

# PHARMACY

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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.

*LeAnn Chambers, Pharm.D. and Matthew Chambers, Pharm.D.*

## Low Dose Naltrexone (LDN) in Dermatology

“Off label LDN has been shown to improve dermatologic conditions such as systemic sclerosis, Hailey-Hailey Disease, lichen planopilaris, and guttate psoriasis... LDN is an attractive treatment option because its side effects are generally mild (including vivid dreams, nightmares, headaches, and anxiety), and it has a low abuse potential.”

“Atopic dermatitis (AD) is one of the most common chronic skin disorders, affecting up to 20% of children and 10% of adults...”

Given the well-established role of both immune dysfunction and pruritus in AD, the idea of LDN as a potential treatment is intriguing. Chronic pruritic disorders such as atopic dermatitis demonstrate downregulation of the  $\mu$ -opioid receptor. Topically administered naltrexone has been shown to cause upregulation of the  $\mu$ -opioid receptor and provide better relief of pruritic symptoms relative to placebo. A trial of a topical formulation of 1% naltrexone [cream] in 40 patients with severe atopic dermatitis revealed a 29% improvement after just 2 weeks of use.”



[J Drugs Dermatol. 2019;18\(3\):235-238.](#)

A review of the literature from 1971 until April 2018 shows that LDN was effective in treating pruritus attributable to atopic dermatitis, prurigo nodularis, cholestasis, burn injury, systemic sclerosis, Hailey-Hailey disease, and lichen planopilaris. Serious side effects were not reported. They concluded that LDN has the potential for the treatment of chronic inflammatory skin conditions; however, additional evidence is needed for dosing and long-term treatment

guidelines.

[JAMA Dermatol. 2019 Feb 1;155\(2\):229-236.](#)

***Talk to our pharmacist about your challenging case and we can help determine if LDN would be an option for your patient.***

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## Options for Dermatologic Symptoms of Menopause

Menopause is a state of estrogen deficiency that affects the skin through accelerated collagen breakdown, decreased elastin, dehydration, and impaired wound healing. Loss of collagen results in skin that lacks tone and is more able to stretch and expand. Low estrogen levels are also associated with decreased water-retaining capacity of skin tissues, resulting in dry and itchy skin, which leads to more fragile skin riddled with deeper and more numerous wrinkles.

Hirsutism, especially facial hair gain, was shown in 39% of menopausal women, with the chin being the most common site (32% of women). This may be related to an increased impact of androgens on hair follicles.

Female androgenetic alopecia, also known as female pattern hair loss (FPHL), has a peak incidence following menopause with a prevalence of up to 29% in women aging between 70 and 89 years. Research points to the effects of dihydrotestosterone on hair follicles contribute to the development of FPHL, which is supported by cases that women with hyperandrogenism may develop early-onset FPHL. The increased prevalence of FPHL especially in postmenopausal women indicates the possible role of estrogen in its pathogenesis; but there is still conflicting evidence on whether estrogens inhibit or promote hair growth.

Estrogen deficiency is also detrimental to wound healing, specifically in inflammation and re-granulation, whereas exogenous therapy can reverse these effects. Keratoderma climactericum was originally reported as having a particular association with menopause. Its main features involve hyperkeratosis of soles and palms, specifically at the level of the heels, at the beginning of menopause.

Postmenopausal women may experience cutaneous alterations resulting in dry, itchy, thin, and fragile skin. Several studies suggest bioidentical hormone therapy (BHT) may alleviate these symptoms, increasing cutaneous hydration and reducing skin atrophy. Although BHT is used for its anti-aging effects on skin, more research needs to be conducted to evaluate the actions and side effects of specific hormones and safely extend the use of BHT in dermatology.

[Dermatology Journal Online. 2019 January; 25\(1\)](#)

***Compounding pharmacists can personalize therapy based on a patient's hormone levels, lifestyle, and symptoms. Hormones can be prescribed in lower doses and the best dosage form for delivery via the optimal route. Our compounding pharmacist works together with patients and health care practitioners to determine the most appropriate formulation for each individual.***

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## Therapy for Wrinkles and Photoaging of the Skin

“Cosmeceuticals” are an area of ongoing research available to treat aging skin, including retinoids, antioxidants, hydroxy acids, bleaching agents, moisturizers, and sunscreens. Formulations containing antioxidants are among the most popular antiaging options. Antioxidants can include vitamin C, Coenzyme Q10, and Alpha Lipoic Acid (ALA) to name a few. Topically applied antioxidants exert their benefits by offering protection from damaging

free radicals produced when skin is exposed to ultraviolet light or allowed to age naturally. Appropriate formulation and use which is supervised by a knowledgeable healthcare professional will maximize the benefits while minimizing any potential side effects of these therapies.

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## Summer Fun: Sun Protection, Burn Gels, Bug Repellants

Ask us about:

- DEET-free insect repellants for babies and adults.
  - Soothing gels and lotions with topical anesthetics and moisturizers to relieve sunburn pain.
  - Topical NSAID creams and gels to treat pain and inflammation caused by sunburn pain.
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