I don’t like to admit that I’ve made a mistake, but I guess I must. Two weeks ago, I focused my column on avoiding sunburn, a leading cause of skin cancer. In that article I listed a few common safety precautions including wearing protective clothing such as a broad-brimmed hat, working in the cool of the day (before 10:00 a.m. or after 4:00 p.m.) and wearing a sunscreen with at least a SPF rating of 15 or higher.

While writing that article, my wife Rita offered her perspective – she thought 45 SPF was the correct number. My understanding was that a sunscreen with an SPF of 15 would suffice in most cases. Interestingly, our debate went on for some time, but as you discovered having read my column of August 7, 2010, I won out — stubborn old coot that I am.

Are you, too, confused by the SPF (sun protection factor) listed on commercial sunscreens? It was obvious; both Rita and I needed an explanation. Our answer came while vacationing with our family the first week in August. While playing on the beach of the Atlantic Ocean off Rockland, Maine, with our kids and grand kids, between building sand castles swimming, kayaking, eating lobster and visiting lighthouses, we consulted with son Tony, the dermatologist. His expert opinion settled our debate once and for all. Turns out, Rita and I were both wrong.

A sunscreen’s SPF measures how much the product shields the sun’s shorter-wave ultraviolet B rays, known as UVB radiation. This radiation can cause sunburn. The SPF number is calculated by comparing the time needed for a person to sunburn with how long it takes for that person to burn wearing sunscreen. If a person sunburns after twenty minutes of exposure, he or she should be protected fifteen times longer with a sunscreen rated at 15 SPF. Much depends on the proper application, the proper amount of application, and the reapplication of said sunscreen.

One would therefore think that a sunscreen with an SPF of 30 would protect twice as long and twice as well as one labeled 15. “Not true!” according to Dr. Griess. The scale doesn’t work that way. Here is how he explained it. SPF is not an easily understood label. An SPF of 15 blocks about 94% of UVB rays. When one buys a product with an SPF of 30 that halves the remaining amount, or protects one from about 97% of the UVB rays. After 30, the higher numbers may give a bit more protection, but not significantly more. An SPF of 60 gives only about 98.5% protection; and the percentage keeps halving. Sunscreens with higher SPF’s block slightly more UVB rays, but no sunscreen offers 100% protection. Therefore, the optimum number seems to be an SPF of 30.

The key to proper protection seems to be applying the proper amount of a water-repellent sunscreen; one needs to follow the application directions which usually states to apply at least an ounce of sunscreen. Sunscreen should be reapplied every two hours and after swimming, drying off, or perspiring.
I did read in my research that the FDA is currently working on a new labeling system for sunscreens. The new method may limit the SPF to 50+. If sunscreen companies can provide scientific evidence proving their products provide the level of protection they claim, they can continue to market sunscreens with higher SPF ratings.

By the way, while on vacation we all wore our sunscreen, had a wonderful time and returned to Nebraska refreshed with no sunburns!