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# Ageless & Wellness News

Volume 3, Number 2

Dear Ageless and Wellness,



"As we age and certain hormone levels drop, collagen production is reduced throughout our bodies, causing facial wrinkles and skin sagging. (Some women also experience loss of vaginal lubrication and thinning of the vaginal wall.) Restoring hormone balance can restore the body's ability to produce

collagen, which 'plumps' your skin and helps retain its youthful appearance." -- C.W. Randolph, Jr. M.D.

In this issue, learn about the connection between hormone imbalance and skin aging, and how to **Boost Collagen (and Reduce Wrinkles) with Bioidentical Estriol**. Our feature, *Behind the Pharmacist's Counter*, describes our new prescription-only **Estriol Face Cream!**

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## Boost Collagen (and Reduce Wrinkles) with Bioidentical Estriol

One of the many roles of estrogen in the body is to increase the synthesis of collagen, which is the skin's underlying support structure. Collagen also promotes skin thickness and elasticity. As men and women age, collagen production is reduced throughout our bodies, causing facial wrinkles and skin sagging. (Some women may also experience loss of vaginal lubrication and/or thinning of the vaginal wall.)

Restoring hormone balance can restore the body's ability to produce collagen, which 'plumps' your skin and helps retain its youthful appearance. Collagen atrophy is a major factor in skin aging. In fact, there is a strong correlation between skin collagen loss and estrogen deficiency at menopause. The skin is an important estrogen-responsive endocrine tissue. Without the growth-promoting effects of estrogen, the skin literally withers away. Thin skin observed in the elderly can be directly correlated to lack of estrogens needed to generate collagen and maintain skin thickness.

Remember that "estrogen" is actually a term for three different hormones: Estrone (E1), Estradiol (E2), and Estriol (E3). When the term "estrogen" is used, most of the time it refers to Estradiol (E2), which is the highest concentration - -80%-- during a woman's reproductive years (from puberty to pre-menopause). Estriol (E3) makes up another 10% and Estrone (E1) makes up the last 10%.

Estriol (E3) is considered a "weak" estrogen which can be derived from plant sources. It does not need to be counterbalanced by progesterone, and does not have a systemic (widespread) effect on the body. This makes estriol an ideal estrogen for topical use, since research suggests its application remains in the skin, rather than in the bloodstream. There is also evidence that estriol, (sometimes called the "good estrogen") may inhibit some of the unwanted effects of estradiol by "binding" to estrogen receptors that typically promote cell proliferation.

Transdermal (or topical) estriol has been shown to be safe and effective in preventing skin aging. In a [study](#) published in February 2007, a group of women were given a topical 0.01% estrogen cream. After only four months, skin thickness was enhanced and collagen levels increased. This study demonstrated that topical estrogen application provided quick and measurable anti-aging effects (even in women who had relatively normal estrogen blood levels). Other studies have investigated the beneficial role that estrogens, especially estriol, can play in maintaining skin firmness, elasticity, moisture content, and even wound

## Dr. Randolph



Click [HERE](#) to learn more about Dr. Randolph and our team of clinicians!

### *Dr. Randolph's Pharmacy & Wellness Store*

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9am-2pm Saturday

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Another such [study](#) was conducted at the University of Vienna in Austria, comparing the topical application of 0.3% estriol and 0.01% estradiol creams over a six-month period. Researchers found that skin symptoms of aging improved, and that those treated with estriol obtained superior results, with no systemic hormonal side effects noted. The results of the study noted: "...elasticity and firmness of the skin had markedly improved and the wrinkle depth and pore sizes had decreased by 60 to 100% in both groups. 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 estriol groups, respectively... significant increases of collagen labeling were combined with increased numbers of collagen fibers...No hormonal side effects noted."

Dr. Randolph and our Compounding Pharmacist Will McGalliard have developed an Estriol Face Cream, available by prescription-only. Read our feature, below, to learn more.

## Behind the Pharmacist's Counter...



Dr. Randolph's NEW prescription-only **Estriol Face Cream** consists of Estriol 0.3% , DMAE 3%, and Hyaluronic Acid 0.5% mixed in a cream base. Dr. Randolph, along with Compounding Pharmacist Will McGalliard, developed this combination of ingredients to provide a clinically-proven treatment that will boost collagen, reduce wrinkles, improve skin moisture and elasticity.

**Estriol:** A critical mechanism by which estrogen maintains a youthful plump appearance is to increase the synthesis of collagen, which is the skin's underlying support structure. (Read more about estriol in our main article, above.)

**DMAE:** This ingredient is a nutrient that occurs naturally in our brains, in small amounts, and facilitates the synthesis of acetylcholine. Acetylcholine is a neurotransmitter that helps in establishing communication between nerves and muscles, and also in carrying messages between brain cells. Acetylcholine works by sending messages to the muscles and stimulates their contraction. Because of this property, a DMAE cream has been used by some patients to address sagging skin. The active ingredient helps stimulate the production of acetylcholine, and that enhances the skin tone by firming and tightening its appearance from beneath the skin. Another way that DMAE helps the skin is by reducing the accumulation of lipofuscin deposits inside cells.



DR. RANDOLPH'S  
AGELESS & WELLNESS  
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We invite you to explore our newly updated practice website by clicking on the logo above!

One new feature is our PATIENT PORTAL, which allows online access to information such as labwork results and upcoming appointments.

Sign up for our PATIENT PORTAL at your next office visit, or anytime online! You will receive a confirmation via email that will allow you to create a username and password for the site.

Give us a call with any questions!

Lipofuscin is a skin pigment that can create discolorations. It has a brownish color and is a result of molecular waste when fatty acids are not metabolized properly by the body. This pigment oftentimes shows up in the form of liver spots or age spots, especially in people who are at a more mature stage in life. DMAE creams also tend to have anti-inflammatory properties and can help reduce free radicals in the body.

**Hyaluronic Acid:** This is an active skin care ingredient that retains moisture and creates a cushion to help plump the appearance of aging skin. Hyaluronic acid also helps to heal and soothe inflammation. A pure hyaluronic acid serum can prevent fine lines and wrinkles, providing effective results on prematurely aged or mature skin types.

**At your next appointment, talk to your clinician about whether Dr. Randolph's Estriol Face Cream can help you restore hormone balance for your skin!**

Please let us know how we can help you on your path to optimal aging and wellness!

To Your Health,

**Dr. Randolph**

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