

Markham Village Naturopathic Clinic

258 Main Street North, Markham, Ontario, L3P 1Y7 (905) 201-6497

Much Ado About Sunscreen

With increasing temperatures comes increasing spirits and... increasing sun burns! How to protect ourselves from that magnificent force that causes such joy and anguish (especially for the fair skinned)? With news of rising rates of skin cancer, most of us have been reaching for the strongest sunscreens available, but protection from the sun does not come without risks. Knowing the high chemical content of most commercial sunscreens leaves many of us searching for healthier alternatives that will protect our skin from the damaging affects of the sun's UV rays.

How do ultraviolet rays affect our health? First, we need to distinguish the three types: UV-A rays (A is for *aging*) rays are the most insidious – these are the culprits for damage to skin even on cloudy days. While these rays do not cause burns, UV-A damages our collagen (which keeps our skin firm and toned) and destroys the vitamin A in our skin, leading to wrinkles and weakness. As well, over the long term, UV-A contributes to damage to our DNA by causing oxidative damage (so get your antioxidants, people!)

Exposure to UV-B rays (B is for *burning*) causes sunburn, and the risks of exposure increase with our thinning ozone layer. Our body reacts to UV-B by increasing the amount of melanin, a brown pigment which acts like an 'umbrella', shading our DNA and producing a tan. But usually, we tan after we have burned, and direct damage to our DNA from UV-B can cause cancer.

UV-C rays (C is for *cancer*) are the most harmful of all UV rays, but luckily our ozone layer prevents these sunrays from getting to us.

The sunscreen controversy:

In 2000, the International Journal of Cancer published a study that showed an increase in malignant melanoma (a rare and deadly form of skin cancer) amongst sunscreen users. This led to further studies on the harmful affects of the specific chemical ingredients of most commercial sunscreens. Researchers found that three ingredients, octocrylene, octylmethoxycinnamate, and benzophenone-3, when absorbed increase free radicals and reactive oxygen species, causing significant oxidative damage and in some, cancer.

Not only do the chemicals in sunscreen contribute to oxidative damage of our skin, research is also starting to reveal the potential estrogenic effect of some of the

chemicals used. These chemicals mimic estrogen in the body and have the potential to significantly disrupt our endocrine systems, leading to fertility concerns, thyroid imbalances, troublesome metabolism, and increased risk of hormone-sensitive cancers.

There is also some concern that diligent use of sunscreen is contributing to Vitamin D deficiency, which leaves us at risk for developing chronic degenerative diseases such as osteoporosis and autoimmune conditions such as multiple sclerosis.

While sunscreen does seem to protect against squamous cell and basal cell carcinomas, two forms of skin cancer (not as lethal as malignant melanoma), the other health hazards seem hardly worth the risk. As well, most commercial sunscreens fail to protect us against UV-A rays at all.

So what do you do, to protect yourselves and your children? Well, the absolute best option is to cover up with light clothing made from natural materials, and allow yourself to tan, which is the body's natural defense against the sun. But this is not always practical. Alternatively, sunscreens that contain minerals, such as titanium oxide and zinc oxide are guaranteed to protect against both UV-B and UV-A, and currently seem to be safer choices than the chemical commercial sunscreens. So with a little common sense and 'healthier' alternatives, enjoy your summer!