

John R. Adams, Jr., M.D., F.A.C.S.  
Ravi D. Chauhan, M.D., F.A.C.S.  
Paul R. Eber, M.D., F.A.C.S.  
Michael A. Granieri, M.D.  
Robert S. Hollabaugh, Jr., M.D., F.A.C.S.  
Thomas B. Shelton, M.D., F.A.C.S.

Matthew Sims, M.D.  
Adam E. Stewart, M.D.  
Val Y. Vogt, M.D., F.A.C.S., F.P.M.R.S.  
Patrick J. Zielie, M.D.



## Topical Estrogen Therapy

By Robert S. Hollabaugh, Jr. MD

### Indications

Many women notice changes in the vaginal area as they age. These changes are commonly called “urogenital atrophy” or “atrophic vaginitis,” which develop related to diminished estrogen hormone levels in the female body. Up to 40 percent of postmenopausal women have symptoms of atrophic vaginitis. This condition is caused by a decrease in estrogen. Decreases in estrogen may be due to a variety of causes including (1) natural menopause, usually occurring around the age of 50, (2) surgical removal of the ovaries which is often done as part of a hysterectomy or (3) with certain medications. Regardless of the cause, natural or surgical, the lack of hormone

in the female system will cause changes in the body. When hormone production decreases, the body goes thru a variety of changes, including moodiness, lethargy, hot flashes, menstrual irregularity, osteoporosis, and vaginal dryness.

Even with such a high occurrence of these symptoms, only about half of women who experience these symptoms seek medical attention. Therefore this is a commonly overlooked and under diagnosed condition that is often easily corrected. Be sure and inform your physician if you are experiencing any of these symptoms.

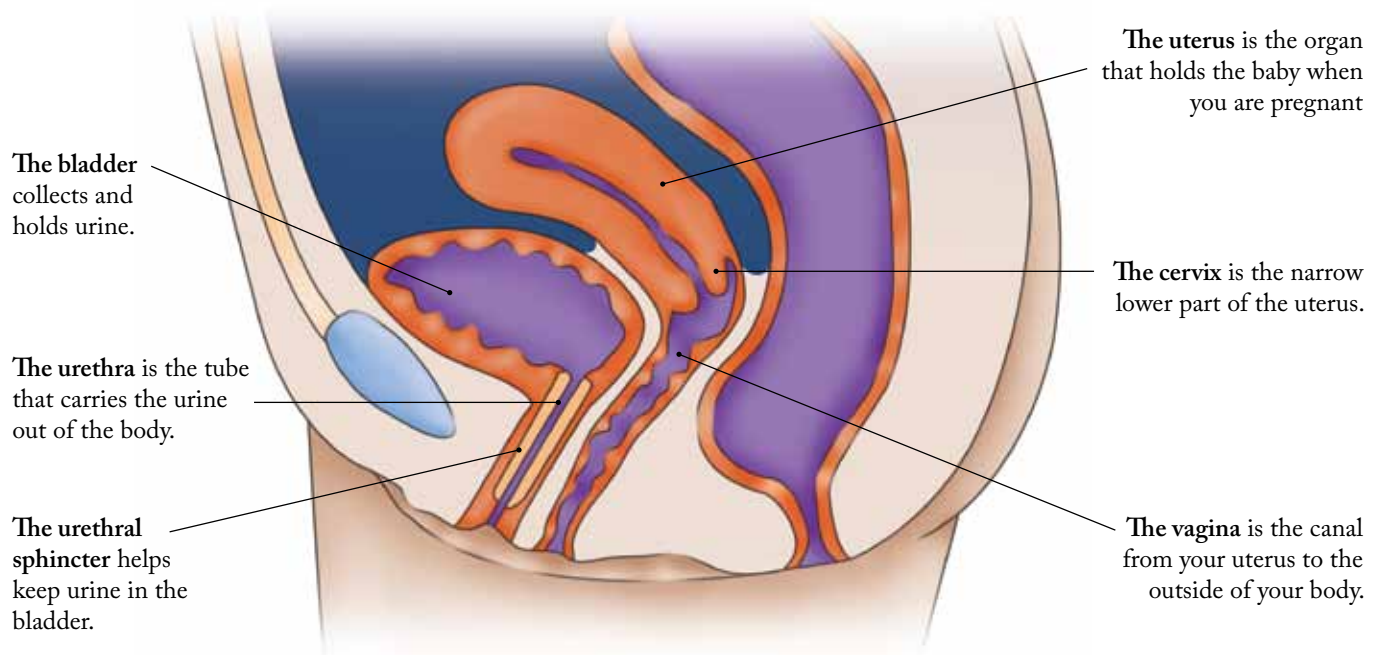
Because the bladder and urethra are situated anatomically next to the vagina, many bladder symptoms may arise

when vaginal symptoms arise. Yeast and bacteria always live in the vaginal area, regardless of the degree of hygiene. Both are naturally supposed to be there, and under normal circumstances they exist in a balance that protects and does not irritate the vagina. When the balance is disrupted, either a yeast infection or a bacterial infection can result. A common scenario involves a woman taking antibiotics for some other infection and developing a vaginal yeast infection. This happens because many antibiotics indiscriminately kill bacteria throughout the entire body. While helpful for the infected area, the vaginal content of bacteria is also killed, allowing for an overgrowth of yeast and a “yeast infection.” In some cases the resulting yeast infection seems to come “like clockwork” and it can be very aggravating to some women. The trick to avoiding these infections relates to maintaining the balance between the vaginal content of bacteria and yeast. In cases like this if the balance is upset, it will usually correct itself in just a few days time.

### Symptoms of Atrophic Vaginitis

- » Feeling of pelvic pressure
- » Urinary frequency
- » Vaginal dryness, itching or burning
- » Frequent urinary tract infections
- » Pain with sexual intercourse
- » Stress incontinence
- » Discomfort with urination

## FEMALE ANATOMY



However when the body lacks estrogen, the balance is disrupted and cannot correct on its own. Estrogen has a variety of effects on the vaginal and urethral tissues. It maintains the integrity of the vaginal epithelium, or skin and helps to maintain the appropriate acidity of the vaginal environment. The correct pH level is essential to maintain the body's natural defense against vaginal and urinary tract infections. With an estrogen deficiency the vagina becomes alkaline, permitting bacteria to multiply more easily. When bacteria multiply in a vicinity so close to the opening of the bladder, urinary infections can result. Estrogen also has a role in maintaining the glandular

function of the vaginal tissues, which is responsible for vaginal tissue suppleness and lubrication. When the vaginal tissues are deprived of estrogen, patients can experience vaginal discharge, dryness, itching, burning, discomfort with sex, and feelings of pelvic heaviness. The coating of the vaginal lining and opening to the bladder deteriorates which allows easier adhesion by bacteria, increasing the risk of vaginal and bladder infection. Topical estrogens are also used to treat vulvar pain and discomfort, a symptom that is often mistaken by patients for an infection. All of these factors relate to gynecologic and urologic health in females.

## Diagnosis of Atrophic Vaginitis

While atrophic vaginitis is common, it is important to rule out any other possible causes. A thorough history and physical examination should be done by your physician. There are also some simple laboratory tests that can be done to identify this condition, including testing the vaginal pH and measuring of blood hormone levels.

## Hormone Replacement Therapy

Much investigation has centered on oral hormone replacement therapy for females in recent years. In decades past, patients who experienced even minor hot flashes or irritability at the time of menopause were placed on oral estrogen replacement therapy. Research has shown increased risk of stroke, blood clots, and cancer in patients on long-term hormone replacement therapy. Thus, widespread use of oral estrogens in this arena has become frowned upon. The prevailing medical opinion recommends not starting every female on oral estrogen at the time of menopause. In certain cases, however, the benefits of oral estrogens outweigh the risks.

In contrast, topical vaginal estrogens are considered to be much safer than the oral counterparts, as the topical estrogens are minimally absorbed into the circulation and have only localized effects. Oral estrogens have to be absorbed into the bloodstream in order to circulate to areas of need, and therein lies the risk. Topical estrogens are applied to the vaginal area and only work in the area of application. They function to revitalize the vaginal tissues. Because they are minimally absorbed, they will do nothing to help with hot flashes, moodiness, or osteoporosis. In that same regard, because they are not absorbed to any appreciable degree, they do not carry the same risk for heart disease, stroke, blood clots or cancer. If a patient has ever had breast cancer, ovarian cancer, or uterine cancer, doctors will need to be informed of this before prescribing topical estrogen. In most cases, this is

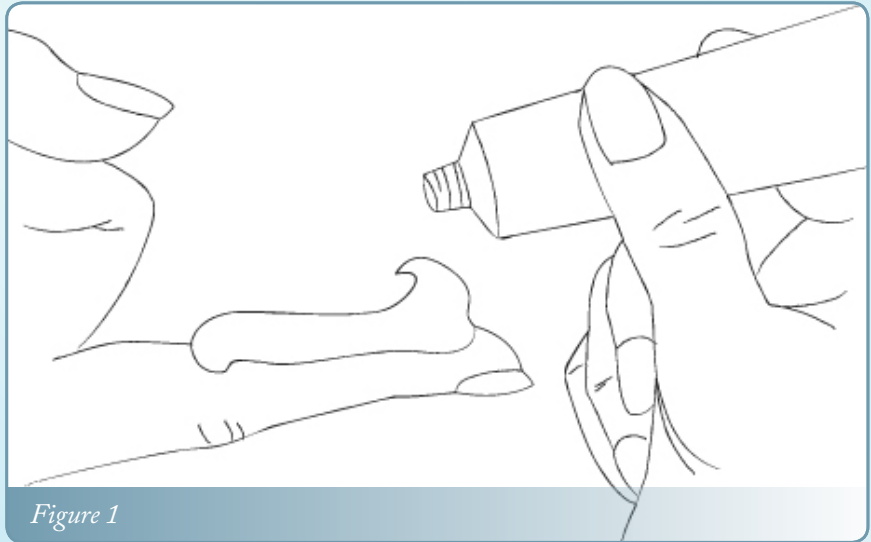


Figure 1

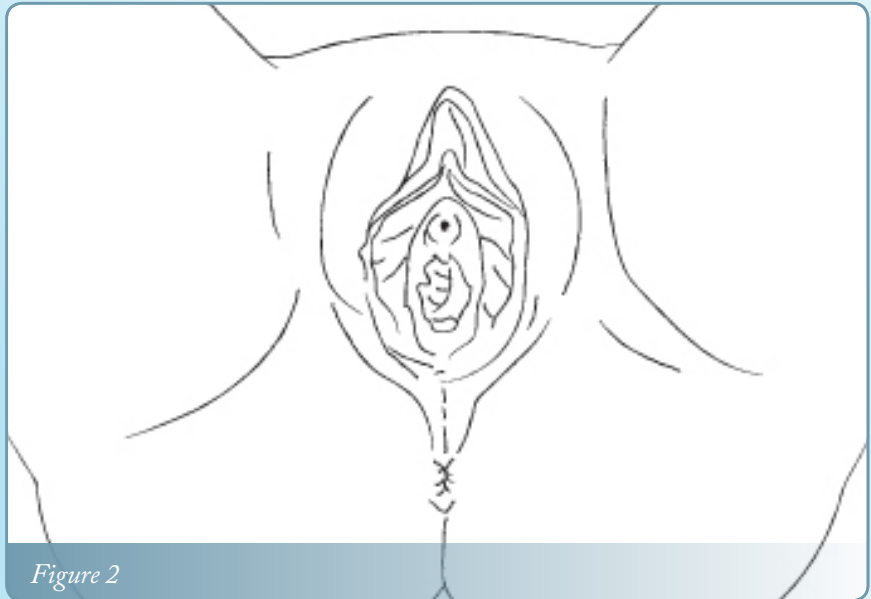


Figure 2

- STEP 1:** Wash your hands with soap and water and dry thoroughly.
- STEP 2:** Squeeze out enough cream from the tube to cover 1/2 of your index finger (Figure 1).
- STEP 3:** Locate the vaginal opening (Figure 2). Immediately above the vagina is the urethra (a small opening where urine is eliminated from your body). The urethra may not be as easily identified as the vagina because the opening is much smaller, however, use the diagram to determine its approximate location.
- STEP 4:** Carefully spread the cream onto the external vaginal/urethral area (Figure 2). As the cream is spread, some may be gently inserted into the vagina; however, it is not necessary to push the cream high into your vagina.

considered a safe amount of estrogen to use. Final decisions about the safety of topical estrogen in these cases often require approval from the oncologist.

## Using Topical Estrogen Therapy

Your physician has advised you to use topical estrogen therapy for the indications listed below:

- » Rejuvenation of the vaginal tissues
- » Decrease the occurrence of urinary tract infections
- » Increases the effect of medications used for the bladder

Topical estrogen therapies consist of vaginal creams (Estrace or Premarin) and vaginal suppositories (vagifem). Depending upon the brand name that your physician has prescribed, you will find that the cream is packaged in a container similar to toothpaste. The vaginal suppository comes with its own insertion tool.

In order to apply the topical estrogen cream, squeeze a small amount on your index finger from your fingertip to the second knuckle (about 1 inch). There is no exact science to this dosage, but this should be enough for each usage and prevents the need for using the plastic applicator tray, which can be cumbersome to use and irritating to the vaginal skin. Separate the labia of the

vagina with your other hand, and smear the cream from the urethral opening back to, and covering, the vaginal opening and urethra. There is no need to be vigorous in the application of this cream as the cream will go to the areas that is needed. Many women prefer to apply the cream in the evening just prior to retiring. We generally suggest that patients apply the cream every night for 2 weeks and then decrease to a frequency of every Monday, Wednesday and Friday night thereafter. In order to maintain the beneficial effects, vaginal replacement therapy needs to be continued long-term. Refills for the topical cream can be obtained by calling our office.

## Dual Therapy using Oral and Topical Estrogens

In some cases, patients may already be using oral estrogens for other reasons. Your doctor may feel that both types of therapy offer specific benefits. Oral agents can help with systemic menopause issues, while vaginal estrogens target specific vaginal issues. If the issue is correction of vaginal symptoms and urinary infections, vaginal estrogens may be the only therapy needed, and may replace oral pills. Make sure to discuss this with the physician, as there may be there reasons to continue the oral estrogens.

## What to expect

When patients first begin to use the vaginal estrogens, they may experience an initial irritation of the vaginal skin. Often, patients will claim that the treatment is making the itching and burning worse. In most cases, this is just the estrogens starting to work in the process of tissue rejuvenation, and will only last a few weeks. The lack of estrogen for many months or years has left the vaginal tissues starving for estrogen. Initially, the increase in blood flow to the tissue, the increase in secretion of lubricants, and the change in fluid acidity will seem like things are worsening, but these are the first steps in correction of the underlying problem. If used regularly, the vaginal tissues will rejuvenate and become more resistant to irritation. A well estrogenized vaginal lining decreases urinary infections, decreases vaginal discomfort with sex, and decreases vaginal dryness and itching. In addition, it improves pelvic support and strength which can help control bladder leakage.

Irritative vaginal symptoms and recurrent infections do not have to be an inevitable consequence of menopause. Inform your doctor if you are experiencing any of these symptoms. Appropriate diagnosis and prevention of atrophic vaginitis may alleviate or eliminate symptoms.

**Germantown Office and Surgery Center**  
1325 Wolf Park Drive, Suite 102  
Germantown, TN 38138  
901-252-3400

**Southaven Office**  
125 Guthrie Drive  
Southaven, MS 38671  
662-349-1964

**Cordova Office**  
8066 Walnut Run, Suite 100  
Cordova, TN 38018  
901-252-3400

phone: 901.252.3400  
fax: 901.763.4305

Please visit our website at  
[www.conradpearson.com](http://www.conradpearson.com)