

SKIN PROTECTION

Dr Elizabeth Sawyers, HBSc, MD, CCFP, FCFP

801-1081 Carling Ave,

Ottawa, ON. K1Y4G2

www.drswyers.ca. 613-725-2334



SKIN CANCER FACTS:

- Skin Cancer is the most common of all cancers representing 1 in 3 of all new cancer cases
 - 80-90% of skin cancers are caused by UV radiation (SUN)
 - 6500 cases of melanoma estimated for 2014 with 1050 deaths
 - 76 100 estimated cases of non-melanoma cancers (basal & squamous cell)
 - Largely preventable form of cancer

UNDERSTANDING THE SUN & RISK

- Ultraviolet radiation (UV) from sunlight is divided into subtypes of different wavelengths. **UVA**: Long waves, penetrating into deeper layers of the skin; Subdivided into **UVAI** (long) & **UVAII** (short); Contributes to sunburn; Damages include promotion of skin cancer, premature ageing & immune suppression. **UVB**: Shorter waves affecting the outer skin layer; Responsible for immediate sunburn effect. **BOTH** play a role in skin cancer
- Sunburn is mainly caused by UVB & UVAI. The *absence of a burn does not equal lack of damage* as there is effect on the deeper skin layers from UVAII. UVA is emitted independent of time of day, latitude & season & thus skin damage can occur in all seasons even if burning is not evident.
- An effective sunscreen should protect against both UVB & UVA (broad spectrum) however most are UVB dominant. Broad spectrum labeling ensures that a certain *breadth* of UVA protection is offered (370 nm wavelength) rather than *depth or magnitude* of protection. Thus, all UVA agents are not equal in providing the required protection.
- While your sunbathing days may be gone, effects on the skin from common daily activities add up: walking to your car, working near a window, driving to work, sitting under a tree & even *winter* outdoor activities can add up to **20 hrs.** of exposure/week!

SPF is a measure of an agent's ability to prevent sunburn primarily from UVB & some UVA. 98.3 % of rays are blocked by SPF 60 & 96.67% by SPF 30 meaning 1.66% of UV radiation reaches your skin with SPF 60 & 3.33% with SPF 30 (*double the amount!*). SPF protection is based on an application of sunscreen of 2 mg/cm² of skin. Studies confirm most people apply 25-50% this amount. Applying half the recommended amount of an SPF 50 drops protection to SPF 25. Using higher SPF accounts for under-application. 1 shot glass full of product is adequate to cover exposed areas properly. **UVA PROTECTION:** Look for broad spectrum (covering UVB & A) sunscreens to ensure UVA protection as well. The label "broad spectrum" means products

have passed a critical wavelength (CW) test whereby 90% of UV absorption occurs at a wavelength of 370 nm. Many products reach this CW but vary in the magnitude of protection. Two products of SPF 30 with different UVA protectant agents can have drastically different protective levels. The majority of skin damage is due to UVB (80%) however UVA is potent causing significant damage in deeper layers. Sunscreen should provide protection proportionate to the contribution of UVB & A to skin damage i.e. balanced in protective powers against skin damage from UVB & A. Ideally a 3:1 UVB:A ratio is needed to do this. Sunscreens containing Zinc Oxide provide excellent such protection. Look for those with minimum 15% zinc in micronized form to avoid whiteness to the skin.

ZINC OXIDE PRODUCTS: (AVAILABLE AT)

IDEAL FOR THE FACE:

- **Think Sport Everyday Face** (Terra 20)
- **Derma-e Face** (Terra 20)
- **Cliniderm** (Pharmacies)
- **Every Morning Sun Whip** (Laserderm, Terra 20)
- **Simply Zinc Sun Whip** (Laserderm, Terra 20)

IDEAL FOR THE BODY

- **Cliniderm** (Pharmacies)
- **Think Sport** (Mt Equip Co-op, Terra 20)
- **Derma-e** (Terra 20)
- **Bio-Solis** (Terra 20)
- **True** (Mt Equip Co-op)
- **Matters' Substance** (Terra 20)

SUNSMARTS:

- Avoid sun in peak hours 10 am – 4 pm
- Wear protective clothing. Hats with 4" brim, UPF protective shirts/shorts
- Apply adequate sunscreen
- Avoid tanning beds which deliver high UVA radiation. Users increase their lifetime risk of melanoma by 75% & are 2.5X more likely to develop Squamous Cell Skin Cancer & 1.5X Basal Cell Skin Cancer.
- Wear sunscreen daily on exposed areas in **ALL** seasons to avoid both UVB & UVA exposure.
- Sunscreen is safe to apply to babies \geq 6 mos.

USEFUL WEBSITES:

LASERDERM Dr. S. Laughlin provides information on sun protection & products for reducing skin cancer risk. www.laserderm.ca

ENVIRONMENTALWORKING GROUP: Provides up to date product information about safe & effective sunscreens. www.ewg.org

UV PROTECTIVE CLOTHING: Order clothing online to protect your skin. www.sunveil.com, www.uvcouture.com, www.sunprecautions.com, www.mec.ca