

# THE ONE INGREDIENT WRINKLE SOLUTION



One reason that facial skin shrivels as we age is that our natural hormone production decreases. As women enter menopause, their internal estrogen production sharply declines. The resulting estrogen deficit intensifies the effects of natural and environmentally related skin aging. In the face, this is manifested with progressive sagging tissues and a reduction in elasticity.

Estrogens exert significant effects on skin physiology by modulating the effects of key epidermal and dermal cells. In fact, the skin is an important estrogen-responsive endocrine tissue. Without the growth-promoting effects of estrogen, the skin literally withers away. The very thin skin observed in the elderly can be directly correlated to a lack of estrogen needed to generate collagen and maintain skin thickness.

## HOW ESTROGEN PROMOTES YOUTHFUL SKIN

According to the findings of a scientific study published in 2006, estrogens prevent skin aging by increasing glycosaminoglycans, such as Hyaluronic Acid, to maintain fluid balance and structural integrity. Estrogen also increases collagen production in the skin, where it maintains epidermal thickness and allows the skin to remain plump, hydrated, and wrinkle-free.

## USING ESTROGEN TO REJUVENATE YOUR SKIN

A large number of published scientific studies confirm that estrogen exerts potent anti-aging effects on the skin.

Topical estrogen application has been shown to be safe and effective in preventing skin aging. In a study published in February 2007, a group of women who were already taking oral estrogen drugs were given a topical 0.01% estradiol cream. After only four months, both dermal and epidermal thickness were enhanced, as well as dermal collagen levels. This study revealed that topical estrogen application provided rapid and definitive anti-aging effects even in women who had high systemic estrogen blood levels.

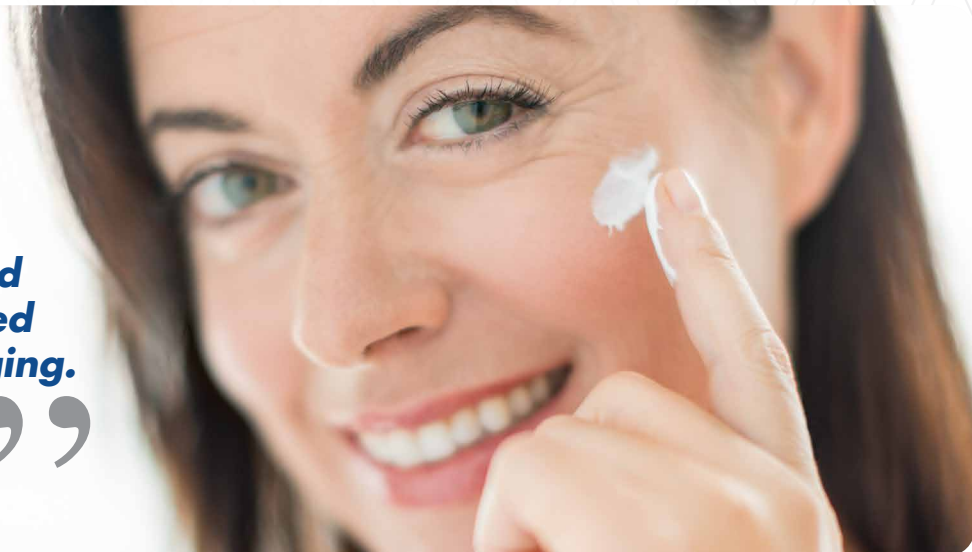
It seems as though microcirculation vastly decreases as we age, further decreasing the delivery of hormones to the skin, therefore, justifying the use of topical estrogens even while on other hormone replacement modalities.

In another scientific study performed by Schmidt, the effects of 0.01% estradiol and 0.3% estriol compounds were compared in 59 premenopausal women with skin aging symptoms. Monthly determinations of estradiol (E2), follicle-stimulating hormone (FSH), and prolactin (PRL) were done and the monthly clinical monitoring was supplemented by measurements of skin hydration by corneometry and profilometry. In 10 patients, skin biopsies were taken for immunohistochemical determination of collagen types I and III.

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After treatment for 6 months, elasticity and firmness of the skin had markedly improved and the wrinkle depth and pore sizes had decreased by 61 to 100% in both groups. Furthermore, skin moisture had increased and the measurement of wrinkles using skin profilometry revealed significant, or even highly significant decreases of wrinkle depth in the estradiol and the estriol groups, respectively. On immunohistochemistry, significant increases of Type III collagen labeling were combined with increased numbers of collagen fibers at the end of the treatment period. As to hormone levels, only those of PRL had increased significantly and no systemic hormonal side effects were noted.

### TOPICALLY DELIVERED ESTRIOL

A number of studies have investigated the beneficial role that estrogens, especially estriol, play in maintaining skin firmness, elasticity, moisture content, and wound healing in postmenopausal women.

Estriol is a weak estrogen when systemically administered, but it can induce potent anti-aging effects as a topical treatment. A six-month study of peri- and postmenopausal women was conducted at the University of Vienna in Austria comparing the topical facial application of estriol and estradiol creams. The doctors found that skin symptoms of aging improved, and that those treated with estriol obtained superior results, with no systemic hormonal side effects noted.

Edward Lichten, MD, author of the Textbook of Bio-Identical Hormones confirms these observations and states that no estriol is detected in blood in test subjects who use a topical estriol cream.

Dr. John R. Lee, author of books like, What Your Doctor May Not Tell You about Menopause, concurs that estriol applied to the skin reverses wrinkling and should be an essential part of the anti-aging skin regimen. The Harvard-trained physician also writes that estriol is the safest natural estrogen.

In a review of 45 scientific studies published in Alternative Medicine Review, estriol was found to be an effective and safe treatment with fewer side effects than traditional hormone-replacement therapy. Postmenopausal patients showed improved elasticity in the skin, while a study that included men and women with acne-damaged skin showed 100% improvement in repair of scarred tissue after three months of twice-weekly treatments.

### NEW ESTRIOL-BASED FACE SOLUTION

It is difficult to imagine maintaining young looking skin in the absence of estrogen.

Harbor Compounding Pharmacy now offers a new line of customized Advanced Cell Repair Creams. Estriol is an active ingredient found in our Revive Skin Labs Cream, a customizable product designed to reduce the appearance of wrinkles, help support collagen synthesis, increase hydration, and enhance skin quality.

**After reading this article,  
 would you like to start a  
 prescription for a patient?**

If so, please call, write, or fax in the following prescription:

**RSL Skin Cream  
 (Estriol 0.3%/Progesterone 2% /Peptide 2.5%)  
 Apply a pea sized amount to face at bedtime**

**Phone: (949) 642-0106  
 fax: (949) 642-5039**

#### REFS:

1. Verdier-Svrain, S., et al. (2006), Biology of estrogens in skin: implications for skin aging. Experimental Dermatology, 15: 83-94.
2. Verdier-Svrain S. Effect of estrogens on skin aging and the potential role of selective estrogen receptor modulators. Climacteric. 2007 Aug;10(4):289-97.
3. Stevenson S, Thornton J. Effect of estrogens on skin aging and the potential role of SERMs. Clin Interv Aging. 2007;2(3):283-97.
4. Calleja-Agius J, Muscat-Baron Y, Brincat MP. Skin ageing. Menopause Int. 2007 Jun;13(2):60-4.
5. Patriarca MT, Goldman KZ, Dos Santos JM, et al. Effects of topical estradiol on the facial skin collagen of postmenopausal women under oral hormone therapy: a pilot study. Eur J Obstet Gynecol Reprod Biol. 2007 Feb;130 (2):202-5.
6. Thornton MJ. The biological actions of estrogens on skin. Exp Dermatol. 2002 Dec;11(6):487-502.
7. Brincat M, Moniz CF, Studd JW, Darby AJ, Magos A, Cooper D. Sex hormones and skin collagen content in postmenopausal women. Br Med J (Clin Res Ed). 1983 Nov 5; 287(6402): 1337-8.
8. Schmidt JB, Binder M, Demschik G, Bieglmayer C, Reiner A. Treatment of skin aging with topical estrogens. Int J Dermatol. 1996 Sep;35(9): 669-74.
9. Lee John MD. What Your Doctor May Not Tell You About Premenopause. New York, NY: Wellness Central/Warner. 1999.
10. Dunn LB, Damesyn M, Moore Aa, Reuben DB, Greendale GA. Does estrogen prevent skin aging? Results from the First National Health and Nutrition Examination Survey (NHANES I) Arch Dermatol. 1997 Mar;133(3):339-42.
11. Schmidt JW, Wollner D, Curcio J, Riedlinger J, Kim LS. Hormone replacement therapy in menopausal women: Past problems and future possibilities. Gynecol Endocrinol. 2006 Oct;22(10):564-77.
12. Kainz C, Gitsch G, Stani J, Breitenacker G, Binder M, Schmidt JB. When applied to facial skin, does estrogen ointment have systemic effects? Arch Gynecol Obstet. 1993;253(2):71-4.
13. Lee, John MD. What Your Doctor May Not Tell You About Menopause. New York, NY: Grand Central Publishing/Warner. 1996.
14. Head, KA. Estriol: Safety and efficacy. Altern Med Rev. 1998 Apr;3(2):101-13.
15. What you don't know about estrogen. Life Extension. October 2004.

