



Can Anti-Aging DMAE Facial Cream Tighten Aging Skin?

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I've heard the question all my professional life, "How can I firm and tighten my loose, sagging skin"? As bioscience moves forward in the 21st century, we are constantly inundated with miracle products that claim to offer us "hope" in a jar for our loose or sagging skin. One exciting ingredient that has garnered significant attention lately is DMAE. Skincare products using DMAE have been marketed by using convincing language such as "facelift in a jar". The full understanding of how DMAE operates is still a mystery; however, the results are real with DMAE.

A New Use For An Old Ingredient

Prescribed for many years as a treatment for cognitive disorders, DMAE has recently become a popular skin-firming ingredient. DMAE is naturally found in fish, such as salmon, and may exist in the human brain in very small amounts. It is a precursor to the neurotransmitter acetylcholine, responsible for the cell communication required for many cognitive functions. It is believed that many beneficial properties of DMAE are related to its ability to affect the levels of choline.

Over the past few years, DMAE has been touted as a "face lift in a jar." Youthful skin is firm because the muscle fibers under the skin are short, thick and taut. As we age, these fibers lengthen and loosen. Skin sags and becomes thinner. To restore the youthful, firm appearance, cosmetic surgeons actually cut the fibers, physically lifting and shortening them. DMAE may be a natural, gentler alternative.

Is DMAE A Natural Face Lift?

Recent studies have demonstrated that DMAE produces similar astounding results. In one study, a group of patients applied a DMAE-enriched gel on one cheek and a control gel lacking DMAE on the other cheek. Forty-five minutes after topical application of the two treatments, researchers measured both skin firmness and hydration. Both formulations improved hydration of the skin, but only DMAE improved skin tone. The DMAE solution significantly increased tensile strength of the skin¹ suggesting that topical application of DMAE firms skin and reduces facial sag. A different study using a DMAE gel reported similar improvement in skin firmness and added that after 16 weeks, DMAE reduced the appearance of lines and wrinkles and improved lip shape and fullness.² DMAE can help reverse the passage of time and give you a younger face using only gentle skin care formulations.

The mechanism behind these results is not yet understood. Research on DMAE as a topical agent is just beginning and much remains to be learned. One hypothesis about how DMAE works suggests that DMAE improves skin firmness by stimulating muscle contraction. Acetylcholine is the neurotransmitter responsible for sending messages between nerves cells and muscles. Increasing levels of DMAE may increase the level of acetylcholine and lead to increased muscle contraction. Increased muscle contraction shortens the muscle fibers and tightens skin. Another possible mechanism is that DMAE aids in hydrating the connective tissue therefore stretching skin more tautly.³ Only with more rigorous research will we understand how DMAE lifts skin.

More Benefits

Though DMAE is known as a skin-firming agent, it also has demonstrated antioxidant and anti-inflammatory properties that make it an ideal skin care ingredient.^{4,5} Antioxidants protect the cell structures from free radical damage, slowing the aging process and preventing the formation of lines and wrinkles. Anti-inflammatory agents soothe skin, keeping it healthy and radiant. DMAE has also been reported to reduce the appearance of age spots. When the brown cellular pigment, lipofuscin, begins to accumulate in cells, age spots appear. In one study, centrophenoquine (which contains DMAE) flushed cells of excess lipofuscin⁶, providing hope that DMAE can also make age spots disappear.

Gravity-defying DMAE reduces facial sag and firms skin. Combining DMAE, Alpha Lipoic Acid, and C-Ester helps to lift, protect, hydrate and nourish your skin. Alpha Lipoic Acid, the universal antioxidant, protects both water and fat-soluble cell structures from free radical damage; C-Ester stimulates production of collagen, essential for skin tone and elasticity.

Published research on the topical benefits of DMAE is just beginning to appear, but the results are positive. DMAE removes years from your appearance by improving skin tone and firming and hydrating skin. It also scavenges free radicals and soothes skin. For younger, healthier skin naturally and gently, try DMAE in a skin care formulation.

¹Isabelle Uhoda et al., "Split Face Study on the Cutaneous Tensile Effect of 2-dimethylaminoethanol (deanol) Gel," *Skin Research and Technology* 8 (2002): 164-167.

²R. Grossman, "The Role of Dimethylaminoethanol in Cosmetic Dermatology," *American Journal of Clinical Dermatology* 6 (2005): 39-47.

³Isabelle Uhoda et al., "Split Face Study on the Cutaneous Tensile Effect of 2-dimethylaminoethanol (deanol) Gel," *Skin Research and Technology* 8 (2002): 164-167.

⁴R. Grossman, "The Role of Dimethylaminoethanol in Cosmetic Dermatology," *American Journal of Clinical Dermatology* 6 (2005): 39-47.

⁵Imre ZS.-Nagy, "Pharmacological Interventions Against Aging through the Cell Plasma Membrane," *Annals of the New York Academy of Sciences* 959 (2002): 308-320.

⁶D.P. Dylewski, S. Nandy, and K. Nandy, "Effects of Centrophenoquine on Lipofuscin in the Retinal Pigment Epithelium of Old Mice," *Neurobiology of Aging* 4 (1983): 89-95.

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