Sun Protection

Working outdoors is one of the primary reasons that people like to work in nurseries, and many summer nursery tasks require spending long hours in the sun. Some exposure to sunlight is necessary to good health. For example, sunlight helps the body produce vitamin D, enabling it to utilize calcium and prevent a calcium deficiency disease called rickets. A healthy tan is one of the benefits of working in the sun, but like many things, you can have too much of a good thing.

Sunlight is the common term for electromagnetic radiation that originates from the sun. The light that our eyes see is only a very narrow band of this radiation, but contains the wavelengths that drive photosynthesis, and make all life on earth possible. Wavelengths longer than visible light are harmless, ranging from the infrared rays that we feel as heat, to very long radio and TV signals that pass harmlessly through our bodies. Wavelengths shorter than visible light, ranging from ultraviolet (UV) to cosmic rays, can be hazardous to your health because of their higher relative energy. Specific wavelengths of ultraviolet light are known to affect human health: UVB is considered a primary cause of skin cancer, whereas UVA rays cause premature wrinkling. Fortunately, the earth's atmosphere selectively screens out most of these harmful rays. Ozone molecules high in the atmosphere intercept much of the UV radiation reaching our atmosphere, however, because man-made pollutants are causing a thinning of the ozone layer, this protective effect is diminishing. Correspondingly, there has been a dramatic increase in skin cancer since World War II, especially among people who spend long hours in the sun.

There are three common types of skin cancer: basal-cell carcinoma, squamos-cell carcinoma, and malignant melanoma. While carcinomas can be deadly, malignant melanoma is by far the most serious type of skin cancer, with 80 percent of the cases becoming fatal. Melanocytes are normal skin cells that produce melanin, the dark pigment that causes tanning and helps protect the skin from solar radiation. UVA rays are thought to break the DNA molecules in the melanocytes, turning them into cancerous cells that multiply out of control. Melanoma is a particularly deadly form of cancer, because some of the cancer cells break off and rapidly migrate through the lymph and circulatory systems to other body organs. One of the insidious aspects of this disease, is that the melanoma may not spread for many years, but once it does, the cancer is almost impossible to cure.

Doctors have identified several factors which have linked the incidence of UV light to skin cancer:

1. The predominant occurrence of tumors on exposed areas of the skin

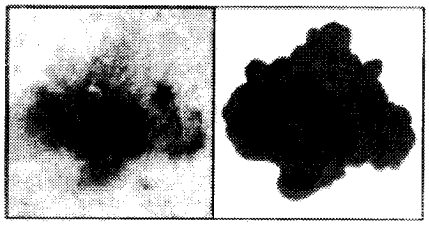
2. The correlation to the amount of time spent in the sun

3. A relationship to the intensity of the sunlight

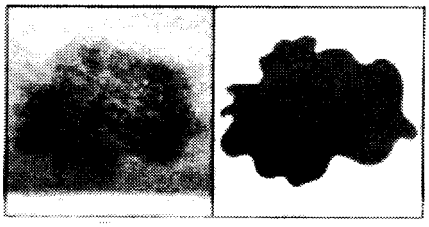
For carcinomas, cumulative lifetime solar exposure is believed to be the primary causative factor. This hypothesis is supported by studies showing a prevalence of skin cancers on those who spend much time outdoors, either recreationally or occupationally. Some people are more at risk than others, and melanoma is rare among people of African or Asian ancestry. High risks factors include a family history of skin cancer, a fair complexion with blue eyes, red hair, or freckles, and skin than tends to burn rather than tan. Regardless of your risk category, everyone should practice the following precautions to reduce their risk of skin cancer:

* Wear light clothing and a hat to protect exposed areas, especially during midday when sunlight is most intense. Remember that UV radiation can penetrate clouds so be cautious even on cloudy days.
* Use sunscreens to block the sun's rays, and re-apply them frequently. Sunscreens are rated by an SPF (sun protection factor) number. For most people, an SPF-15 sunscreen should be sufficient as it blocks out 93% of the UV rays. Lighter-skinned people or those working out in the sun all day should use SPF-30.
* Wear UV-blocking sunglasses. Almost any brand provides a moderate level of protection, but outdoor workers may want to consider special UV-rated glasses that can reflect 99% of UV radiation.
* Practice early detection by examining yourself regularly. Most skin cancers are easily treated and cured if they are detected in time. Look for a change in the size or appearance of a mole or blemish, and become concerned if these areas are sore or start to itch. If any of your moles or pigmented skin spots have any of the following A-B-C-D symptoms (Figure 9), contact your doctor immediately.

A - Asymmetry: One half of the spot is different than the other half.



B - Border is irregular: The spot has a scalloped or poorly defined border.



C - Color or texture is varied: Parts of the spot vary in color or skin texture.

D - Diameter is unusually large: The size of the spot are larger than 6 mm, or the size of a pencil eraser.

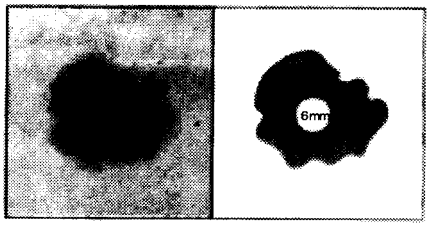


Figure 9. People working outdoors should regularly examine their skin for any suspicious blemishes or moles (Courtesy of the Oregonian).

So, with a little common sense and some simple precautions, nursery workers can reduce their risk of developing health problems, and still enjoy the physical and mental benefits of working outdoors.

Sources:

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