



Vulvovaginal Disorders: An algorithm for basic adult diagnosis and treatment

VAGINAL ATROPHY OR ATROPHIC VAGINITIS

What is vaginal atrophy?

The tissues of the vagina and vulva, including the urethra (opening to the bladder) and lower urinary tract are very sensitive to the effects of estrogen. When a woman's estrogen levels decrease, these tissues can become thin, inflexible, and dry. The medical name for this condition is *vaginal atrophy*. It is referred to as *atrophic vaginitis* when there is accompanying irritation or inflammation (vaginitis means inflammation of the vagina). Symptoms of atrophic vaginitis can include irritation, itching, rawness, dryness, bleeding after wiping or intercourse, urinary frequency or urgency, trouble holding urine, vaginal discharge, vaginal odor, and/or pain with intercourse. Urinary tract infections may become more frequent. The signs and symptoms of local low estrogen levels can be confused with yeast vaginitis, urinary tract infection, bacterial vaginosis, or other conditions of the female lower genital track.

Who has vaginal atrophy?

Vaginal atrophy is most commonly seen in women who are peri or post-menopausal, when estrogen levels naturally decline. According to the North American Menopause Society, 10-40% of menopausal women have symptoms of atrophy or atrophic vaginitis.

Atrophy also sometimes occurs in women who are breastfeeding because breastfeeding suppresses a woman's natural estrogen production. Hormonal contraceptive methods such as Depo Provera® or low dose continuous birth control pills can also lead to low estrogen levels, and atrophic vaginitis symptoms. Some other hormonal treatments that suppress or alter ovarian estrogen production such as Lupron®, or SERMS (selective estrogen receptor modulators) and aromatase inhibitors (used in the treatment of estrogen-sensitive breast cancers) may also cause atrophy and atrophic vaginitis.

How is it treated?

Atrophic vaginitis is most successfully treated with *local estrogen therapy*; that is, estrogen applied directly to the vulva or inserted in the vagina.

Systemic estrogen replacement (hormone replacement therapy) from patches or oral pills may also help with the symptoms of atrophic vaginitis, *but is not indicated solely for the treatment of atrophic vaginitis*. Some women on systemic estrogen replacement find that they still need local estrogen to help with their atrophic vaginal symptoms.

Keep in mind that estrogen treatment does not *cure* the condition of vaginal atrophy. When estrogen treatment is discontinued, the symptoms of atrophy/atrophic vaginitis will most likely return.

What forms of local estrogen (applied directly to the vulva and vagina) are there?

Local estrogen therapy does not carry the same risks that are associated with systemic hormone replacement therapy.



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They are generally considered safe even for women who are advised not to take other estrogen containing treatments (women who have had breast cancer, for example).

Local options include:

- **Estrogen vaginal tablets** (Vagifem®). These small estrogen-containing tablets are inserted into the vagina with an applicator. Typically the dose is 1 tablet nightly for 7-14 days, then twice weekly for maintenance. Some women find that they need to use the tablets indefinitely, as often as 3 times per week to stay comfortable. Estrogen tablets tend to be less messy than estrogen creams (see below) but still can cause an increase in normal discharge. This is the lowest form of local estrogen available.
- **Estrogen ring** (Estring®). The Estring® is a semi-flexible ring which is inserted into the vagina for 3 months at a time. It releases a low level of estrogen continuously, slightly higher than the estrogen tablet. When the ring is inserted correctly it should not cause any discomfort. Most women don't know it is there. Sometimes the ring can become dislodged or come out when straining or bearing down, such as with a bowel movement. In that case it can easily be repositioned or replaced. It can be left in during intercourse. The ring may cause an increase in normal vaginal secretions.

Most women can learn to place and replace the ring. It is similar to a contraceptive diaphragm. Some women are not comfortable with an Estring® or even with the idea of having something in their vagina. Rarely, it causes vaginal abrasions.

- **Estrogen cream** (Premarin®, Estrace®). Estrogen-containing creams may be inserted vaginally with an applicator. The usual dosing is at bedtime for 2 weeks, then 1-2 times a week for maintenance. (The creams come with a marked applicator. The dose varies depending on the particular cream). Estrogen cream can also be used topically just on the surface of the vulva though it is less effective when used that way.

One advantage of estrogen cream is that the dose can be adjusted according to symptoms. Some women find that even very small quantities of estrogen cream ($\frac{1}{4}$ – $\frac{1}{2}$ gram or less once or twice a week) can keep them comfortable. The estrogen creams deliver more estrogen into the blood than the other forms of vaginal estrogen, but do not approach pre-menopausal levels or the level of hormone replacement tablets or patches.

Does vaginal estrogen have any side effects?

The most common side effect of vaginal estrogen is a slight increase in discharge from the cream, tablets, or ring. Rarely a woman might experience breast tenderness, vaginal bleeding, cramping or pelvic discomfort, and nausea, especially when starting treatment.



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What are the risks of vaginal estrogen therapy?

One concern about estrogen is that it can make the lining of the uterus (endometrium) thicken (endometrial hyperplasia) and even eventually become cancerous. Estrogen cream may pose slightly more risk in this regard than the tablets or ring. Progesterone is given to women who use standard oral or transdermal estrogen therapy to counteract this effect.

Currently most experts do not think the use of progesterone or a progesterone-like drug is necessary for women using vaginal estrogen therapy as prescribed.

Speak with your clinician about your risks of endometrial hyperplasia from vaginal estrogen therapy:

- If you use a product called Femring® which is hormone replacement therapy designed to raise blood levels of estrogen
- If you are using higher doses of estrogen cream (more than 1 gram of vaginal estrogen cream twice/week).
- If you have any vaginal bleeding after starting vaginal estrogen therapy

You should also review your medical history with your clinician (especially if it includes breast cancer or other estrogen sensitive cancers) before starting any vaginal estrogen product.

What are the other options for managing atrophy or atrophic vaginitis?

Good **vulvovaginal hygiene** is the first step. Avoid harsh soaps, chemical products, and tight clothes.

If you are not comfortable using estrogen therapy to treat your symptoms or if the use of estrogen is not recommended for you, the symptoms of atrophy and atrophic vaginitis may improve with use of a **vulvovaginal moisturizer** such as Replens® or K-Y Silk-E Vaginal Moisturizer®. A thin coat of Vaseline® or vegetable oil can also be applied to the vulva to reduce the symptoms of vulvovaginal dryness and irritation. Use of lubricants such as K-Y Kelly®, Astroglide®, Slippery Stuff®, and others, can be helpful to reduce symptoms and prevent dryness during intercourse.

Hyaluronic acid

Because the vagina loses collagen and water-retaining ability at menopause, hyaluronic acid is used to help improve the vaginal epithelium and reduce complaints of dryness and discomfort. Hyaluronic acid is a substance that is naturally present in the human body. It is found in the highest concentrations in fluids in the [eyes](#) and joints. Hyalo Gyn is a gel product available over-the-counter; the recommended use is one applicator every three days for thirty days, and then as needed. Local irritation may occur.

Continuing to be **sexually active** is thought to help maintain the blood supply to the vagina and help avoid atrophy as well!

Ospemifene (Osphena) is a newly released selective estrogen receptor modulator (SERM) with different effects on



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different tissues. This means that it acts like an estrogen on the uterine lining (endometrium) and in the vagina. Its effect on the breast is not well studied. Since it is newly released, clinicians do not have extensive experience with this medication. It is an oral tablet used to treat vaginal dryness and painful intercourse. A single 60 mg tablet is taken daily. Common side effects include: hot flushes, vaginal discharges, muscle spasms, and increased sweating. It also interacts with a number of medications. Serious, but uncommon side effects include: stroke, blood clots, and cancer of the endometrium.

Note:

If you have ongoing vulvovaginal symptoms that you cannot manage please consult your gynecologic clinician.