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## Sunlight and Health

## by Raymond Francis

In a number of BHN issues beginning in July/August of '96, we have told our readers that, contrary to popular belief, sunlight does not cause cancer. In fact cancer rates are much lower where there is more sunlight. I have recently come across an excellent book by Zane Kime, MD titled *Sunlight*. Dr. Kime looks at the relationship of sunlight and human health. He takes studies from the scientific literature and demonstrates sunlight's beneficial effects in lowering cholesterol, blood pressure, and blood sugar. He cites how sunlight increases endurance, sex hormone levels, and immunity. The book also contains dietary suggestions on how to protect your skin from sun damage the way nature intended.

It's easy to forget, in the midst of our cancer epidemic, that cancer was traditionally a rare disease affecting less than 1% of the population. The healthy, long-lived populations like the Hunzas and the Vilcabambas lived at high elevations where the sun was more intense. They were out farming every day. Yet they lived to very old ages without getting cancer. If the sun causes cancer, how did these people and others like the Polynesians ever survive? Skin cancer is the end-result of many factors of which inappropriate sun exposure is only one.

Like a lot of things, too much of a good thing can be bad for you. The sun is essential to health, but too little or too much sun will damage health. The sun can do damage if we use it improperly. And use it improperly is what most of us do. Studies show that the incidence of all malignancy is 6 to 10 times lower closer to the equator where there is more sunlight, and people who have chronic exposure to the sun are less likely to develop melanoma than urbanized people who have intermittent exposure.

One of the reasons for lower cancer rates may be that people who are out in the sun all the time form pigments that protect them from the sun, and their sun exposure makes them healthier in the first place. Urban dwellers don't get enough healthy sun exposure. They often get intermittent tans that fade. Repeating this cycle may result in damage because the skin is not protected during the tanning process. Also the urban dweller is much more likely to burn during the tanning process. Some researchers believe that burns are a key to skin cancer. Turning into a red lobster is definitely not conducive to good health, as any lobster can attest.

No one is arguing that sunlight doesn't trigger free radical activity and that the amount of free radicals doesn't increase with the intensity of the sunshine. These free radicals can cause skin to age prematurely, wrinkle, and sunburn, and can damage DNA and cause skin lesions. However, research shows that diets rich in carotenes and other antioxidants protect the skin against the hazards of ultraviolet sunlight. Carotenes are a class of compounds found in plants, fruits, and vegetables that reduce the free radical activity that causes damage and premature aging of cells. Research has shown that diets rich in carotenes reduce the risk of cancer and prevent the damage to DNA that results in a number of degenerative diseases. In fact carotenes are being called nature's "sun umbrella." Carotenes are used up during exposure to sunlight, so one's dietary supply must be adequate to provide continuous protection. Here's the problem. Very few Americans are getting adequate amounts of fresh fruits and vegetables in their diet. We are blaming the sun for problems caused by poor diets and excessive inappropriate exposures.

What about sunscreens? A few decades of increasing sunscreen use has done nothing to stop the increasing rate of skin cancer. In fact, the chemicals in sunscreens may even become carcinogenic when exposed to sunlight. Researchers at the University of Pennsylvania say that broad-spectrum sunscreens still aren't broad enough to cover the full spectrum of potentially harmful light. Ultraviolet radiation

consists of over 100 separate frequencies. Sunscreens don't protect against all, and we don't know which are harmful and which beneficial. We may even be blocking the wrong ones. In addition, using a sunscreen can create a false sense of security and cause people to spend excessive amounts of time in the sun. Researchers at the M.D. Anderson Cancer Center in Houston say, "There is no substantial evidence that sunscreen protects against any of the three forms of skin cancer. Dr. Robin Marks, a dermatologist and a professor at the University of Melbourne says, "Relying on synthetic chemicals to prevent cancer is laughable." Arthur Rhodes, a University of Pittsburgh dermatologist, told a 1994 meeting of the American Cancer Society that sunscreens "appear weakly effective or ineffective" at preventing cancer.

The fact is we were designed to be out in the sun. Sunlight is absolutely essential for good health in so many ways that we don't even begin to understand them. Unless you do something foolish, the sun won't damage healthy people who have adequate amounts of nutrients like carotenes, lycopene, essential fatty acids, and vitamins A, C, E, and zinc and selenium. Our need for the sun is exemplified by the fact that nature intended we get most of our vitamin D from the sun. Vitamin D is almost totally absent in vegetable foods.

When sunlight strikes the skin it sets off a multi-staged process whereby cholesterol is ultimately changed into vitamin D. Vitamin D is essential to the absorption of calcium from the intestines and for the production of enzymes involved in collagen formation in the bones. Staying out of the sun is partially responsible for our epidemic of osteoporosis, especially in our elderly. One study found that 36% of elderly men and 47% of elderly women were vitamin D deficient. Even moderate sun exposure would help to alleviate this problem. However, sunlight through window glass will not activate vitamin D synthesis.

Sunlight is absolutely essential to good health. Its only been in recent times that the sun has been cast as our enemy. If getting too little or too much sun is bad for us, how can the average person get what they need without harming themselves? First of all get the sun slowly. Secondly, stay out of the midday sun. Timing sun exposures to avoid the hours of 10 to 2 PM will cut ultraviolet exposure by 60% because the sun is less intense. Most everyone should try to get at least ten minutes in the sun on a daily basis and longer on weekends. If you do it this way, your skin will adapt through skin pigmentation and you won't get sunburned. Some experts claim at least one hour of unfiltered sunlight per day is essential to health. This doesn't have to be in direct sun, indirect sunlight is acceptable but it should not be filtered through glass. Sunlight into the retina is a very important nutrient. Retinas need the whole spectrum of solar radiation, and wearing glasses or contacts could screen out important frequencies that are critical to long-term health. When you are in direct sun for long periods, cover up. Wear a broad brimmed hat and suitable clothing.

We need to protect against skin cancer both from the outside and the inside. Getting an optimal amount of nutrients is essential. Eat a diet that is rich in fresh, unrefined, essential fatty acids such as those contained in Udo's Choice. A diet rich in carotenes is essential. Supplementation with products like Caroplete should be considered. Caroplete contains a natural mixture of carotenes including lycopene. In addition, vitamins A, C, and E along with minerals like zinc and selenium will help to both protect and repair skin.

How much sun is right for you depends on your biochemical individuality. With a bit of awareness and following the above suggestions, you should be able to develop a healthy golden tan and reap the benefits of the sun without doing harm. Health is a choice, and by developing good habits and making sensible choices, the sun will be your friend and not your enemy.

Raymond Francis is an M.I.T.-trained scientist, a registered nutrition consultant, author of Never Be Sick Again and Never Be Fat Again, host of the Beyond Health Show, Chairman of the The Project to End Disease and an internationally recognized leader in the field of optimal health maintenance.

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