



Hotel Los Flamingos, Acapulco

PIC QUESTION OF THE WEEK: 4/25/11

Q: Please review some of the current recommendations for use of sunscreen products.

A: In August, 2007, the FDA *proposed* new regulations that would establish standards for formulating, testing, and labeling over-the-counter sunscreen products. These new guidelines will assist consumers in better identifying the roles of ultraviolet light A and B (UVA/UVB) in causing sunburn and other skin disorders. Although these proposed regulations await final approval, it is important to understand and practice existing recommendations. The designation of UVA and UVB is based on the specific wavelength of light beyond the visible violet band. UVB light produces the erythema associated with sunburn, but can also result in aging of the skin and some types of skin cancer. UVA light penetrates more deeply and is primarily associated with photo-aging and skin cancers such as melanoma. All sunscreens currently are imprinted with a *Sun Protection Factor (SPF)* expressed numerically on the container. This SPF number only identifies the estimated amount of UVB light transmitted from the sun to the skin. The proposed guidelines require inclusion of the amount of protection from UVB AND UVA light (UVA light will be denoted with a 1 – 4 STAR Scale - 4 stars having the most protection). Today, sunscreens designated SPF 15 and SPF 50 transmit 1/15th (7%) and 1/50th (2%) of erythema-producing light respectively. In addition, higher SPF values indicate a longer duration of protection before producing noticeable skin erythema. Unfortunately, sunscreens are rarely applied as liberally as recommended. Based on current FDA guidelines, the SPF is determined by using an amount of sunscreen equivalent to 2 mg/cm² (a rather thick layer!). Numerous studies conclude that the general public normally applies 50% or less of the appropriate amount of sunscreen. When applied in this manner, all sunscreens (SPF 15 – 100) actually provide an SPF of < 10. Sunscreen should be used throughout life and applied as early as 6 months of age. One should choose a sunscreen whose label states *broad spectrum* (UVA and UVB) coverage with a designated SPF of at least 15. Those more prone to severe sunburn or skin cancer usually require an SPF of 30 or more. Most products are considered *chemical* sunscreens because they absorb UV light, while others (e.g. zinc oxide and titanium dioxide) provide a *physical* barrier to the sun's rays. Patients should be reminded to apply sunscreen 30 minutes before exposure and reapply every two hours as well as after swimming or heavy perspiration. When used in this manner, long-term application of even sub-optimal amounts decreases the frequency of skin cancer. In addition, if you are interested in vitamin D intake, most individuals require only 2-8 minutes of direct sun exposure to meet their daily requirements. The reader should keep abreast of the new guidelines for sunscreen products when finalized by the FDA. ‘

References:

- FDA. FDA Proposes New Rule for Sunscreen Products. <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/2007/ucm108970.htm>. Accessed April 13, 2011.
- [Summertime skincare guide for pharmacists. Pharmacist's Letter February 2011; CE Online.] Accessed April 12, 2011.
- Sunscreens revisited. *Med Lett Drugs Ther* 2011;53:17-8

Alex M. Toman and Stephen J. Killa, Pharm.D. Candidates

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