

THE ANTI SKIN CANCER DIET & TIPS FOR MINIMIZING SKIN CANCER BY PATRICIA WONG, M.D.

Everyone is familiar with the standard dermatologist's advice for avoiding skin cancer and sun damage: "Stay out of the sun between 10am to 2pm." and "Wear your sunscreen everyday." But is this the only thing you can do? And realistically, who is going to stay home in the middle of the day and pass up the best part of the day not to mention all the fun activities.

Research on skin cancer and sun protection is revealing some very interesting facts. It turns out that what you eat, wear, wash your clothes with may also make a difference in modifying skin cancer risk and solar wrinkling, discoloring, and thinning of your skin.

Anti Skin Cancer Diet

ENJOY YOUR COFFEE & DECREASE YOUR RISK OF SKIN CANCER

Recent studies strongly suggest that caffeine decreases one's risk for developing non melanoma skin cancers. Caffeine acts as a sunscreen absorbing UV light when applied topically to skin. Caffeine inhibits an enzyme known as ATR, which is responsible for monitoring DNA replication in cells and making sure that all DNA has been completely replicated prior to cell division. Caffeine causes atypical skin cells to be eliminated.



Mice studies show that lack of ATR enzyme function decreases development of UV induced skin cancers. Mice exposed to ultraviolet radiation and then given caffeine enriched water to drink did not develop skin cancers. When the caffeine was removed from their diet, they developed non melanoma skin cancers.

Over one's lifetime, 1 cup of coffee (caffeinated) decreases the risk of a non-melanoma skin cancer by up to 5% according to a study of 93,676 women done by Rutgers University in New Jersey. Although the effects of drinking coffee on preventing skin cancer are too small to make this a useful strategy medically, topical caffeine may achieve higher concentrations in the skin than what is possible by normal consumption and be of benefit in reducing non melanoma skin cancers.

In any case, from a dermatological perspective, you should take comfort in knowing that you are doing something good for your skin when you have your morning cup of coffee. Coffee contains polyphenols (caffeic acid and coumaric acid) which are naturally occurring plant products with anti-inflammatory, immunomodulatory, and antioxidant properties.



RESCUE SERUM CONTAINS CONCENTRATIONS OF CAFFEINE AND GREEN TEA POLYPHENOLS. Dr. Wong recommends applying it underneath your sunscreen to provide additional UV protection and as a defense against potential skin cancer. Rescue serum contains antioxidants that have anti-inflammatory properties, which can help calm rosacea, and repair sunburns and sun damaged skin. It is available in our office.

GREEN TEA contains epigallocatechin gallate. This polyphenol has been shown to assist in the repair of ultraviolet radiation damage to DNA in skin cells in mice. It also inhibits enzymes involved in tumor growth and may play an important role in carcinogenesis prevention.



Taking **VITAMIN D & CALCIUM** together may decrease the risk of developing melanoma by 50% in postmenopausal women with a history of having nonmelanoma skin cancer, according to Stanford University research. 36,262 postmenopausal women ages 50-79 were randomly selected to take calcium plus Vitamin D supplements or placebo. After 7 years of follow-up, women taking the supplements who had had a previous nonmelanoma skin cancer reduced their risk of developing melanoma by 57% compared with similar women taking placebo. The melanoma risk reduction was not observed in women who had no prior history of a nonmelanoma skin cancer.

VITAMIN A SUPPLEMENTS may decrease risk of melanoma.

FLAVONOIDS are powerful antioxidants found in grapes that neutralize free oxygen radicals that form from UV exposure and damage skin cells.



WE HAVE INFUSION MULTI-ACTIF, A RESEVERATROL CREAM MADE FROM GRAPE EXTRACT. DR. WONG RECOMMENDS TWICE DAY APPLICATION TO FACE, NECK AND DECOLLETAGE AREAS TO DEFEND AGAINST PHOTO AGING CHANGES SUCH AS INCREASED SKIN LAXITY AND WRINKLING.

Boost your diet with antioxidant food sources rich in anthocyanins such as

pomegranate juice and blueberries. Blackberries are loaded with ellagic acid, which is another powerful antioxidant.

Following a **Low Fat Diet** (less than 20% of total caloric intake as fat) decreases the incidence of precancerous lesions and nonmelanoma skin cancers.

Take An Aspirin A Day To Keep the Melanoma AWAY. But you still need to be seen for your annual comprehensive skin exam!

A retrospective study involving 59,806 post-menopausal white women, showed that taking aspirin decreased the risk of developing melanoma by 20%. Longer durations of aspirin use correlated with a greater reduction in melanoma risk. Individuals who took aspirin for 5 years or more had a 30% lower risk for melanoma than non-aspirin users.

Clinical studies have yielded inconsistent results regarding the benefit of non-steroidal anti-inflammatory use and melanoma. Acetaminophen (Tylenol) has not shown any benefit towards reducing skin cancer risk.

Aspirin inhibits the activity of an enzyme called Cyclooxygenase 2. This enzyme plays a key role in tissue inflammation and tumor growth. High levels of Cyclooxygenase 2 are present in melanoma and other types of cancers. This is currently thought to be the mechanism of action for aspirin in reducing melanoma development.

POLYPODIUM LEUCOTOMOS is an extract from a fern in Central America. Research shows promising evidence that taking the extract prior to sun exposure may help prevent skin cancer and sunburns. It has anti-inflammatory properties and helps combat cellular mutations and photoaging. Heliocare and SunPill are two formulations containing polypodium leucotomos. There is no data at present establishing what an effective dose is and there is limited information on side effects. An upset stomach has been reported. This is available without a prescription.

Other dietary interventions have been studied such as beta-carotene, selenium, vitamin E, and Vitamin C. No significant benefit has been shown as far as skin

cancer prevention.

Sun Protective Clothing Tips

Launder Clothing with Tinosorb for Added UPF Protection

Tinosorb for washing clothes; there is a product called SUN GUARD manufactured by CIBA. It is a laundry additive that absorbs UVA and UVB. You add it to your wash and it provides an invisible photoprotective layer UPF 30 (Ultraviolet protection factor) on your clothing. The sun protection lasts through 20 washings. This is a convenient alternative to purchasing sun protective clothing. One box costs about \$2 and can be ordered online: sunguardsunprotection.com. This is a practical treatment to use on children's clothing and avoids using sunscreen on very young, delicate skin.

Protective Clothing: There are specially designed garments whose fabric offers UPF 50 or higher. Solumbra, Coolibar, SolarTex, Walleroo are some of the companies selling such clothing. They are manufactured to be lightweight so that you can exercise comfortably while wearing them. The advantage of photoprotective clothing is that you do not need to reapply sunscreen every few hours. Sunscreen degrades in sunlight and rubs/sweats off over time. Sun Protective clothing provides constant and consistent protection.

Cotton T shirts do not provide adequate protection from the sun. A white T-shirt has an UPF of 5-7 and when wet it actually increases the penetration of ultraviolet light and accelerates burning. In general, darker clothing with a tight weave provides better protection.

Fabrics with Superior Photoprotection

- * Blue or black denim jeans UPF 1700!
- * Merino wool garments
- * Unbleached cotton- contains lignins
- * blendsatin-finish silk of any weight
- * Tightly woven fabrics
- * 100% polyester
- * Shiny polyester

Fabrics with Inferior Photoprotection

- * Polyester crepe
- * Threadbare, worn fabric

- * Bleached cotton
- * Undyed, white denim jeans
- * Knits, especially loosely woven
- * Viscose
- * Wet Fabric

Hats with at least a 4" brim circumferentially should be worn. Baseball caps provide woefully inadequate photoprotection. There are a number of hats that have drapes that cover the neck. My personal favorite hat for outdoor activities is a lightweight hat that has draped mesh vented fabric that covers the entire neck. Many hats have additional fabric but it only covers the back of the neck and leaves the sides of the neck exposed. The following website has some excellent hats, parasols, and shaded portable chairs.

<http://www.inoventions.biz/main.sc>

Break the Habit



STOP SMOKING! Smokers have a 50% greater risk of developing squamous cell carcinoma than people who have never smoked. Smokers develop more head and neck cancers, lip cancers, mouth cancers, and anogenital cancers. Although smokers do not appear to develop more melanomas, they have a poorer prognosis when they do have a melanoma because their immune system is compromised from smoking and are more likely to die from melanoma than nonsmokers with melanoma.

Big Sunglasses are the Best

Wraparound sunglasses provide the best protection for minimizing UV radiation entering the sides of glasses. UV causes cataracts, thins the skin around the eyes, and leads to fine wrinkling and dark circles under eyes. Choose sunglasses that have a wide side arm to block UV rays from entering the retina laterally and have lenses with a large surface area.

Make your Car Windows UV protective

Put a UVA blocking clear plastic film like Llumar on the driver and passenger windows of your car. It has low reflectivity so you have visibility at night and keeps the car cooler during summer. It is not necessary to darkly tint windows to effectively block UVA radiation. Website www.llumar.com

EXERCISE OUTSIDE IN THE EARLY A.M.



Your skin contains enzymes for removing precancerous cells and correcting DNA damage due to UV radiation. This physiologic process is at its maximal repairing capacity in the early A.M. Afternoon sun exposure will result in more

damage because skin repair enzymes are not as active later in the day. There is a circadian rhythm to cellular repair mechanisms.

Sunscreen is still the number one strategy for preventing skin cancer, wrinkling, and skin discoloration. The lifetime risk of developing melanoma is now 1 in 36 for males and 1 in 55 for females in the U.S. Studies show applying sunscreen daily decreases your chances of developing melanoma by half compared with occasional application.