



June 12, 2010 – Grand Rapids, MI

## Protect Your Skin

Most readers don't comment on messages after they read them unless it strikes a cord with them. It's nice to get feedback and even better when the questions allow me to expand on a topic. Such is the case with this past Monday's message on sunblock. Today's message goes into more details on sunblock, sunscreens, and every question you asked, and a couple you didn't.

### Sun Protection Factor

A sunscreen's effectiveness is reported as sun protection factor, more commonly known as SPF. It's not an actual quantity of protection; instead, it indicates how long it will take for ultraviolet beta rays (UVB) to redden your skin when using a sunscreen compared to how long your skin would take to redden without the sunscreen. That means it would be helpful for you to know how long it would take for your skin to redden after 10 minutes of exposure, 15 minutes, etc. I think you can be intuitive about this. I've run for 40 minutes on a sunny day with just a mild reddening, so if I use a sunscreen with an SPF of 15, it will take 15 times longer for my skin to redden, which is a pretty long time. On the other hand, Paula's a redhead and her skin reddens in about 10 minutes, so she prefers a higher SPF just to be safe.

But today, we have sunscreens with an SPF over 100. What does that mean? Probably not what you think. When you consider the UVB rays that are actually being blocked, SPF 15 screens 93% of the sun's UVB rays. Going up to an SPF 30 protects against 97%, and an SPF 50 blocks some 98 percent. Going to SPF 100 will block about 99% of the UVB rays. The question is expense: is the higher SPF really doing that much more than the SPF 30? In my opinion, no. I think an SPF 30 is probably as good as we need, but it's your skin and if you want the extra 1% protection, go for it.

### Sunblock versus Sunscreen

Sunscreen reduces the risk of getting burned while sunblock prevents damage to deeper layers of the skin. Remember the UVB waves? There are also UVA waves which can reach deeper layers. This is the damage that really ages the skin, so if you don't want leather-like skin when you're older, you'd best protect yourself against UVA waves as well as UVB. They require either a physical blocker such as zinc oxide or titanium oxide, or a chemical blocker such as avobenzone. When you look at labels for sunblocks, they often say that they also protect against UVA waves and when you look at the list of ingredients, you'll see avobenzone listed. I looked at about 25 different types of sun protection products, and I didn't see any with zinc or titanium. They're out there, but you may have to look harder if chemical blockers bother your skin and you prefer a physical blocker.

### Application

This was on every label I read, but I don't think many people are aware that sunscreens are supposed to be applied 15 to 30 minutes before a person enters the sun. I know I didn't until Paula told me about it several years ago. When I go off to run, I used to just put some sunscreen on before I headed out the door. It takes time for the chemicals to allow a protective film to develop, so now I put it on before I put on my shirt and shoes, and that adds some time for the protection to develop.

The second part of application is that you're supposed to put it on every exposed area. You can get some pretty strange sunburns if you forget an area—such as the exposed hairline above my brim, the tops of your feet if

you're wearing sandals or flip-flops, the backs of your hands, or the little strip of neck between hair and shirt collar. If you're covering your whole body with the exception of a bathing suit, that may require about an ounce of lotion. If you're going to protect your skin, this is not the time to get cheap and try to make it stretch. Put on as much as you're supposed to, especially on children. Early childhood sunburns do lasting damage, so protect the little devils, no matter how much they protest.

Sun protection is even more critical if you're going to be near the water or other surface that reflects a lot of light—that can magnify the effects of sun.

One more thing. You should also wear sunblock when it's cloudy because the UV rays can get through the clouds. I've found out the hard way when I got a sunburn during a long run on a cloudy day. Don't you be like me. Protect yourself.

## **Lotions, Gels, Sprays, and Creams**

Which is the best? The answer is: it really depends on your preference. I've used the sprays and the lotions. Some are oilier feeling than others, so it's really up to you. The sprays make it easy to apply to hard-to-reach areas, such as your own back. Many moisturizers have a built-in SPF, which makes it easy to be protected year-round while avoiding the heavy, oily feel or the distinctive sunblock smell. The important thing is that you use it.

What about swimmers and adults and children who're going to spend a significant time getting wet or sweating in the sun? Look for "water resistant" and "very water resistant" on the label. Some are labeled waterproof or sweatproof as well. That means that the sunblock should protect people until they towel off or wash with soap and water—then the sunblock has to be reapplied. So just remember that while they do protect you while wet from any means, re-apply as often as you towel off.

## **What About Protection from My Clothes?**

There are SPF-rated clothes, but I think it's wise to choose the right colors and weaves. Either dark or bright colors reflect most of the UV rays, while pastels and bleached cottons don't reflect as much. Also the tighter the weave and the looser the clothes, the fewer rays get through. So those tropical loose-fitting flowered shirts, shorts, and dresses are just the thing to protect you from the harmful rays.

## **Don't Forget Your Eyes!**

You can get sunburned eyes so if you're going to go into the sun, especially on the water, make sure you wear UV-protective sunglasses. Paula always wears sunglasses, summer and winter, sunny or cloudy, when she goes outdoors. Those are her rules. I'm not as good, but I'm getting better. However, I always wear a brim when I run all year long to reduce direct sunlight into my eyes.

## **Expiration Date**

Will the chemicals in the sunblock still be effective after the expiration date? There's nothing I could find that would say that it wouldn't be, other than if the cream or lotion have separated, throw it out. But here's the thing. You're protecting the largest organ of your body against the sun, which can cause cancer and cause your skin to look like leather. Is this the time to be cheap? Get rid of it and buy some new sunblock. It's worth the expense.

## **A Word about Chemicals**

It wouldn't be responsible of me to avoid the chemical issue when it comes to sunblock and sunscreens. There's so much written on the Internet about chemicals from all sources including sunblocks and their ability to disrupt hormones. It would take a book to cover every issue associated with this, but here's a very pragmatic way to look at this issue.

Paula loves to read about 18th and 19th Century England. Everyone—every home, business, factory, rooming house—burned coal for heat and power. In London, they could see the air they breathed. That's an extreme example, but my point is this: we are exposed to chemicals all day long from natural sources and man-made

sources, and we mostly always have been. And yes, some chemicals do end up in our blood stream and in our tissues, but that doesn't mean they'll cause any harm in low amounts.

If we provide our body with the proper nutrients so that it can detoxify itself, it can handle chemicals in the low doses we get from just about everything in our environment. Instead of inspiring fear by telling us how bad these chemicals are, wouldn't it be better to focus on how to protect yourself while alternatives are being discovered? For example, instead of obsessing about the chemicals in your children's sunscreen, obsess about whether they're getting enough fruits and vegetables to supply the antioxidants their bodies need to handle all the toxins they come in contact with. We have to live in the present and work toward better approaches in the future; I can assure you that those approaches will include more chemicals.

## The Bottom Line

Thanks for all the questions about sunblock and protecting your skin—I always prefer writing about what you really want to know, and you wanted to know about sunblock. The key is that you have to use it for it to be effective. Read the labels to find one that meets your needs and fits your budget. Find one that you like and use it every day, summer or winter, sunny or cloudy. That's the way to have skin that looks 30 years old when you're 60.

What are you prepared to do today?

**Dr. Chet**

**Reference:** Much of the information on UV rays came from [www.skincancer.org](http://www.skincancer.org).

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