



BOUNCE BACK BY TARGETING COLLAGEN



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Dr. Charlene DeHaven is board-certified in Internal Medicine. During her training, she received the Upjohn Clinical Award for Outstanding Resident of the Year. Over the past 19 years, her professional activities have focused on improvements in skin aging and development of scientifically based skincare products. She has served as Clinical Director of INNOVATIVE SKINCARE since the company began in 2000. Her professional experience includes a broad spectrum of clinical practice in addition to corporate development, medical education, research, and age management. She had one of the first and largest anti-aging practices in the United States. She founded the Arizona Longevity Institute and was a founding member of the Kronos Longevity Institute. She developed clinical age management protocols for those institutions including protocols for mitigation of oxidative stress and other age-related parameters and advanced hormone replacement therapies. Dr. DeHaven has extensive media experience and has published and lectured worldwide on wellness, skin health and age management.

Firm, resilient, youthful skin is always in. But there are many processes at play that can sabotage even our best efforts towards this goal.

One such process is glycation. In fact, glycation is one of the major contributing factors to collagen breakdown and sagging skin. Glycation affects our body's most prominent anti-aging protein, collagen. Fortunately, aesthetic professionals know about combating glycation and preserving youthful looking skin.

Glycation and Aging: The Breakdown of Collagen

Glycation is the chemical process in which a sugar attaches to a protein. This sounds simple but damages collagen, leading to signs of aging.

Collagen is found in the joints, blood vessels, eyes, and especially the skin. It is best known for giving the skin its firmness, resilience, and elasticity. When a collagen protein becomes glycated, the sugar attachment makes the protein stiff. It can no longer perform its normal function and eventually breaks down.

Glycated collagen is damaged collagen. Since the body is eager to remove and replace any damaged tissue, it tries to make quick work of clearing out these damaged proteins. To do so, a special enzyme called collagenase digests the collagen so it can be reabsorbed by the body. Unfortunately, when collagenase is activated, it does not always differentiate between damaged collagen and healthy collagen – so healthy collagen is sometimes digested as well.

Like inflammation and many other processes in the body, this breakdown is necessary and helpful in moderation but can be damaging when excessive.

Repairing the Damage: Fibroblasts

To heal the damage from glycation and collagenase, fibroblasts are called upon to restore and replace collagen. Fibroblasts are cells found in the dermis that create collagen, elastin, and something called ground substance. Ground substance is a jelly-like mixture (made mostly of glycosaminoglycans) that creates a supportive framework for skin cells, collagen fibers, and elastin fibers.

When collagen is damaged and cleared by collagenase, fibroblasts are activated and begin to make more collagen. New collagen is laid down where the old collagen was destroyed, and the skin regains its youthful support.

To the Rescue: Cosmeceuticals

One of the best ways to slow the effects of aging is to prevent glycation and support the body's collagen synthesis. Thankfully, certain cosmeceuticals can help to maintain the skin's youthful appearance by slowing the process of glycation and supporting the body's collagen production.

In one experiment to test the effects of cosmeceuticals on collagen synthesis, two small incisions were made on a participant's skin, then sewn closed. Stitches were removed in one week, and SUPER SERUM ADVANCE+ was applied to one of these incisions twice per day for three months, then once per day for the next three months. The control incision was left to heal without help from any products.

In comparing the incisions throughout their healing process, the incision that was left untreated remained red and had more visible scar

tissue. The incision that was treated with SUPER SERUM ADVANCE+ looked nearly normal, with no visible scar tissue or hyperpigmentation. These results indicate that properly chosen collagen-boosting cosmeceuticals are effective in restoring the skin's ability to repair.

Another study measured the ability of fibroblasts to make collagen over a three-day period. Two sets of -55-year-old fibroblasts were tested: one with no product use (control) and one with product use (YOUTH COMPLEX). After three days, the untreated skin maintained a low level of fibroblast activity, while the treated skin's collagen levels skyrocketed during all three days.

The results of these two studies clearly indicate that quality collagen-boosting cosmeceuticals can play an incredible role in enhancing skin health through collagen synthesis.

One Step Closer to Eternal Youth

Understanding glycation and collagen synthesis is essential for strategically fighting the aging process. As leaders in antiaging techniques, aesthetics professionals can use this science to our advantage. By recognizing how glycation affects the skin and how cosmeceuticals can reverse and prevent this damage, we can help our clients bounce back faster and maintain their youth.

To learn more about the role of glycation and collagen synthesis in aging, enroll in a professional course through www.isuniversity.org or www.isclinicaledu.com.