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Thank you for entrusting in the compounding services at Madison Medical Compounding Pharmacy to help meet the unique medication needs of your patients. We are excited to share our monthly newsletter with you and look forward to working with you. Please don't hesitate to let us know how we can assist you and your practice.

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Vaginal Health in Menopausal Women

Genitourinary Syndrome of Menopause (GSM) is a term introduced by the International Society for the Study of Women's Sexual Health and the North American Menopause Society in 2014. GSM is caused by estrogen deficiency and is associated with genital signs and symptoms such as dryness, burning, irritation, and sexual symptoms such as discomfort or pain, and impaired sexual function. This condition, previously known as atrophic vaginitis or vulvovaginal atrophy (VVA), may also be accompanied by urinary incontinence, dysuria, and frequent urinary tract infections.¹ Signs include loss of pubic hair and scratching lesions due to itching. GSM can occur following radiation therapy or chemotherapy, or in women who have had an oophorectomy or who are receiving antiestrogen medication.



GSM is experienced by up to 90%² of postmenopausal women and is even more pervasive in women with cancer; yet this chronic condition is still under-diagnosed and under-treated. GSM tends to worsen throughout the years after menopause or cancer and it requires prompt and long-term therapy to achieve good results. "Understanding the scope of this issue in female breast and gynecologic cancer survivors and identifying treatment options for this complex patient population are paramount."³ First-line treatment consists of nonhormonal therapies such as lubricants and moisturizers, while hormonal therapy with local estrogen products is generally considered the "gold standard".⁴ Oxytocin vaginal gel, which can help improve the symptoms of vaginal atrophy and reduce vaginal pH is an option for women who have a contraindication for hormone therapy.²

- ¹ [Medicina \(Kaunas\). 2019 Sep 20;55\(10\):615.](#)
 - ² [BMC Womens Health. 2020 May 19;20\(1\):108.](#)
 - ³ [Am J Obstet Gynecol. 2020 Feb;222\(2\):103-113.](#)
 - ⁴ [Cureus. 2020 Apr; 12\(4\): e7586.](#)
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Oxytocin Gel vs Estrogen for Treatment of GSM/Vaginal Atrophy in Postmenopausal Women

A randomized controlled trial evaluating the effect of oxytocin vaginal gel on vaginal atrophy was conducted on 96 postmenopausal women who suffered from vaginal atrophy. Women in the intervention group were requested to use one applicator of 400 IU oxytocin gel per night and women in the placebo group used the placebo. The subjective symptoms of vaginal atrophy, vaginal PH, and maturation index were measured before and after the intervention.

The improvement of the maturation index was more dominant in the oxytocin group (increased from 7.76 ± 4.68 to 52.48 ± 7.54) in comparison to the placebo group (increased from 8.58 ± 4.35 to 13.25 ± 5.06). The PH of the vagina decreased significantly in the oxytocin group in comparison to the placebo group. After 8 weeks, 88.6 and 7.1% of women in the oxytocin and placebo groups did not show the severe symptoms of vaginal atrophy. The results of this study showed that an eight-week intervention with oxytocin vaginal gel (400 IU) could significantly improve the vaginal maturation index, subjective symptoms of vaginal atrophy and reduce the PH of the vagina. Using this medication in women who have a contraindication for hormone therapy is recommended.

[BMC Womens Health. 2020 May 19;20\(1\):108.](#)

Treating Dysbiosis of the Vaginal Microbiome

Maintaining homeostasis of the vaginal microbiome, which consists of both bacteria and fungi, is essential to the health of a woman's reproductive system. Dysbiosis can be caused by behavioral (wearing tight clothing, use of vaginal lubricants, sexual activity, douching, smoking, hormone use) or biological variables (menstruation, lack of immune response). Pathogenic bacteria and fungi flourish on the biofilms they create and affect conception, pregnancy, delivery, development of infections or sexually transmitted diseases, and the overall health of the woman.

If the cause of a vaginal infection is suspected to be bacterial or an azole-resistant fungus, then a boric acid suppository inserted vaginally at bedtime for 14-21 days may be prescribed to decrease the vaginal pH and inhibit the growth of pathogens. If the infection persists, treatment with a flucytosine vaginal cream for 14 days may be considered. "Treatment with a vaginal cream containing EDTA 0.5% and boric acid 30% for 14 to 21 days can also be effective because that compound binds calcium ions (in some pathogens, this inhibits conversion to the [disease-causing] hyphal form) and disrupts fungal biofilms." A combination of intravaginally-applied estriol and *Lactobacillus acidophilus* can benefit women with vaginal dryness and atrophy and repopulate the vaginal flora.

[Int J Pharm Compd. 2018 Nov-Dec;22\(6\):456-465.](#)

Clinicians often consult compounding pharmacists to formulate preparations to treat vaginal diseases and re-establish homeostasis when commercially available products have failed or are unavailable. Our pharmacist will work together with healthcare providers and their patients to customize a therapy to meet the needs of each individual.

