

BEAUTY

Why Estrogen Is a Magic Bullet for Your Skin and Vaginal Health

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It must be my hormones. For a certain segment of women, particularly those hovering around middle age, it's a now oft-repeated refrain to explain away a whole host of issues affecting various parts of our bodies. But more messaging around our hormones, and estrogen in particular, has not necessarily brought more clarity about their role in our overall health and why we should be paying such close attention to them.

What is estrogen?

Estrogen is a group of hormones (there are three types: estradiol, estriol, and estrone) that helps regulate the menstrual cycle and has an impact on various parts of the body, including the urinary tract, bones, breasts, skin, heart and blood vessels, pelvic muscles, and the brain. And when it comes to vaginal health, estrogen plays a critical role.

“Estrogen helps to support the structure and elasticity of the vagina, making the walls

thick and elastic, and maintain vaginal lubrication,” says Somi Javaid, MD, a board-certified ob-gyn and founder of HerMD, whose latest location is in New Jersey. Because female brains are stacked with estrogen receptors, there’s a cognitive connection (to learning, focus, memory, and growth) as well. “Estrogen exerts its effects on brain regions such as the prefrontal cortex and hippocampus, affecting mood, motor coordination, pain sensitivity, cognition, and neuroprotection from stroke as well as Parkinson’s and Alzheimer’s diseases,” says Mary Jacobson, MD, an ob-gyn and chief medical officer of Hello Alpha. “It also plays a role in the regulation of serotonin, our body’s feel-good hormone, which contributes positively to our mood and staves off anxiety and depression,” Javaid adds.

What does estrogen have to do with your skin?

As it turns out, to maintain healthy skin, a lot. “Estrogen enhances the production of skin collagen and elastin, proteins responsible for helping to keep your skin looking firm, strong, and youthful,” says Javaid. Estrogen also helps with wound healing, preserving the skin’s barrier function, and, critically, increases its hyaluronic-acid content to keep skin hydrated. “Just as it keeps the mucosal membranes of the vagina hydrated, it does that for the skin on your face as well,” says Mona Gohara, MD, a Yale-trained dermatologist in Connecticut.

When do we experience dips in our estrogen levels?

The second half of every menstrual cycle is when most women first experience routine dips in estrogen. “Estrogen levels physiologically fluctuate throughout the menstrual cycle based on a complex relationship between the hypothalamus, pituitary gland, and ovaries,” adds Jacobson.

As we age and approach the menopause transition, the estrogen in our bodies is in a slow decline (also progesterone and, research has shown, testosterone). However, that dip can be inconsistent, says Javaid. Once a woman enters menopause, marked by 12 consecutive months without a menstrual cycle, estrogen levels stay low in a more steady manner.

What is the impact of these dips in estrogen?

The impact is, in a word, broad. When estrogen briefly dips during your menstrual cycle, it tips off PMS symptoms like moodiness, migraines, breast tenderness, and skin sensitivity. During menopause, lowering estrogen levels are accompanied by lowering levels of the vagina's important lactobacilli, says Javaid, which maintains its pH and shields it from infection, disease, and inflammation. Estrogen is also theorized, says Javaid, to contribute to the onset of mild cognitive decline commonly associated (affecting up to 62% of women) with perimenopause and menopause, like brain fog, forgetfulness, lack of focus, and difficulty with word finding. In a recent episode of Bridget Everett's excellent HBO comedy *Somebody Somewhere*, Sam asks Joel why she can't remember anything. "Menopause? Perimenopause." [*Laughs.*] "What's the difference? Fuck nobody knows." [*Both laugh.*] And it can also cause sexual pain, irregular periods, and the most talked-about menopause concern of all: hot flashes. Lack of estrogen can lead to thinning hair, and because it's behind the production of one of the skin's natural humectants, when it nosedives, both the vagina and the skin on the face can become severely dry. "People don't often relate estrogen, or the lack of it, to the aging process when it actually has a pretty big role," says Gohara, adding that skin begins to sag noticeably and fine lines and wrinkles become more prominent.

What are the ways to replenish the estrogen we lose?

Some doctors will steer women toward oral contraceptives (like the pill or the patch) as a first line of defense against the initial bothersome symptoms of perimenopause. During the menopause transition, treatment options usually combine a modification of lifestyle factors, nonhormonal interventions, and often hormone therapy (HT). While hormone therapy has a troubled past, the latest guidelines by NAMS (North American Menopause Society) uphold it as a gold-standard option. Estrogen-containing hormone therapy (with or without progestogen) can typically be categorized as either localized or systemic therapy. "Localized therapy refers to therapeutic treatment that targets a specific and affected area, such as the vagina," says Javaid. "Systemic therapy—prescribed in a variety of ways like oral, patches, sprays, gels and rings and typically containing higher doses of

estrogen than localized—enters the bloodstream and circulates to all parts of the body.” Systemic estrogen therapy can help, says Jacobson, with hot flashes, vaginal dryness, night sweats, and bone loss, which can all lead to improved sleep and sexual function and a better quality of life. Javaid also points to emerging studies around the benefit of testosterone therapy on the betterment of sexual function, arousal, and desire. And as for all those brain-related menopausal blips, recent research has also shown, adds Javaid, that hormone therapy may prevent cognitive decline and improve certain factors of brain health in women with specific genotypes. Jacobson cautions against the use of bioidentical hormones, though, as they are not closely regulated.

Is there such a thing as too much estrogen?

Yes, and this is known as estrogen excess, says Monica Grover, MD, an ob-gyn and chief medical officer at VSpot. “This can be due to an imbalance of testosterone or progesterone in regulating estrogen levels,” Grover explains. This excess can lead to certain disease states, including cancer. Downie says the amount of her patients with estrogen-receptor-positive breast cancers and different types of uterine, endometrial, and cervical cancers is what makes her tread carefully. “For some, there can be such a thing as overdoing it with estrogen,” she says.

Is there a benefit of applying estrogen topically for the skin?

On this topic, doctors are split. Ellen Marmur, MD, a board-certified dermatologist and founder of MMSkincare who happens to be on HT herself, says the role of hormone therapy for skin is often overlooked. “Using estrogen topically on the skin can be good for combating skin dryness and acne rosacea,” says Marmur, adding that using high-dose estrogen on the skin should be done with a physician’s care, much like systemic therapy. “The drop in estrogen hormones deflates the collagen, which diminishes vascular and lymphatic circulation and moisturization. Applying estrogen to the skin can ease these symptoms and improve hydration.” While Gohara hasn’t seen enough evidence thus far that topical estrogen is beneficial for cosmetic purposes on the skin, Jeanine Downie,

MD, a New Jersey-based cosmetic dermatologist, sees a benefit but only recommends estrogen alternatives. Her favorite option to recommend to her patients in the menopause transition is Emepelle (note Downie worked on the clinical trials), which uses MEP (methyl estradiol propanoate) technology. “It’s a nonhormonal treatment, and it really does help to improve the loss of the skin’s collagen, dryness, dullness, thinning, and wrinkling,” says Downie, who thinks the estrogen-mimicking topical holds up, efficacy-wise, against ingredients like retinol. Gohara, on the other hand, prefers to steer patients toward gold-standard skin care collagen builders like retinol and a double-moisturizing routine with biosimilar ingredients (perhaps topping a hyaluronic acid with a lipid-rich cream). What everyone can agree on is that the same cream should not do double-moisturizing duty for the face and vagina. “This is not a great idea because as sensitive as our facial skin is, our vulvar skin is even more so,” says Grover, adding that certain ingredients may irritate the vulvar skin and even cause thinning. Not to mention messing with your pH. Says Downie: “I’ve had patients who are using the same cream for the face and vagina getting yeast infections from doing this, so I definitely don’t recommend it.”