

Dr. Jonathan V. Wright's
NUTRITION & HEALING

Vol. 9, Issue 6 • June 2002

**Toss your sunscreen and step out of the shadows!
You can prevent skin cancer and still enjoy
time in the sun this summer**

By Jonathan V. Wright, M.D.

The days are getting longer, the weather is getting warmer, and the dermatologists and sunscreen salesmen are getting down to business with their annual chorus. Like the best of self-proclaimed "saviors," they threaten us with Skin Cancer Hell if we "sin" by exposing our bodies to the Great Sun Satan.

If some dermatologists had their way, we'd all dress like people in the Victorian era, covering up in ankle-length dresses and long pants whenever we're outdoors, carrying parasols and wearing gloves whenever sunshine threatens to come too close, and having just the smallest bit of skin peeking out whenever we go swimming.

And sunscreen salesmen would like nothing more than for us to believe the only way to avoid skin cancer is by slathering every inch of exposed skin with SPF 10,000 (or thereabouts).

Sometimes I wonder if they think that humans were originally an underground species, with skins not adapted to the rays of the sun. Or perhaps we're all originally from some planet further from the sun—Mars or Jupiter maybe—where the sun's rays are weaker?

For some reason that continues to perplex me, they seem to forget that the sun has been around for billions of years (probably more), and humans beings date back quite a ways as well—existing in times

"Sunscreen salesmen would like nothing more than for us to believe that the only way to avoid skin cancer is by slathering every inch of exposed skin with SPF 10,000 (or thereabouts)..."

where the only clothing came from scraps of animal skin and there was no such thing as sunscreen.

Anthropology vs. dermatology: Are we on the wrong planet?

Before attending medical school, I received my undergraduate "A.B." degree (in 1965, Harvard liked "A.B." instead of "B.A.") in anthropology. I still like to keep track of this field of research today. Knowing the history of the human race has given me a different (and

sometimes unique) perspective on health care, including skin cancer prevention.

Anthropologists have determined that the earliest humans lived in Africa. The sun's intensity is much greater there, and people spent nearly all of their time outdoors wearing very little clothing. While it's likely that "early man" and "early woman" sought shade whenever the sun's heat was just too much, it's also likely that our remote ancestors got enormously more direct-skin sun exposure than we do now.

For hundreds of thousands of years, humans lived mostly outdoors, and, odds are, our skin is quite adapted to sun exposure—as long as we pay attention to the early twinges of sunburn.

And just to drive the point home, no anthropologist has ever reported finding anything even remotely resembling sunscreen along with the remains of prehistoric man, so let's move on and dispose of...

The sunscreen myth

You've probably seen pictures from the 1920s depicting women on the beach reveling in their

(continued on next page)

The lowdown on low back pain: Willow bark offers relief equal to prescription drugs page 4

Safe tan tips that work for even the fairest of complexions page 5

Dr. Jonathan V. Wright's
NUTRITION & HEALING

Editor:

Jonathan V. Wright, M.D.

Publisher:

Jenny Thompson

Editorial Associate:

Corin Mauldin

Designer:

Ramsey Brisueño

Managing Editor:

Amanda L. Ross

Copy Editor:

Ken Danz

Customer Service Specialist:

Dawn Heidelberg

© Copyright 2002 Agora South, L.L.C., 819 N. Charles St., Baltimore, MD 21201. Reproduction in whole or part is prohibited without written permission of the publisher. Dr. Jonathan V. Wright's *Nutrition & Healing* is published monthly by Agora South, L.L.C., 819 N. Charles St., Baltimore, MD 21201. Subscription rates are \$74 per year. POSTMASTER: Send address changes to Dr. Jonathan V. Wright's *Nutrition & Healing*, 819 N. Charles St., Baltimore, MD 21201.

For questions regarding your subscription, please call reader services at (508)368-7493 (9 a.m.-5 p.m. EST Mon.-Fri.). International call (508)368-7498; fax (410)230-1273. Send cancellations to P.O. Box 206, Baltimore, MD 21203. If, for any reason, customer service is unable to handle your request in a satisfactory manner, you may contact a subscriber advocate. Subscriber advocates can be reached via our telephone hotline, (410)223-2690, or via e-mail at subscriberadvocate@agora-inc.com.

Our mission:

Nutrition & Healing is dedicated to helping you keep yourself and your family healthy by the safest and most effective means possible. Every month, you'll get information about diet, vitamins, minerals, herbs, natural hormones, natural energies, and other substances and techniques to prevent and heal illness, while prolonging your healthy life span.

A graduate of Harvard University and the University of Michigan Medical School (1969), Dr. Jonathan V. Wright has been practicing natural and nutritional medicine at the Tahoma Clinic in Kent, Washington, since 1973. Based on enormous volumes of library and clinical research, along with tens of thousands of clinical consultations, he is exceptionally well-qualified to bring you a unique blending of the most up-to-date information and the best and still most effective natural therapies developed by preceding generations.

Nutrition & Healing cannot improve on these famous words:

"We hold these truths to be self-evident, that all men are created equal, that they are endowed by their creator with certain unalienable rights, that among these are life, liberty, and the pursuit of happiness."

The inalienable right to life must include the right to care for one's own life. The inalienable right to liberty must include the right to choose whatever means we wish to care for ourselves. In addition to publishing the best of information about natural health care, *Nutrition & Healing* urges its readers to remember their inalienable rights to life, liberty, and freedom of choice in health care. This information is published to help in the effort to exercise these inalienable rights, and to warn of ever-present attempts of both government and private organizations to restrict them.

All material in this publication is provided for information only and may not be construed as medical advice or instruction. No action should be taken based solely on the contents of this publication; instead, readers should consult appropriate health professionals on any matter relating to their health and well-being. The information and opinions provided in this publication are believed to be accurate and sound, based on the best judgment available to the authors, but readers who fail to consult with appropriate health authorities assume the risk of any injuries. The publisher is not responsible for errors or omissions.

Moving? Missed an issue? Please let us know within 60 days of moving or if you have not received an issue. (International subscribers, please notify us within 90 days.) After this time period, missed issues can be purchased for US\$6.50 each. Postage costs may apply to international requests.

newfound liberation by shedding inhibitions and what was, at the time, a shocking amount of clothing. Of course, we men joined in the fun, too—and bathing suit manufacturers saved a lot on cloth. Sunscreen use was rare in the '20s compared to the present, but the skin cancer rate was notably very low.

Sunscreen use has risen every decade since then, and the rate of skin cancer has risen right along with it! No, I'm not claiming that sunscreen *causes* skin cancer, but the data shows that sunscreen doesn't do a terribly good job of *preventing* skin cancer, either. So, if you want to prevent skin cancer, what do you do?

Could your diet lead to skin cancer?

Before we became "civilized," humans relied completely on whole foods. There were no processed or junk foods, no one added sugar to anything, and, of course, there were no food chemicals, herbicides, pesticides...you get the picture. As long as there was enough food to eat, nutrient deficiencies didn't exist except in areas of the world with specific soil mineral deficiencies. That's certainly not the case today! Nutritional deficiencies and "insufficiencies" (not an outright deficiency you could die from, but not enough to "get the job done" for all your body's needs, either) are absolutely rampant. Many of the most common deficiencies involve nutrients that can protect your skin from sun damage and cancer.

To sharply reduce your risk of skin cancer, what foods and specific nutrients are most important? The food list won't come as a surprise: vegetables, nuts, beans, fish, eggs, and whole grains are first in line. Specific nutritional supplements include folic acid, vitamin A, vitamin B₁₂, zinc, and vitamin C.

What do folic acid and your tax refund have in common?

Folic acid is destroyed rapidly by heat, cold, and exposure to light, including sunlight. So it's sunlight's destructive effect on folic acid in the skin, not the actual sun exposure itself, that accounts for a significant part of the skin cancer problem. Folic acid (along with vitamin B₁₂ and zinc) is absolutely key to DNA reproduction and repair. When skin cell DNA is damaged by errant or excess sunshine, intracellular enzymes dependent on folic acid, vitamin B₁₂, and zinc get right to work repairing the damage, and the skin cell is much less likely to become cancerous.

For decades, folic acid has been the No. 1 dietary vitamin deficiency. If folic acid levels are low to begin with, sunshine can make the situation even worse. It's no wonder skin cancer rates have risen in response. By supplementing with the right amount of folic acid, you can ensure that your body has enough to offset the amount destroyed by the sun.

Just a few years ago, after considerable arm twisting, criticism from other government agencies, and congressional pressure, the FDA reluctantly mandated folic acid "enrichment" of certain foods. Unfortunately, food "enrichment" is much like your tax refund—a few dollars given back each year to make you feel better about forking over a big chunk of every paycheck to the government: It's enough to quiet most complaints, but not

ough to do much good. So folic acid still competes with essential fatty acids for the No. 1 spot on the vitamin deficiency list. And folic acid deficiency and insufficiency is a major contributor to skin cancer risk.

At the risk of sounding like your mother, I'll tell you once again: Eat your vegetables! It really is the best way to ensure that you get adequate folic acid to reduce your risk of skin cancer. Spinach and other deep green vegetables are particularly good sources. Other good food sources of folic acid include brewer's yeast (it's actually the best source), beans (especially lima beans), cantaloupe, watermelon, and wheat germ. Liver is a good source, too, but it *must* be from entirely organically raised animals.

Even if you already eat the foods listed above, it's a good idea to take a folic acid supplement too. Use at least 1 milligram (1,000 micrograms) daily, more if you like to be out in the sun or have a family history of skin cancer. Unfortunately, you won't find folic acid supplements in 1,000 microgram quantities because our "guardians" at the FDA limit the amount that can be put into one tablet to 800 micrograms. But there have been no recorded folic acid overdoses, so you can go ahead and take two or more 800-mcg tablets without worrying about taking too much—you can't!

Bringing vitamin A out of the shadows and into the light—literally!

Aside from seeing it listed on the label of your daily multivitamin/mineral combination, you probably don't spend a whole lot of time thinking or worrying about vitamin A. But vitamin A is a crucial element in the war against skin cancer.

Vitamin A is very similar to folic acid in its connection to skin cancer. Like folic acid, vitamin A assists with cellular repair and lack of this nutrient can result in the cellular damage dermatologists blame only on the sun's rays.

The protective metabolite of vitamin A is called retinoic acid. (When we take vitamin A, our body naturally metabolizes some of it into retinoic acid.) Researchers have reported that ultraviolet irradiation from the sun causes a major loss of retinoic acid receptors in skin cells.¹ But if levels of vitamin A are sufficient, more retinoic acid can be formed, which appears to protect retinoic acid receptors, and much of the "sun damage" is prevented. The bottom line: Skin cells can repair themselves better with sufficient retinoic acid, which is only possible with sufficient vitamin A. (Using retinoic acid itself is the very best way to use vitamin A to protect against sun damage, but it must be done carefully. For more information on this, see Clinical Tip #86 in the February 2001

issue of *Nutrition & Healing*.)

While vitamin A may not always catch your attention, I'm sure you've heard of carotenoids, especially beta-carotene. Carotenoids are vitamin A precursors: Your body must break them down to get vitamin A, and, unfortunately, like many other things, the older we get, the more this process slows down. So it's best to make sure you get some actual vitamin A, not just betacarotene.

There are relatively few dietary sources of vitamin A as vitamin A itself (and not carotenoids). Eggs, liver (from organically raised animals only), and fish liver oils are the most widely available and healthful sources. Carotenoids are present in all yellow-orange and green vegetables, but don't rely on them for your entire vitamin A intake.

It's important to keep in mind that while it's nearly impossible to truly overdose on betacarotene (although you can turn a very interesting carrot color if you take very large amounts), you can overdose on vitamin A itself, so you should be very careful about quantities. Symptoms of vitamin A overdose include headache, very dry skin, loss of hair at the outer edges of the eyebrows, and pain in the "long bones," just to note a few. Quantities up to 75,000 IU are generally safe, but you don't need to take quite that much for skin cancer prevention. To lower your risk of skin cancer, take 40,000 IU of vitamin A daily. (Don't be afraid of taking or eating extra carotenoids such as betacarotene along with a vitamin A supplement. Even if your body already has enough vitamin A, extra carotene *will not* cause a vitamin A overdose.)

Do you have this risk factor for skin cancer? The answer might be written on your fingernails

Although zinc is a well-known supplement for a variety of skin conditions (eczema and acne are among the best known) its potential to reduce skin cancer risk is a well-kept secret, even among many skin cancer researchers. But if you remember zinc's critical role (along with folic acid and vitamin B₁₂) in helping repair damaged DNA, it makes sense that zinc will help damaged skin cells restore themselves to health before the damage leads to cancer. And it also makes sense that if your body has a deficiency of this mineral, it won't have all the tools necessary to get the repair job done.

In the early 1960s, the USDA (the federal "agriculture department") published a map showing that 31 states had insufficient levels of zinc in their agricultural soils for optimal crop growth. The situation has only worsened in the 40 years or so since! You don't

(continued on page 6)

Skin cancer protection

(continued from page 3)

need me to tell you (but I'll remind you anyway) that if there's not enough zinc in the soil for optimal crop growth, then there certainly won't be enough zinc in those crops to ensure optimal health in the people eating them.

My patients are usually surprised to learn that zinc deficiency is sometimes literally written on their bodies in what might seem like an unlikely place: the fingernails. Go ahead and take a look at your own fingernails right now. Do you see any little white spots? These are "zinc deficiency spots," first identified and publicized by Dr. Carl Pfeiffer. Zinc is most "used up" when a large mass of cells are rapidly growing and dividing, which happens to the greatest extent during puberty, so teenagers are particularly at risk for zinc deficiency and insufficiency. But unlike many of the other aspects of puberty, this isn't one that you can simply thank your lucky stars to be finished with. Zinc deficiency can happen at any age. And it's important to keep in mind that zinc deficiency or insufficiency more often occurs without the telltale "zinc spots," so even if you don't see any on your fingernails, you should still consider taking extra zinc as extra insurance against skin cancer.

The best food sources of zinc—by far—are oysters. I don't know about you, but I just haven't been able to develop a taste for these slithery mollusks, so I usually rely on herring and other seafood, eggs, liver (yes, organic only), and beef, which are all good zinc sources. The best vegetable sources of zinc include sunflower seeds, nuts, mushrooms, and whole grains.

Regardless of how many of the foods above you decide to incorporate into your diet, you should also take 25 to 30 milligrams of zinc (picolinate or citrate) in supplement form each day for the best chance of lowering your risk of skin cancer. To prevent zinc-induced copper deficiency, take 2 milligrams of copper along with the zinc. Many good multiple vitamin/mineral combinations already contain these amounts, and I recommend that all my patients take such a formula, so there may be no need to buy additional supplements. But check the quantities on the label your multi to be sure.

Eating meat may reduce your skin cancer risk

The final member of the "DNA repair group" that can help you reduce the risk of skin cancer is vitamin B₁₂. But do you get enough? I worry that many of my patients put themselves at significant risk for B₁₂ deficiency by listening to the nutrition "experts" who

advise eliminating as much animal protein from their diet as possible.

My concern lies in the fact that the vitamin B₁₂ in our diets is almost exclusively from animal sources. Liver (organic) is far and away the best source, but other organ meats, regular cuts of meat in general, and seafood are good sources too. There are very, very few plant sources of B₁₂ other than algae, chlorella, and spirulina. Don't get me wrong, I'm not arguing against vegetarian diets (they're actually best for some people), but if you follow such a diet, be very careful to take adequate amounts of vitamin B₁₂ and iron.

While the possible lack of this nutrient in the diet is an important aspect to consider, it isn't the major problem with vitamin B₁₂ nutrition. The biggest problem is with the digestion and absorption of the vitamin.

I know you've read this from me over and over, but hypochlorhydria, poor stomach function with inadequate production of hydrochloric acid and pepsin, (which happens increasingly with age) is such a common—and often ignored—problem that I feel it's necessary to remind you about it as often as I can. In this case, you need to know that hypochlorhydria is the major cause of vitamin B₁₂ deficiency and insufficiency.

I could go on and on about this problem (and I have—most recently in the September 2001 issue of *Nutrition & Healing*, as well as in the book *Why Stomach Acid Is Good For You*, which I co-authored along with Lane Lenard, Ph.D.). So, I won't write any more about it here but recommend that if you're over 40, have your stomach acid levels tested and take the necessary steps to correct any imbalances.

In the meantime, take at least 500 micrograms of vitamin B₁₂ daily. You can do so worry-free, since, as with folic acid, it's nearly impossible to overdose.

Vitamin C: Stress relief for your skin

Even though our ancestors have genetically prepared us to handle exposure to sunlight, intense or prolonged exposure does impose a certain amount of extra stress on your skin. For most creatures, this isn't a problem because their bodies produce extra vitamin C naturally in response to any stress. So when they remain in the sun for long periods of time, the internal production of vitamin C is stepped up and it is then "rushed" to the skin to help prevent damage and repair any that may have already occurred. But humans are among the "select" few species to have a unique genetic defect that prevents our bodies from making vitamin C internally under any circumstances, stress or otherwise—so we must make sure we get adequate amounts from supplements and food sources like fruits and vegetables.

(Just a quick bit of trivia: we share our vitamin C defect with gorillas, monkeys, chimps, and other primates, which you may have guessed, since their internal makeup is very similar to ours. But I'll bet you never thought you shared a genetic link with guinea pigs! They're among the very few other species that have this internal shortcoming.)

If you know you're going to stress your skin with sunshine, make sure to take at least an extra gram of vitamin C twice daily—and more if you're on the beach in a tropical environment. (It's the least you can do for being lucky enough to go on such a getaway!)

Damage control and antioxidants

The word "antioxidant" is relatively new on the medical scene, but it describes nutrients that have been around forever. For

example, all of these specific nutrients you've read about so far are antioxidants to one degree or another. I've always suspected that the "powers that be" in academic medicine coined the term and popularized it as the "latest breakthrough" in order to cover up their possible embarrassment at finally being forced to agree with all us "health food nuts" that vitamins, minerals, and other nutrients can be used to prevent and treat disease.

But "antioxidant" has some actual meaning when describing a specific function these nutrients share: slowing or preventing oxidative damage. One example of oxidative damage is the kind caused to your skin cells by excess or prolonged exposure to sunlight.

For this reason, other antioxidant nutrients have great potential for lowering your risk of skin cancer. First among these is vitamin

E, but the list of potential skin-protective antioxidant nutrients is incredibly long. In addition to the specific recommendations made in this article look for a well-rounded antioxidant formula at your local natural food store or compounding pharmacy to lower your risk of skin cancer even further.

Giving the blessing to bask

Ignore the chorus of dermatologists who are undoubtedly good at many things they do but have forgotten that we belong on Earth, descended from tens of thousands of generations who never used sunscreen but rarely got skin cancer. Being in the sun is good for you! It's one of the places you, your children, and grandchildren belong! So, as long as you take the right dietary precautions and heed your skin's warning twinges of sunburn, go ahead and soak up some rays. ☀

CLINICAL TIP 104

Never say never: You can get a tan—and still avoid sunburn—with a few simple nutrients

It's an all-too-familiar dilemma for many people in the summer: You head outdoors into the sunshine with the expectation of a golden tan only to retreat indoors a few hours later looking like a boiled lobster. In several days' time, your lobster shell peels away leaving you once again with a complexion that has come to be known "affectionately" as "pasty white."

Admittedly, an inability to tan isn't a life-threatening medical condition. But serious sensitivity to the sun's rays that results in serious burns after just a few hours *is*. Fortunately, even if you have the fairest of complexions, it is possible to increase the amount of time you spend in the sun without burning. And good news for the tan-impaired: These steps can help the "pastiest" people achieve a healthy glow (even those who "just can't tan" are pleasantly surprised after using this technique).

Over 50 years ago, Dr. John Myers, who I (and many other natural medicine physicians) consider *the* pioneer of using trace elements in medicine, found an effective, natural, and entirely logical way to lengthen the time you can spend in the sun without burning, and improve your tan, too.

Dr. Myers' "better tanning" system is designed to help skin produce more melanins (skin pigments). The amino acid L-tyrosine is the precursor for all the

melanin pigments. Some key "cofactors" in turning L-tyrosine into the various melanins include copper, vitamin B₆, and vitamin C. Dr. Myers reasoned that supplying the skin with these nutrients would enable more and better melanin formation under the influence of sunshine, and thousands of people have proven him correct.

Of course, the key is to make sure that all of these elements are in the right place at the right time. Trace elements (in this case copper) usually take two to three weeks to build up and start "doing their jobs" in our bodies. But the other components necessary for this tanning technique work relatively rapidly. Vitamin B₆ and vitamin C are water-soluble, and L-tyrosine converts into melanin—which then results in a suntan—in just two or three days.

If you want to try Dr. Myers' better tanning system, you'll need to take 4 milligrams of copper daily. The sebacate form of copper appears to be the best absorbed, although other forms are OK. If you're not planning much sunshine exposure right away, start the copper first (remember, it takes longer to "start working") and add the other three nutrients the day before you plan to tan. But if your tan plan starts tomorrow, it's OK to start everything at once. It'll still help, just not quite as much as when the copper supple-

ment gets a head start.

On the day before you head out into the sun on the quest for a new and improved tan, take the following combination three times a day: 1,000 to 1,500 milligrams of L-tyrosine, the same amount of vitamin C, and 50 milligrams of vitamin B₆.

Supplementing with copper can cause your body to excrete excess zinc, so it's best to take 30 milligrams of zinc (picolinate or citrate) daily for as long as you're using copper. It's also best to "back up" extra vitamin B₆ with the entire B-complex; the amount found in any good mega-vitamin multiple is usually sufficient.

If you're going to continue spending time in the sun throughout the summer months, continue taking these nutrients at the specified quantities.

Dr. Myers' better tanning system *will not* prevent sunburn if you're in the sun too long! It will enable you to stay in the sun *longer* (sometimes considerably longer—in my own case 2 1/2 hours) before you start to burn. And it will improve whatever tan you usually get. If you "never tan," you'll probably notice at least a slight difference from what you're used to. But it's still very necessary to take precautions against burning and to make sure your diet and supplements protect you against skin cancer. Read the lead article of this issue for the specifics on skin cancer protection