

Chatham Dermatology

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Sun Safety Information

What does the sun do?

- provides energy allowing life on earth to survive
- provides heat for warmth and visible light so we can see
- helps body produce Vitamin D (but should NOT be relied upon for Vitamin D production)
- emits ultraviolet radiation(UVR) causing skin damage (DNA damage & immune suppression)

What is ultraviolet radiation (UVR)?

- UVR is on the list of the most dangerous cancer causing agents for humans (International Agency for Research on Cancer).
- UVB causes sunburn and skin cancer. UVB is increased between the hours of 10AM and 4PM in Georgia.
- UVA causes skin cancer and immune suppression.
- UVA is 95% of the UVR reaching the earth's surface. UVA is NOT blocked by the ozone, clouds, or glass. UVA is present all year round, all over the world, and during all daylight hours. It is believed that this everyday UVA causes more DNA damage than UVB. Everyday UV exposure is cumulative. Your skin remembers every drop of sun it has ever gotten. *EEK! Children receive large amounts of UVA on the playgrounds at schools.*

Skin Cancer

- Most common cancer in US / Over half of all cancers in humans
- Over 3.5 million skin cancers diagnosed annually in US
- Each year, there are more new cases of skin cancer than the combined incidence of cancers of the breast, prostate, lung, and colon.
- 1 in 5 Americans / 1 in 3 Caucasians will develop skin cancer
- 5 or more sunburns by any age doubles the risk of any skin cancer (Mayo Clinic).
- The number of women under 40 diagnosed with basal cell carcinoma has more than doubled in the last 30 years.
- The number of women under 40 diagnosed with squamous cell carcinoma has increased almost 700% in the last 30 yrs.

Malignant Melanoma in the US

- Most common cancer ages 25-29
- 2nd most common cancer under age 30
- 5th most commonly diagnosed cancer in men
- 6th most commonly diagnosed cancer in women
- Lifetime risk of invasive melanoma in the US was 1 in 1500 in 1935, 1 in 500 in 1960, and 1 in 250 in 1980. *Today, it is 1 in 50 for white females and 1 in 39 for white males.* (The lifetime risk of melanoma in Australia is 1 in 19.)
- 1 person dies every hour in the US from melanoma.
- Melanoma death rates associated with THIN melanomas <1mm in depth (that we used to think of as easily curable) have increased and now account for approximately 30% of melanoma deaths.
- Although uncommon in African Americans, Latinos, and Asians, melanoma is frequently fatal in these patients.
- The incidence of melanoma is rising faster than that of any other cancer in the US.
- The incidence of melanoma in whites has increased by over 60%.
- The most rapid increases in melanoma have occurred among white women aged 15-39 and white men over 65.
- Sun exposure early in life appears to play a greater role than later in life (especially first 10-20-years).
- One blistering sunburn in childhood doubles melanoma risk.
- Melanoma in adolescents and young adults is increasing at alarming rates in the US and parts of the world with light skinned populations.
- Any exposure to tanning beds before the age of 35 may increase melanoma risk by 75%.
- An estimated 25% of melanomas may be attributable to indoor tanning.

Why is skin cancer increasing so rapidly?

- Lifestyle changes – more leisure time spent in the sun
- Sunny living location during childhood
- Tanning Devices
- Clothing styles are more revealing
- False sense of security from wearing sunscreen
- Sunny vacations
- Longevity
- Ozone depletion

Sun Protection Measures

- Seek shade (trees, umbrellas, cabanas).
- Beware of reflective surfaces (sand, water, snow, concrete).
- **Hats** (wide brim to shade face, neck, ears)
- **Clothing** loose fitting; long sleeves & pants; dark or bright colors; tightly woven fabrics
UV protective clothing / SPF clothing very helpful
A white T-shirt only has a SPF of 4 or 5.
- Sunglasses (UVA/UVB protective) ; large lenses; wrap around styles
- Lip protection
- Avoid indoor tanning / tanning beds. Tanning beds can emit doses of UVR as much as 15 times that of the sun.
- UV Window protection (for cars and homes)
- Sunscreen

Sunscreen

- Apply daily after brushing your teeth.
- Apply 15-30 minutes before sun exposure.
- Reapply every 1 ½ to 2 hours. Sweating, swimming, and wind all decrease sunscreen effectiveness.
- Use more than you think you need.
- Studies show we apply sunscreen too thinly, and the SPF we are actually getting from sunscreen is probably only one third to one half of the number shown on the bottle.
- Choose high number SPF's with broad spectrum coverage (UVB and UVA).
- Sunscreen should be our LAST line of defense. We should wear protective clothing and hats and sunglasses.

Sun Protection for Kids

- The young learn sun protection from parents and role models (teachers, coaches).
- *Children receive THREE times the annual sun exposure of adults (especially dangerous midday sun).*
- The CDC and the International Agency for Research on Cancer have recommended better protection of our children's skin including better education and school involvement like Australia. Australia has the highest incidence of melanoma in the world. Australia has a SunSmart program in which schools are required to provide shade structures and sun safety education. Children must wear hats and sunscreen on the playgrounds.
- Australia's SunSmart program:
 - Slip on a shirt
 - Slop on sunscreen
 - Slap on a hat
 - Seek shade
 - Slide on sunglasses
- In 2004, Arizona became the first US state to legislatively mandate sun safety in schools!!
- In Georgia, sun safety must be implemented by individual schools. Hancock Day School has adopted a Sun Safety for Kids program (education, hats, sunscreen, lip balm, sunglasses). The program can only succeed if parents and teachers remind the students to wear their hats and sunscreen everyday & if the students wear the hats and sunscreen. If it was 20 degrees outside, teachers would remind students to wear coats outside, and students would gladly put on the coats. Teachers and students should be as diligent with wearing hats and sunscreen daily.

Vitamin D

- UVR (UVB) does promote Vitamin D synthesis in the skin.
- Vitamin D is also obtained from some foods (fortified milk, oily fish, fortified cereals).
- In the US, about half of men and women have low levels of Vitamin D. This is true even in folks who get LOTS OF SUN i.e. surfers in Hawaii, residents of South Florida...
- Vitamin D production varies (decreased in elderly, obese, smokers, drinkers, diabetics, patients on certain meds...).
- UVB varies (depends on location, altitude, season, time of day, ozone, pollution, clouds...).
- Sun exposure cannot ASSURE adequate Vitamin D production for each individual. The best way to ASSURE adequate Vitamin D is by taking the safe and inexpensive supplements. Get Vitamin D from food and supplements.
- Do NOT rely on a carcinogen (cancer causing agent) to obtain a vitamin that is easy to get from supplementation. Would you smoke a few times a week if you knew it could stimulate Vitamin D production? Of course NOT!!

Sources: American Academy of Dermatology, American Cancer Society, Skin Cancer Foundation, US Department of Health and Human Services, Journal of the American Academy of Dermatology, SEER Cancer Statistics Review, Dermatologic Clinics, Cancer, International Journal of Cancer, Clinical Pediatrics, Dermatologic Surgery, American Journal of Clinical Nutrition, New England Journal of Medicine, International Agency for Research on Cancer