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## News from Good Life

Thank you for entrusting in the compounding services at Good Life Pharmacies to help meet the unique medication needs of your patients. We are excited to share our monthly newsletter with you and look forward to continuing to be your medication problem solvers.

Be sure to visit our new website at [www.goodliferx.com](http://www.goodliferx.com). You or your patients can contact us via our HIPAA-compliant forms and learn how compounding can provide solutions for your medication challenges.

Please don't hesitate to let us know how we can be of further assistance to you and your practice.

Sincerely,  
Jim Andreesen, R.Ph.  
Angie Svoboda, Pharm.D. FIACP  
Ray Scott, R.Ph.



## Increase in Compounded Hormone Therapy

Recent data indicates an increase in the use of compounded bioidentical HRT versus manufactured combinations of estrogens and progestins which have been approved for the treatment of menopausal signs and symptoms. Published data suggests a safer profile of estradiol and natural progesterone therapy versus conjugated equine estrogens and progestins.

In 2002, the Women's Health Initiative (WHI) showed possible harm in women with a mean age of 63 that were treated for more than 5 years with conjugated equine estrogens (CEE) and medroxyprogesterone acetate (MPA). This deterred many women from initiating or continuing prescribed hormones. Since the publication of the WHI, an increase in the use of compounded bioidentical hormone therapy has occurred in the United States.



Using a combination of cross-sectional Internet survey data, US Census Bureau statistics, and prescription data, a recent US study estimated that compounded bioidentical hormone therapy may account for 28% to 68% of all hormone therapy prescriptions and may be used by 1 to 2.5 million women aged  $\geq 40$  years annually.

***Customized 17 $\beta$ -estradiol and progesterone combinations are available through our compounding pharmacy.***

## **Progesterone for Brain and Bone Health**

Progesterone (P4), a well-known neurosteroid, is produced by ovaries and placenta in females and by adrenal glands in both sexes. Progesterone also has multiple non-reproductive functions, and is synthesized by central nervous system (CNS) tissues to perform various vital neurological functions in the brain.

Experimental, epidemiological, and clinical data indicate that progesterone is active in bone metabolism. Progesterone appears to act directly on bone by engaging an osteoblast receptor or indirectly through competition for a glucocorticoid osteoblast receptor. Progesterone seems to promote bone formation and/or increase bone turnover. It is possible, through estrogen-stimulated increased progesterone binding to the osteoblast receptor, that progesterone plays a role in the coupling of bone resorption with bone formation.

In the central nervous system, progesterone helps to regulate cognition, mood, inflammation, mitochondrial function, neurogenesis and regeneration, myelination and recovery from traumatic brain injury. A substantial body of experimental evidence from animal models documents the neuroprotective role of progesterone in various CNS injury models, including ischemic stroke. Extensive data have revealed that progesterone elicits neuroprotection through multiple mechanisms and systems in an integrated manner to prevent neuronal and glial damage, thus reducing mortality and morbidity. Progesterone has been described as safe for use at the clinical level through different routes in several studies.

Progesterone alone or in combination with estradiol therapy may improve quality of life for a postmenopausal woman, whether or not she has an intact uterus. In addition to mitigating or preventing vasomotor symptoms or postmenopausal bone loss, oral progesterone causes drowsiness and can be administered at bedtime as part of an HRT regimen, and in this way can help with sleep.

[Journal of Osteoporosis Volume 2010. Article ID 845180.](#)

[Endocr Rev. 1990 May; 11\(2\):386-98.](#)

[Front Neuroendocrinol. 2008 May; 29\(2\):313-39.](#)

[J Environ Pathol Toxicol Oncol. 2017; 36\(3\):191-205.](#)

## **Quality of life and sexual function of postmenopausal women using an ultra low-concentration estriol vaginal gel**

Postmenopausal women with vulvovaginal atrophy symptoms and sexual disorders were enrolled in a case-control study to evaluate sexual function and quality of life (QoL) of naturally postmenopausal women affected by genitourinary syndrome of menopause who were treated with an ultra low-concentration estriol vaginal gel (0.005%).

Women were treated with vaginal gel (containing 50 micrograms of estriol) daily for 3 weeks and then twice weekly up to 12 weeks. Vaginal maturation index, vaginal pH, and vaginal atrophy symptoms were evaluated. QoL, sexual function, and distress were investigated using the Short Form 36, Female Sexual Function Index, and Female Sexual Distress Scale questionnaires. Changes between baseline and week 12 were assessed.

Sixty-eight women were included in the study group, and 42 women were included in the control group. Women on estriol vaginal gel had a significant increase in vaginal maturation index and improvement of vaginal pH compared with baseline. Mean total Female Sexual Function Index score improved, and Female Sexual Distress Scale score decreased from baseline to follow-up. Results from the Short Form 36 questionnaire showed a significant improvement in the overall index of somatic aspects. The control group showed no changes from baseline evaluation.

CONCLUSIONS: Estriol vaginal gel (0.005%) therapy significantly improves the trophism of the vaginal mucosa and the sexual health and QoL of naturally postmenopausal women. These results confirm that low doses of vaginal estrogen must be considered as the first choice for the initial treatment of postmenopausal genitourinary symptoms.

[Menopause. 2016 Jan;23\(1\):47-54.](#)

## **Micronized Progesterone for Treatment of Vasomotor Symptoms**

A randomized double-blind placebo-controlled trial in post-menopausal women compared oral micronized progesterone with placebo as therapy for postmenopausal hot flushes and night sweats (vasomotor symptoms; VMS).

Healthy community women (n=133, ages 44 to 62 years) who were 1 to 10 years post final menstruation were recruited for a trial of progesterone (300 mg daily at bedtime) versus placebo, and were screened for clinical, physical, or laboratory evidence of cardiovascular risks. Women recorded daily frequency and severity of VMS in the Daily Menopause Diary during run-in (4 weeks) and intervention (12 weeks). Average daily VMS score during final 28 therapy days was the primary outcome.

The VMS scores of women taking progesterone were significantly better than placebo. The researchers concluded that oral micronized progesterone is effective for treatment of hot flushes and night sweats in healthy women early in postmenopause.

[ClinicalTrials.gov NCT00152438.](#)

[Menopause. 2012 Aug; 19\(8\):886-93](#)

## **Androgen Treatment for Postmenopausal Women**

Testosterone is physiologically important for women. Serum testosterone levels decline with age, with the most precipitous fall being prior to menopause. There is no level of testosterone which defines a woman as being testosterone deficient. However, there is substantial high quality evidence to support the use of testosterone for the treatment of hypoactive sexual desire disorder in postmenopausal women. Preliminary data suggests testosterone has favorable effects on bone and muscle mass, cognitive function and the cardiovascular system.

[J Steroid Biochem Mol Biol. 2014 Jul; 142:107-14.](#)

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# Hormone Consultations

by Angie Svoboda, Pharm.D., FIACP

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consultation experience.

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