Executive Perspective

As public health professionals, you undoubtedly use the national health observances to help heighten awareness of important health topics. In this column, RADM Boris Lushniak provides a unique perspective on ultraviolet (UV) radiation awareness to coincide with UV Awareness Month in July. For more information on UV Awareness Month, go to http://www.healthfinder.gov/nho/JulToolkit.aspx.

Janice Huy
CAPT (Ret.), U.S. Public Health Service

HERE COMES THE SUN

Boris D. Lushniak, MD, MPH

As we approach another summer season, we're all reminded of the fun and activities that those "dog days" of summer bring. Certainly, the milder weather allows us to venture into the great outdoors and pursue the recommendations of the National Prevention Strategy.[1] For example, adults should engage in at least 150 minutes of moderate-intensity activity each week, and children and teenagers should be involved in at least one hour of activity each day. Whether you engage in outdoor physical activity or outdoor recreational activities such as boating, swimming, attending sporting events, picnicking, or relaxing, regardless of the season, your skin is vulnerable and needs to be protected.

The culprit is ultraviolet (UV) radiation, which is a form of radiation that comes from the sun, tanning beds, and sunlamps. UV radiation can penetrate and change the cells within the layers of the skin. Immediate effects of UV radiation exposure include tanning and burning of the skin. Excessive chronic exposure to UV radiation can change the texture of your skin, cause wrinkling and premature skin aging, and lead to cataract formation in the eyes. More importantly, chronic UV radiation exposure is linked to skin cancer. A simple way of noting the intensity of UV radiation on any given day is by paying attention to the UV Index. This scale, which was developed by the Environmental Protection Agency and the National Weather Service, is often reported in newspapers, on weather broadcasts, or on the Internet.[2] The scale ranges from 1 to 11+, with a UV Index of 8–10 presenting a very high risk of harm from unprotected sun exposure.

The World Health Organization, International Agency for Research on Cancer lists UV radiation as carcinogenic to humans.[3] Basal- and squamous-cell skin cancers are the most common cancers in the United States, with more than three million people affected every year. Most skin cancers are curable but do require surgical procedures. The most dangerous and deadly skin cancer is melanoma. This year, more than 76,000 cases of melanoma will be diagnosed in the U.S., and more than 9,000 deaths will result from melanoma.[4]

The best way to fight skin cancer is to prevent it. Reducing exposure to UV radiation can help decrease the risk of skin cancer. Parents and caregivers should pay special attention to children by limiting their exposure to UV radiation. Reducing UV radiation exposure is a multifaceted process that includes (*1*) properly using sunscreen; (*2*) seeking shade, especially between 10 a.m. and 4 p.m.; (*3*) covering the head with a wide-brimmed hat; (*4*) shielding the skin with appropriate clothing (e.g., some garments have UV protection factor labels); and (*5*) protecting the eyes with UV-blocking sunglasses. In addition, one should avoid artificial sources of UV radiation, such as sunlamps or tanning beds.

As for the proper use of sunscreen, the American Academy of Dermatology recommends applying a broad-spectrum (covering both UVA and UVB rays) sunscreen with a sun protection factor (SPF) of ≥30 to all exposed skin.[5] The sunscreen should be reapplied every two hours and after sweating or swimming.

The regulatory world of sunscreens is changing, and hopefully these changes will provide more accurate information to the public. Final Food and Drug Administration (FDA) regulations that will go into effect in June 2012 will establish standards for testing the effectiveness of sunscreens and will require specific labeling to reflect those results.[6] These new regulations will require specific criteria for sunscreens to be labeled as "broad spectrum" and "water resistant." Only sunscreens that pass the FDA's broad-spectrum test procedure, which measures a product's UVA protection relative to its UVB protection, may be labeled as "broad spectrum." Water-resistance claims must indicate whether the sunscreen remains effective for 40 minutes or 80 minutes while swimming or sweating,

based on standard testing. Only sunscreens that are broad spectrum and have an SPF rating of ≥15 will be labeled with the following statement: "If used as directed with other sun protection measures . . . reduces the risk of skin cancer and early skin aging, as well as helps prevent sunburn." Sunscreens that are not broad spectrum or are broad spectrum but only have SPF ratings of 2–14 will be labeled as follows: "This product has been shown only to help prevent sunburn, not skin cancer or early skin aging."

Other regulatory actions are being taken at local and state levels to limit exposure to UV radiation in tanning beds. For example, in October 2011, California banned the use of UV tanning devices by children and teenagers younger than 18 years of age.[7]

Skin cancer remains a national priority. Healthy People (HP) 2020 focuses on science-based national objectives for promoting health and preventing disease. The HP 2020 goals focus on reducing the melanoma death rate and increasing behaviors that reduce exposure to harmful UV radiation and avoid sunburn.[8]

Do your part to promote the National Prevention Strategy—"working together to improve health and quality of life for individuals, families, and communities by moving from a focus on sickness and disease to one based on prevention and wellness"[1]—by protecting yourself and those you love from the harmful effects of the sun and artificial sources of UV radiation. As the Australians say: "Slip, slop, slap, seek, slide." That is, slip on a shirt, slop on the sunscreen, slap on a hat, seek shade, and slide on the sunglasses.

Boris Lushniak is Deputy Surgeon General in the U.S. Public Health Service, Office of the Surgeon General, Washington, D.C.

Address correspondence to: Boris D. Lushniak, MD, MPH, U.S. Public Health Service, Office of the Surgeon General, 200 Independence Ave. SW, Washington, DC 20201; tel. 202-401-4660; fax 202-260-4405; e-mail <boris.lushniak@hhs.gov>.

The findings and opinions expressed in this article are those of the author and do not necessarily represent the official position of the Office of the Surgeon General.

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