

**N. Torsten Graybill, M.D.**

2211 West Magnolia Blvd, Suite 280

Burbank, CA 91506

818-842-4111

## **Important Agents in Daily Skin Care**

**Sunscreen:** Ultraviolet light is extremely damaging to the skin, leading to aging (wrinkling), pigment changes and precancer formation. Sun Protection Factor (SPF) is very important in picking a sunscreen, but is only a measure of Ultraviolet B rays. Ultraviolet A are the deeper penetrating, tanning and aging rays and has no current measurement of protection. Physical blockers provide the best protection and include zinc oxide.

**Fruit Acids:** Demonstrated benefits include exfoliation, skin smoothing and anti-aging effects. In addition to its anti-aging benefit of improving fine lines, the regular use of fruit acids helps control acne activity. First generation alpha-hydroxy acids include glycolic acid and lactic acid. While these are effective molecules, they can initiate strong skin irritation in sensitive patients. The second generation polyhydroxyacids maintain the beneficial effects and have been shown to be well tolerated even in traditional sensitive skin conditions like rosacea or eczema.

**Vitamin C:** Shown to promote healthy collagen formation thereby improving fine lines. In addition, it is one of the most effective antioxidants, allowing for repair of sun damage and minimizing further damage. To be effective in the skin, Vitamin C must be both active (l-ascorbic acid is the active form in the skin) and stable (difficult product to stabilize in topical formulations).

**Hyperpigmentation Agents:** A variety of agents exist which block the ability for the pigment producing cells to produce melanin (the tanning pigment). While hydroquinone remains a primary agent, other agents can complement or provide alternatives. Two of the main agents are Arbutin glycoside and Kojic Acid.

**Antioxidant Agents:** A variety of different agents exist with different mechanisms of action. One of the main ways that UV light causes skin damage is through the formation of oxygen radicals. Antioxidant agents quell these destructive molecules to minimize sun damage. In addition to Vitamin C, other important agents include Vitamin E (tocopherol), and the natural agents, Green Tea Extract and Centella Asiatica.

**Vitamin A (retinoids):** The classic agent is Retin A (tretinoin), but newer derivatives can boost effect and cut down on irritation potential. Retinoids are among the most beneficial products used for the skin. Demonstrated effects include improvement in fine lines and pigmentation, improvement in acne activity and even prevention of precancer changes in the skin. Unfortunately, all this comes at a cost and that is skin tolerance. These products often lead to redness and peeling and so must be used very carefully and are often introduced later into a daily regimen.

**For more information, please ask how you can incorporate these agents into your daily skin routine.**