Retin-A/Retinol/Retinaldehyde….Which Vitamin A based product should you use?

Retinol/Retinal/Retinaldehyde/Retinoic Acid are all derived from Vitamin A. Animal sources like liver and eggs create a form of Retinol in the body. Plant based sources (such as spinach and carrots) deliver precursor versions of Vitamin A to the body. This is then turned into Retinal. Whatever the source, the retinol and retinal versions of Vitamin A are in turn changed into retinoic acid…this is the ONLY form of Vitamin A that will be absorbed into the cell and is then ready to increase cell turnover and promote the production of more collagen (a great advantage in the skin), or to reduce the production of oil by the sebaceous glands and strengthen the pore walls (an advantage in some acne cases).

Prescription Vitamin A (Retin-A, Renova, Differin, Avita etc) deliver Tretinoin, a Vitamin A that is more closely associated with cell-ready Retinoic Acid, but this constant barrage of bio-available Vitamin A causes over 50% of users to experience irritation, redness in the skin and sometimes burning sensations.

At the Society for Dermatology Skincare Specialists (SDSS) annual meeting held in San Francisco in early March 2009, I was bombarded with information about Retinaldehyde – similar to Retinol but promoted as a milder, non prescription product to be used where Retin-A and similar prescription products cannot be used. I have further investigated it as well as tried it out in a mini clinical trial.

Both Retinol and Retinaldehyde versions of Vitamin A are turned into Retinoic Acid in the body (but in smaller concentrations than with Retin-A type products), and thus absorbed by the cells. Both forms also are stored in the body in an inactive form and released when the body needs more Vitamin A in the form of Retinoic Acid.

A smaller percentage of Retinol and Retinaldehyde penetrate the skin than the prescription products. This means that Retinol and Retinaldehyde produce less bio-available Retinoic Acid than the prescription products. However all the negative side effects of prescription products are important to consider. First and foremost is the fact that we want to look good every day, while producing more collagen. Being red, flaky and sensitive is not the type of skin we want to present. Prescription Vitamin A products often cause the skin to present as red, flaky and sensitive.

There are few published scientific studies to show that either Retinol or Retinaldehyde are better for the skin, but the few published studies did show that Retinaldehyde is less irritating.

In my analysis, using a Retinol or Retinaldehyde product will produce similar results, granted over a longer period of time, but with a better daily impact on the skin’s appearance than when one uses prescription Retin-A type products. Out of the two, Retinaldehyde definitely appears to be less irritating on the skin, though producing similar results as Retinol. The important aspect in comparing products is to measure the quantity of each in the cosmetic you are using. The strong 1% retinol products equate to 0.1% of Retinaldehyde. I favour .05% to .075% strength Retinaldehyde for most skins.
I do not recommend any form of topical Vitamin A on skin that is typically red, or where many tiny blood vessels are visible. Vitamin A will stimulate the development of more blood vessels and thus increase the appearance of redness in the skin.

Accutane in the bio-available form Isotretinoin (a strong Vitamin A oral prescription drug marketed for acne) actually reduces repair and regeneration capabilities in the skin and other body cells (apart from all it’s well documented side effects). This is bad news for skin aging. Accutane’s effect of reducing the secretion of the oil glands also impacts repair of the skin after laser resurfacing. There is potential for Accutane users to experience drier skin as they age.

In closing, Vitamin A is a critical vitamin in the human body for optimal functioning of all organs, the skin being relevant to this conversation. Vitamin A deficiency in the body also leads to night blindness and decreased visual acuity. Vitamin A is fat soluble and thus can be stored in the body tissue, so it is not wise to randomly increase your dosage of Vitamin A...you should research what is best for your body.

To make an appointment, please call 415.699.8494 or online at blueturtlespa.com.