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Topical nutrients improve common skin complaint

A report published in the March, 2007 issue of the *Journal of Cosmetic Dermatology* described data presented in part at the 2006 annual meeting of the American Academy of Dermatology concerning the ability of topical N-acetyl glucosamine to reduce skin hyperpigmentation, a major cosmetic complaint of women that occurs frequently in aging skin as a result of sun exposure. N-acetyl glucosamine is a stabilized form of glucosamine, an over the counter natural compound consumed orally to improve the symptoms of arthritis. The current research confirms the ability of N-acetyl glucosamine, alone and in combination with the B vitamin niacinamide, to provide a more even skin tone when topically applied by reducing the production of melanin, the skin's natural pigment.

Donald L. Bissett, PhD and colleagues divided 50 Japanese women aged 25 to 55 to receive a lotion that contained 2 percent N-acetyl glucosamine to be applied to one side of the face and a placebo lotion to be applied to the remaining half morning and evening for eight weeks. Digital photographs of each side of the face were taken at the beginning of the study, and after 4 and 8 weeks. A second experiment with Caucasian women tested 2 percent N-acetyl glucosamine with 4 percent niacinamide, niacinamide alone, and a control substance.

In both experiments, N-acetyl glucosamine was found to improve the appearance of hyperpigmentation. In the second experiment, the combination of N-acetyl glucosamine with niacinamide was more effective than the niacinamide alone, which, in turn, provided better results than the control substance.

The addition of niacinamide to glucosamine provides a two pronged approach to reducing hyperpigmentation. While it is likely that N-acetyl glucosamine inhibits melanin in a manner similar to that found for glucosamine, which acts by preventing tyrosinase glycosylation, niacinamide inhibits melanosome transfer. Additionally glucosamine has anti-inflammatory effects.

Concerning the current findings, Gary Goldfaden, MD, member of the American Academy of Dermatology and founder of Cosmesis Skincare told Life Extension, "The combination of these two novel ingredients has proven to be a breakthrough in creating more healthy and youthful appearing skin."

Health Concern

Skin aging

Skin damage occurs when the membrane covering of the skin cell is damaged by free radicals. Free radicals make the membrane more permeable, allowing the cells to dehydrate (lose water). The membrane of the cell is what is called a lipid bilayer: two layers of fat end-on-end. Enzymes are activated when the skin is traumatized or exposed to sun. Enzymes break

down the lipid bilayer and cause inflammation. Thus, any antioxidants must be fat-soluble to protect this layer.

Chronic inflammation is an underlying cause of common degenerative diseases. One study found that pro-oxidative factors that accelerate skin aging might activate a self-maintained micro-inflammatory process that interferes with skin elasticity and thickness. This study stated that topical antioxidants decrease this inflammatory cascade and thus afford protection to the skin structures (Giacomini et al. 2000).

While free radicals have been implicated in much of the damage that occurs to aging skin, there are other injurious factors that result in unsightly structural and functional deterioration.

For instance, aging skin cells suffer from metabolic imbalances that preclude them from performing youthful repair functions. The groundbreaking work of Benjamin S. Frank, M.D., showed that RNA improved cellular energy and the ability of the skin's cells to use oxygen. This improved metabolism enhances the movement of young cells to the surface of the skin where they replace old cells.

<http://www.lef.org/protocols/prtcl-099.shtml>

Featured Products

RejuveneX® Factor

RejuveneX® Factor incorporates some of the latest advances in natural skin care—nutrients with proven therapeutic value that do so much more than just address the underlying mechanisms essential to healthy skin. These new ingredients, combined with the best of the older tried and true ingredients, result in more noticeable skin firmness, elasticity, smoother skin tone, diminished wrinkles, and vibrant texture and volume.

<http://www.lef.org/newshop/items/item00918.html>



Anti-Oxidant Rejuvenating Hand Cream

The Anti-Oxidant Rejuvenating Hand Cream helps improve the look of unwanted pigmentation, discoloration, and age spots. The specialty cream helps minimize the appearance of dry, dehydrated, and veiny skin on the back of the hands. The Anti-Oxidant Rejuvenating Hand Cream has been specifically formulated with potent anti-oxidants, vitamins, tea extracts, and powerful anti-aging ingredients for improvement of the skin on the back of the hands.

<http://www.lef.org/newshop/items/item80117.html>



Life Extension magazine

Ask the doctor, by Gary Goldfaden, MD

The skin on the back of the hands, with its spots, wrinkles, dryness, and sagginess, bears mute but unmistakable witness to the passage of time. It is important to know how time and circumstances work to produce these physical changes and what you can do to prevent, delay, and even reverse them.

http://www.lef.org/magazine/mag2007/may2007_atd_01.htm

If you have questions or comments concerning this issue or past issues of Life Extension Update, send them to ddye@lifeextension.com or call 954 202 7716.

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