

ESTROGEN DEFICIENCY

Estrogen is a potent steroid hormone (or rather a group of hormones) that is responsible for keeping you joyful, juicy and feeling sexy. Women with low estrogen levels, most commonly during the perimenopausal years, often experience mood swings, low libido, dry vagina, achy joints, less mental focus and enthusiasm.

Low estrogen (Estradiol = E2) has the following effects on our body.

1. **Weight gain.** Low E2 stimulates appetite by triggering a hormone called leptin. The lower your E2 goes, the hungrier you become
2. **Low libido.** E2 makes the genital skin sensitive, full of innervation and blood supply. When E2 is low the vagina becomes dry and nerves that innervate the clitoris, G-spot, and labia minora start to disappear. The elastic, compliant, blood supplied tissues dry up like the desert! Lubrication is compromised and orgasms may be so subtle they go unnoticed.
3. **Mood.** E2 maintains levels of serotonin, the feel-good neurotransmitter. When E2 decreases, serotonin levels drop and may lead to depression
4. **Bone health.** E2 helps facilitate the movement of calcium into the bones. When E2 goes down, bone loss ensues.
5. **Hot flashes, night sweats, insomnia.** Although the exact mechanism is unknown, the thermoregulatory control of the body is affected by estrogen levels. As E2 levels fluctuate and eventually decline, the regulation becomes unpredictable.

Targeted lifestyle changes

1. **Avoid caffeine.** Coffee and other caffeinated beverages decrease E2 levels. Herbal teas containing rhubarb or valerian (as a tea or supplement) may help reduce hot flashes and improve sleep.
2. **Cut out gluten grains.** Glutens can lead to insulin resistance, which leads to hormonal imbalance.
3. **Add flaxseeds to your meals.** Flaxseeds contain lignans, a phytoestrogen or estrogen-like chemical that also acts as an antioxidant. Eating 2 tbs of flaxseeds twice per day over 6 weeks reduced hot flashes by half. Plus it offers a good dose of fiber.
4. **Orgasm...more.** Female orgasm and sexual stimulation raises E2 in premenopausal women. Orgasm also releases oxytocin, which works with estrogen to buffer stress and lower cortisol.
5. **Exercise...but not too much.** Exercise helps reduce low-estrogen symptoms in lean women. Those who are overweight may worsen their vasomotor symptoms with more intense exercise and should exercise with moderation.
6. **Acupuncture.** Getting needled has been shown to raise E2 levels sufficiently to reduce hot flashes but probably not enough to help with vaginal dryness or recurrent urinary infections.
7. **Eat pomegranate.** Many women report relief of hot flashes. Pomegranate seed oil at a dose of 30 mg twice per day for 12 weeks has been shown to reduce hot flashes.

Nutraceuticals

☐ **Fish oil** (omega 3) 3,000 mg/day

Studies have shown that omega 3 decreases the frequency and intensity of hot flashes. It is also known to elevate mood. Plus fish oil is one of the only supplements proven to extend life. It lowers heart disease, heart attack and subsequent death.

☐ **Vitamin E** 400 IU/day

Vitamin E has been a long-standing remedy for improving symptoms of low estrogen, including hot flashes, vaginal dryness, and mood swings. Vitamin E has been shown to increase blood supply to the vaginal wall. It may take 4 weeks of supplementation to note these effects.

☐ **Magnesium** 400 mg/day

Among breast cancer patients, magnesium was shown to reduce hot flashes, fatigue and distress, all common symptoms of low estrogen. These women took 400 mg daily for 4 weeks increasing to 800 mg daily if symptoms persisted. Please note magnesium may cause diarrhea particularly at higher doses.