from sun exposure occur on all skin types, so sun protection is important.

Sun Protection is Important at Every Age

Over 25 percent of lifetime sun damage occurs in childhood. Men over the age of 40 spend the most time outdoors and get the highest annual ultraviolet rays. Harmful UV rays are more intense in the summer, at higher altitudes, and closer to the equator. Florida receives 150 percent more UV light than Maine. Overexposure in one day can lead to sunburns. It takes only one sunburn to double your risk of skin cancer. Melanoma has been linked to sunburns in childhood. A sunburn at any age will increase the melanoma risk. Long term exposure is linked to all forms of skin cancer.

Sun Damage is Caused By UVB (290-320 nm) and UVA (320-400 nm) Radiation

- UVB causes sunburn and skin cancer. Skin cancer is the most preventable cancer, with sun protection being the best prevention. More than 90 percent all of skin cancers are located on sun-exposed skin.
- UVA causes photo aging. Wrinkles are directly related to sun exposure. Tanning is a direct sign of injury to the skin—both a sunburn and a tan are signs of damage to the skin (consider a sunburn a "heart attack" of the skin).
- Sun exposure causes cataracts, the leading cause of blindness.

Clothing

Clothing is our first line of defense against the sun's harmful ultraviolet (UV) rays and protects us by absorbing or blocking much of this radiation. The more skin you cover, the better. A long sleeved shirt covers more skin than a t-shirt, especially if it has a high neckline or collar that shields the back of the neck. Likewise, long pants protect more skin than shorts. UPF stands for Ultraviolet Protection Factor, and indicates what fraction of the sun's ultraviolet rays can penetrate the fabric. The higher the UPF (ultraviolet protection factor), the greater the protection. A shirt with a UPF of 50, for example, allows just 1/50th of the sun's UV radiation to reach the skin. A white cotton T-shirt has a UPF of three. Some clothing manufacturers list the UPF of their garments on the tags. In addition, darker colors fabrics will block the UV rays better.

Choose Broad Spectrum Sunscreens

Broad spectrum sunscreens should include both UVA and UVB sunscreen They are made to absorb, reflect or scatter sunlight. Water resistant sunscreens are important if swimming. Brand names do not matter. Realize that the average adult should use two ounces of sunscreen for one application of exposed skin. So, an eight ounce bottle of sunscreen would last a family of four about two days. The average American uses 25-50 percent of the recommended sunscreen. The average American family uses 1.5 bottles of sunscreen a year. The reason why people get sunburned at the beach is because they are not using enough sunscreen. Reapply every two hours, and be sure to use enough.

Using Sunscreen

One way to get the most from sunscreen is to apply the sunscreen, wait for 20 minutes, and then reapply the sunscreen. This should be done well before going out in the sun. Another way is to use a higher SPF, keeping in mind that research shows there is no additional benefit from SPF over 50, and that using a higher SPF sunscreen does not mean that one can use less. The average person requires one ounce of sunscreen—this is enough to cover the exposed areas of the body adequately.

Staying Active Pays Off!

Those who are physically active tend to live longer, healthier lives. Research shows that moderate physical activity—such as 30 minutes a day of brisk walking—significantly contributes to longevity. Even a person with risk factors like high blood pressure, diabetes or even a smoking habit can gain real benefits from incorporating regular physical activity into their daily life.

As many dieters have found, exercise can help you stay on a diet and lose weight. What's more – regular exercise can help lower blood pressure, control blood sugar, improve cholesterol levels and build stronger, denser bones.

The First Step

Before you begin an exercise program, take a fitness test, or substantially increase your level of activity, make sure to answer the following questions. This physical activity readiness questionnaire (PAR-Q) will help determine if you're ready to begin an exercise routine or program.

- Has your doctor ever said that you have a heart condition or that you should participate in physical activity only as recommended by a doctor?

- Do you feel pain in your chest during physical activity?
- In the past month, have you had chest pain when you were not doing physical activity?
- Do you lose your balance from dizziness? Do you ever lose consciousness?
- Do you have a bone or joint problem that could be made worse by a change in your physical activity?
- Is your doctor currently prescribing drugs for your blood pressure or a heart condition?
- Do you know of any reason you should not participate in physical activity?

If you answered yes to one or more questions, if you are over 40 years of age and have recently been inactive, or if you are concerned about your health, consult a physician before taking a fitness test or substantially increasing your physical activity. If you answered no to each question, then it's likely that you can safely begin exercising.

Prior to Exercise

Prior to beginning any exercise program, including the activities depicted in this brochure, individuals should seek medical evaluation and clearance to engage in activity. Not all exercise programs are suitable for everyone, and some programs may result in injury. Activities should be carried out at a pace that is comfortable for the user. Users should discontinue participation in any exercise activity that causes pain or discomfort. In such event, medical consultation should be immediately obtained.

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This brochure was created and updated by Dr. Mark Herron, MD, board-certified in Dermatology and Pediatric Dermatology, and is a product of ACSM's Consumer Information Committee. Visit ACSM online at www.acsm.org.