

# W o m e n ' s HEALTH UPDATES



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## Hormone Therapy Options: Bioidentical Hormones

**W**ith all the bad news about hormone replacement therapy over the past few years, is it any wonder that more women than ever are now searching for alternatives to treat their menopausal symptoms?

As a result, there is increasing interest in so-called “natural” herbal products and in treatment options known as bioidentical hormones.

Unfortunately, there’s nearly as much confusion about the meaning of “natural” and “bioidentical” female hormones as there was about hormone therapy in 2002, when the first results of the Women’s Health Initiative (WHI) were released.

Early results from that study indicated that postmenopausal women using a combination estrogen/progestin medication called Prempro faced a slightly increased risk of breast cancer, heart disease, stroke and blood clots. The risks prompted the U.S. Food and Drug Administration (FDA) to mandate warning labels on all estrogen products advising women to use the least amount of hormone necessary for the shortest duration to treat menopausal symptoms.<sup>1</sup>

In the aftermath, millions of women quit their hormone therapy cold turkey—no matter what form they were taking. However, many were surprised by the return of menopausal symptoms they’d thought long gone.

Since then, however, newer hormone formulations have been approved, more intensive review of the data has raised some questions about the WHI study itself and, slowly but surely, millions of women are returning to the option of using hormones to treat menopausal symptoms. Now if a woman decides to use hormones, it’s more a question of which type of therapy best meets her individual menopausal needs than whether she will use hormone therapy or not.

*This Women’s Health Update will help you understand your options when it comes to hormone therapy, and separate fact from fiction.*

**Fact 1.** Your body produces three different kinds of estrogen. These are: estradiol, or E<sub>2</sub>, the primary estrogen produced during your reproductive years; estrone, or E<sub>1</sub>, the primary estrogen

produced during your menopausal years; and estriol, or E<sub>3</sub>, the weakest form of estrogen, primarily available during pregnancy when it is produced by the placenta. Each form works differently in different parts of your body.

**Fact 2.** “Natural” is a marketing term, not a medical term. Just because a medication or supplement is labeled “natural” doesn’t mean it’s any safer than a drug or supplement created in a laboratory. In fact, there is usually more evidence that a pharmaceutical medication is safer than an over-the-counter product made from soy, or an estrogen created in a compounding pharmacy (a pharmacy that custom-mixes medications). That’s because pharmaceutical manufacturers must submit to strict testing to receive FDA approval and close FDA monitoring of all manufacturing to insure purity; closely track distribution to prevent counterfeiting; and submit any reports of adverse events relating to their product to the FDA. Manufacturers of supplements and compounded hormones do not have to follow any of these requirements.

**Fact 3.** Women today can choose from many options to treat their menopausal symptoms. It is important to understand that the WHI focused on just

*There are two main types of bioidentical hormones: those that are FDA-approved and commercially available with a prescription...and those that are mixed on an individual basis for women in compounding pharmacies, which are not FDA-approved.*

two forms of hormone therapy—Premarin, a conjugated estrogen produced from the urine of pregnant mares, and Prempro, which contains Premarin plus a synthetic progestin, a very strong form of progesterone called medroxyprogesterone acetate, or MPA.

While these products have been on the market for many years, there are now many new hormone formulations in varying dosages to consider for symptom relief. These options range from pills to creams to patches to a gel.

**Fact 4.** As with any medication, all forms of hormone therapy have the potential for side effects. Whether it was made in a lab or specially created for an individual woman in a compounding pharmacy, all hormones have certain side effects and risks. For instance, even estrogen normally present in your body until menopause has been implicated in a woman's risk of breast and uterine cancer, with many studies finding that women with naturally higher levels of two forms of estrogen—estradiol and estrone—have a higher risk of breast cancer than women with lower levels.<sup>2</sup>

Your body is designed to function with lower amounts of circulating estrogen following menopause. Using hormone therapy isn't a requirement; it's an option available to women who need relief from symptoms associated with declining estrogen levels during the menopause transition, such as vaginal dryness, hot flashes and night sweats. Commonly reported side effects of estrogen hormone therapy include: headache, breast pain, irregular vaginal bleeding or spotting, stomach cramps/bloating, nausea and vomiting, and hair loss.<sup>3</sup>

**Fact 5.** If hormone therapy is indicated, the FDA recommends that it should be prescribed at the lowest effective dose for the shortest time needed. Using this guideline is the safest option for all women who choose to use hormone therapy. Your health care professional will determine the dose and timing depending on your health profile and response to therapy. Finding the dose and formulation that works best to relieve your symptoms may take some time (and perhaps varying doses and hormone therapy options) and should be re-evaluated on a regular basis.<sup>4</sup>

## Defining Bioidentical

When something is “bioidentical,” it is structurally identical to the substance as it naturally occurs in your body. Most bioidentical estrogens and progesterone come from soy (estrogen) or yams (progesterone). Once the hormones are extracted from the plant source, they can be processed to be used by a woman's body.

There are two main types of bioidentical hormones: those that are

FDA-approved and commercially available with a prescription, such as Estrace and EstroGel, and those that are mixed on an individual basis for women in compounding pharmacies, which are not FDA-approved. Estrogen products produced via compounding are typically called “bi-estrogen” or “tri-estrogen,” since they contain varying amounts of the two or three types of estrogen. The individual prescription is typically created based on a saliva test that identifies the forms of estrogen in which a woman is deficient. However, saliva testing is not reliable; nor is it used to determine dosage or to monitor therapy.

## Safety and Regulation of Bioidentical Hormones

If you choose to have your bioidentical hormones custom-made for you in a compounding pharmacy, you need to understand that their production, the purity of the product and the safety of the dose designed for you are unregulated. Additionally, no safety or efficacy studies (i.e., studies showing how well the drug works) have been conducted or published. While these formulations may use FDA-approved ingredients, the customized formulations are not approved and there are no guidelines for their use.<sup>4</sup>

Pharmaceutical bioidentical products, however, are subjected to a rigorous review of their benefits and health risks before they can be marketed. They are only allowed on the market if the benefits outweigh the risks. Additionally, the quality of pharmaceutical estrogens and progesterone are regulated by the federal government.

## Your Hormone Options

Women have numerous FDA-approved options today when it comes to hormone therapy. The following outlines the nine main formulations of FDA-approved hormone therapy available in the United States:

### Oral

Most hormone therapy formulations still come in a pill form. The only bioidentical oral form is Estrace (micronized estradiol). (Don't be put off by the word "micronized," it just means that the estrogen particles were made smaller for better absorption.)

### Transdermal gel

EstroGel (estradiol gel) is applied once a day to the arm, from wrist to shoulder. This bioidentical estrogen is a clear, odorless gel that dries on the arm in two to five minutes. It doesn't cause the skin to dry out and is approved for the treatment of moderate to severe hot flashes and moderate to severe dryness, itching, and burning in and around the vagina.<sup>3</sup>

### Lotion

Estrasorb (estradiol topical emulsion) is a bioidentical estrogen. Women apply this white, lotion-like emulsion to both their legs (thighs and calves) on a daily basis. Estrasorb has been approved for treating moderate to severe symptoms of hot flashes and night sweats associated with menopause.

### Vaginal cream

Estrogen creams include Estrace (micronized estradiol cream), Ogen (estropipate cream), Ortho diene-

strol cream, and Premarin (conjugated estrogen cream). These creams are generally used only to treat vaginal symptoms of menopause. Only Estrace is a bioidentical estrogen cream.

### Vaginal ring

There are two rings currently available, Femring (estradiol acetate) and Estring (estradiol). Only Estring is a bioidentical form of estrogen in a ring. The ring is a small piece of circular plastic silicone that is inserted into the vagina like a diaphragm, where it releases a steady dose of estrogen for three months, at which point it is replaced. Femring is approved to treat moderate to severe hot flashes, night sweats and vaginal dryness.<sup>6</sup> Estring is approved for the treatment of urogenital complaints related to menopause, including vaginal dryness, urinary urgency (feeling like you suddenly have to go to the bathroom), painful intercourse and painful urination.<sup>7</sup>

### Patches

Ranging from smaller than a dime in size to nickel and half-dollar sizes, estrogen patches are typically applied to the abdomen or upper buttock. They are designed to stay on even when showering or swimming. They have varied dosing, with some needing to be changed once a week, others twice weekly. However, you have to rotate where you wear the patch and there is a possibility of skin irritation. Bio-identical patches include Vivelle Dot, Alora, Climara, Menostar and Estraderm, which all are estradiol. With the exception of Menostar, which is approved for osteoporosis preven-

tion, these products are approved for a variety of menopause symptoms, including hot flashes and vaginal symptoms.

### Vaginal tablet

Less messy than a cream, Vagifem is an estradiol tablet inserted into the vagina via a disposable applicator. The general dose is one tablet daily for the first two weeks, followed by one tablet twice a week. It is bioidentical, and generally used only for relief of vaginal symptoms.<sup>8</sup>

### Injection

Before there were creams and vaginal pills, there was Delestrogen (estradiol valerate), an injection. Still available in the U.S., this form of estrogen is taken once every four weeks, and women are urged to discontinue or taper the dose at three- or six-month intervals. It is not, however, a bioidentical formulation.<sup>9</sup>

### Progesterone

To reduce the risk of endometrial cancer, progesterone is prescribed along with estrogen-only hormone therapy products. There are two forms of bioidentical progesterone currently available: Prometrium (oral capsule) and Prochieve (a vaginal gel).

*More information on menopause and hormone therapy is available in the National Women's Health Report, "Menopause: Hormone Therapy & Other Options," available online: [www.healthywomen.org](http://www.healthywomen.org), or by calling the National Women's Health Resource Center toll-free: 1-877-986-9472.*

## Questions to Ask Your Health Care Professional

If you are considering using hormone therapy to treat menopausal symptoms, ask your health care professional these questions:

1. Why should I take hormone therapy?
2. Which hormone therapy delivery method is right for me?
3. Could you please review the term "bioidentical" with me?
4. What is the lowest dose of hormone therapy that I can take to relieve my symptoms?
5. How long should I take hormone therapy?
6. What side effects are possible with this medication?
7. What are the risks associated with this medication?



**Bioidentical Hormones**  
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## Start with Your Symptoms

The new approach to hormone therapy is to focus first on the symptoms, then match the treatment for the specific symptom that is affecting your quality of life. For instance, if your primary symptom is vaginal dryness, you might try a vaginal ring, cream, or gel. If your primary symptoms are hot flashes and night sweats, hormone therapy in oral, patch or gel form are options. If your primary symptom is mood swings, your health care professional might recommend one of the antidepressants shown to also relieve hot flashes, like venlafaxine (Effexor) or other antidepressant medications.

Experts also recommend that if you do use hormone therapy to relieve your menopausal symptoms, you start on the lowest possible dose, gradually increasing it until you're comfortable, and use it for the shortest amount of time necessary.

## References

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- 3 EstroGel [package insert]. Marietta, GA. Solvay Pharmaceuticals, Inc.; 2004.
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- 6 Femring [package insert]. Rockaway, NJ: Warner Chilcott; 2004.
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## Resources

### American College of Obstetricians and Gynecologists

409 12th Street, SW  
Washington, DC 20090-6920  
202-863-2518  
[www.acog.org](http://www.acog.org)

Provides expert information and education on women's health conditions.

### American Menopause Foundation

350 Fifth Avenue, Suite 2822  
New York, NY 10118

[www.americanmenopause.org](http://www.americanmenopause.org)  
Provides individualized support and assistance on all issues concerning menopause.

### National Institutes of Health Menopausal Hormone Therapy Information

[www.nih.gov/PHTindex.htm](http://www.nih.gov/PHTindex.htm)

Lists resources and links on hormone replacement therapy, women's health and menopause.

### National Women's Health Resource Center, Inc.

157 Broad Street, Suite 315  
Red Bank, NJ 07701  
1-877-986-9472

[www.healthymenopause.org](http://www.healthymenopause.org)

Provides a wide range of health and menopause-related materials.

### North American Menopause Society

PO Box 94527  
Cleveland, OH 44101  
440-442-7550

[www.menopause.org](http://www.menopause.org)

Consumer information includes the *Menopause Guidebook*, available online and via mail.

### National Association of Nurse Practitioners in Women's Health

503 Capitol Court, NE, Suite 300  
Washington, DC 20002  
202-543-9693

[www.npwh.org](http://www.npwh.org)

Provides consumer information about various women's health issues.