



# APOTHECARY OPTIONS

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## Frequently Asked Questions about Bioidentical Hormone Replacement Therapy (BHRT) for Women

Our bodies contain an estimated 60 trillion cells that all must communicate with each other. These cells respond to a special language that is orchestrated by our hormones. Hormones travel throughout the body and enter cells through receptor sites located on the cells. When a hormone attaches to a receptor, it is similar to a key opening a locked door. Once inside the cell, the hormone gets to work, flipping switches and pulling levers that regulate mental and physical functions throughout the body. Hormones exist in harmony with each other. When our hormone levels are balanced in the right proportions, the body is happy and stable. When balance is lost, we become more susceptible to disorders and diseases (both physical and mental). Hormone imbalance occurs in women and men and is associated with every major disease that plagues Western society (cancer, heart disease, osteoporosis, and diabetes). Some medical experts theorize that hormone imbalance is a contributing factor in depression and certain types of mental illnesses.

### Hormone Imbalance in Women

**Irregular menstrual cycles and PMS**  
**Breast and Uterine Cancer**  
**Endometriosis and uterine fibroids**  
**Depression, migraines, insomnia, anxiety**  
**Fibromyalgia, chronic fatigue**  
**Osteoporosis**  
**Decreased Libido**  
**Thyroid problems**  
**Weight gain (especially at the waist & hips)**  
**Immune disorders (lupus, rheumatoid arthritis)**

### Hormone Imbalance in Men

**Prostate Cancer**  
**Diabetes**  
**Decreased Libido**  
**Osteoporosis**  
**Increased body fat**  
**Deterioration in work performance**  
**Depression**  
**Metabolic Syndrome**  
**Insomnia**  
**Anxiety**

### ■ **What is Bioidentical Hormone Replacement Therapy (BHRT)?**

Bioidentical Hormone Replacement Therapy means that the chemical make-ups of the replacement hormones are **exactly the same as what your body produces naturally**. The hormones used are processed from wild yam and soybean plants and while they are not “human” in origin, they are **identical** in structure and function to the hormones our bodies produce. When describing natural hormones, the word “natural” refers to the structure of the hormone, not the source -- Horse estrogen (a major component of Premarin®) exists in nature but it is not natural to a woman’s body. The natural hormones we use in our preparations are indistinguishable from those the human body produces. Another name for BHRT is **Natural Hormone Replacement (NHRT)** - the terms are used interchangeably. No two women are alike. The value of BHRT is that it is tailored to **your** individual body and hormone levels. With the help of your prescriber, you can start and maintain a **low-dose** replacement regimen that closely mimics your own body physiology and allows for changes as you grow older.

### ■ **Why should women consider BHRT?**

From puberty to menopause, women experience the ebb and flow of hormones within their bodies. As a woman makes the transition from the reproductive to the non-reproductive stage of her life, her body undergoes some significant hormonal changes. Her hormone levels may become imbalanced and

menopausal symptoms (hot flashes, night sweats, weight gain, depression, anxiety, mood swings, vaginal dryness, painful intercourse, and sleep disruption – to name a few!) may occur. Long-term, these same imbalances may lead to an increased risk of heart disease, osteoporosis, Alzheimer's, and certain cancers. Think of a woman's hormones as a rapidly spinning child's top. As a woman ages, the top begins to slow down as her hormone levels begin to drop. Eventually the top will begin to wobble which correlates to physical symptoms indicating that "the change" in life is beginning to occur. Finally, the top will stop and the woman has now entered menopause. Hormone replacement therapy is an attempt to minimize the wobble effect. The wobble effect can begin in some women as young as age 35.

As women approach menopause they are faced with a difficult choice – whether or not to take hormone replacement. Without it, many will experience the discomfort of menopause. On the other hand, taking synthetic hormones may actually increase the risk of breast cancer, heart disease, and stroke, as well as cause other undesirable effects. This was the conclusion of the abruptly discontinued Women's Health Initiative (WHI) study (**read further for more specific information on the WHI study**). Over the last forty years, millions of women have essentially been asked to "gamble" with their health because until recently there have only been two choices available – take synthetic hormones or don't take anything.

Today, women are not willing to accept the risks associated with synthetic hormones, and are searching for safer alternatives. ***Bioidentical Hormone Replacement is the process of responsibly looking at a woman's hormone imbalance and returning it back to more normal levels by using the body's own natural hormones, in dosages that alleviate symptoms but do not provide unneeded excess.*** Bioidentical hormone replacement is the first medically accepted alternative to synthetic hormone replacement and greatly improves a woman's odds of winning the health gamble.

#### ■ What are the reported beneficial effects of BHRT?

Hormone replacement therapy won't make a woman young again, but restoring estrogen, progesterone, testosterone, and DHEA to more youthful balance may result in significant improvements in how young a woman looks and feels, how well her mind and body functions, and how long she lives. Other reported beneficial effects include:

- Increased bone density (increased bone metabolism) and bone strength - a result of estrogen balance combined with a proper diet and weight bearing exercises.
- Reduced hot flashes and night sweats.
- Reduction in vaginal dryness and thinning – less painful intercourse.
- Protection against heart disease and stroke. Improved cholesterol metabolism.
- Improvement in overall skin condition and increased wound healing.
- Reduced risk of endometrial and breast cancer – when compared with synthetic hormones.
- Improved mood and fewer mood swings. Reduced risk of depression.
- Better sleep. Less fatigue and more energy.
- Improved libido (sex drive) and sexual enjoyment.
- Improved concentration and memory. BHRT may also provide protection against senility and Alzheimer's disease (November 2002 study – Journal of the American Medical Association - JAMA)

#### ■ What are the goals of BHRT?

- Re-establish natural hormonal balance and regain the health protective benefits that were originally provided by naturally occurring hormones when you were younger – while avoiding undesirable effects of synthetic hormones.
- Alleviate symptoms caused by the age-related natural decline in production of body hormones – by using the lowest physiologic dose needed to control symptoms without producing side effects caused by excess hormones.

Hormone imbalance also occurs in men. Men can learn more about the benefits of natural testosterone replacement by visiting our website

⇒ [www.apothecaryoptions.com](http://www.apothecaryoptions.com)

## ■ What was the Women's Health Initiative (WHI) study and why was it cancelled?

The WHI study was a multi-part, placebo-controlled, clinical study administered by the National Institutes of Health (NIH). The study was designed to look at the effect of a combination of estrogen and progestin on cardiovascular risk and to assess the overall risk-to-benefit ratio of this combination. Over 16,000 postmenopausal women between 50 and 79 years of age took part in the study. Half of the participants received a standardized dose of Prempro<sup>®</sup>; containing 0.625mg of conjugated equine estrogen plus 2.5mg of medroxyprogesterone (a synthetic progestin) administered as a single daily tablet. The other half of the participants received a placebo or sugar pill. Follow-up was done on these patients for more than 5 years. The study was abruptly cancelled in July 2002 when researchers saw a higher risk of cancer, heart disease, and stroke in the patients taking the hormones versus those taking the placebo. The sudden termination of the study caused great concern with women around the world and compelled them to reconsider the risk/benefit issues of hormone replacement. Physicians became reluctant to prescribe hormones and many women stopped taking them altogether. However, even before the study was halted there was concern within the scientific community about significant design flaws in the trial itself.

### WHI Trial Design Flaws:

- The study used potent horse estrogen as a substitute for natural human estrogen. **It is called Hormone Replacement Therapy not Hormone Substitution Therapy.** Human hormones were available then but the study did not use them.
- There was no pre-enrollment saliva testing or blood level testing done to determine the degree of imbalance the women were experiencing. Not all women are deficient in estrogen.
- The study patients were subjected to a "one-dose-fits-all" drug regimen. Since all women in the trial received the same dose, many women received MUCH more drug than they needed. The WHI researchers themselves concluded, "*The results of the study do not necessarily apply to lower dosages.*" In fact, shortly after the study was cancelled, Prempro's manufacturer applied for and was granted approval by the FDA to make a lower-dose version of the drug combination. The new product is called Prempro Lo<sup>®</sup>. Interestingly, full-strength Prempro<sup>®</sup>, and its component parts Premarin<sup>®</sup> and Provera<sup>®</sup>, are all still available and continue to be marketed and prescribed today for many women.

### WHI Trial – More Questions than Answers?

- Vast experience shows that standardized estrogen/progestin dosage regimens result in a significant percentage of patients receiving too much estrogen – as compared with the highly individualized approach used with BHRT.
- The study used synthetic progestin instead of natural progesterone. Synthetic progestin has been implicated in previous studies to cancel many of the heart-protective effects of estrogen, whereas natural progesterone does not.
- The researchers state that transdermal (applied topically) estradiol (a natural hormone) with natural progesterone more closely resembles normal sex hormones in physiology and metabolism than an orally administered horse estrogen/progestin combination.
- The WHI researchers admitted that because the study employed a multi-drug regimen of estrogen and progestin they could not distinguish whether it was the horse estrogen component or the progestin component that caused the increased incidence of heart disease, breast cancer, and/or stroke.
- The WHI researchers did not account for lifestyle & dietary influences when interpreting the study data. For instance, menopausal women who drink alcohol (2 drinks or more per day) and take hormone replacement therapy (HRT) have twice the risk of breast cancer than other women.

Why is it that from puberty until menopause, a healthy woman's body can make its own natural hormones without causing cancer, heart disease, or stroke? However, when synthetic hormones are used significant problems are observed? At age 65, men and women have almost the same risk of cardiovascular disease. Women who have had both ovaries removed in their late 30's have a cardiovascular risk similar to 65 year olds. Yet, the frequency of heart disease in women with intact ovaries before age 50 is low. How can this be explained? The common factor in a 65 year old woman and a younger woman whose ovaries have been removed, is that both women have reduced levels of estrogen and progesterone – these hormones are produced by the ovaries, and production declines significantly as a woman enters menopause. Younger women who are still producing balanced amounts of estrogen and progesterone have an overall lower risk of heart disease.

There was a second part of the WHI trial that only looked at Premarin® (not the combination drug Prempro®). This part of the study was also halted because it showed an increased risk of stroke with Premarin® (estrogen only) -- but no increased risk of heart attack. If natural estrogen and progesterone have protective effects on the hearts of younger women, and the estrogen-only portion of the WHI trial did not show any increased cardiovascular problems, it is reasonable to conclude that the cardiac problems associated with the first part of the WHI study must have been due to the synthetic progestin. In fact, previous studies have demonstrated that Provera® (the synthetic progestin found in Prempro®) actually causes a constriction of coronary blood vessels, restricting blood flow to the heart and putting women at an increased risk of having a heart attack. Cardiologists had thought this about Provera® for some time but never had proof. Natural progesterone does not cause coronary vessel constriction or cancel the cardiovascular protective effects of natural estrogen. Physician proponents of bioidentical hormone therapy believe that by returning a woman's natural hormone levels to more of a balanced condition the overall risk of cardiovascular disease can actually be reduced by as much as 50% in some women.

#### ■ **What about the risk of blood clotting and stroke with estrogen?**

Abnormal blood clots have been a concern since the early days of the birth control pill. Early formulations of "the pill" contained huge amounts of estrogen and were associated with a higher risk of blood clotting and strokes. Over the years, estrogen levels in oral contraceptives have been reduced and the risk of clotting is now much lower. Clearly, the more estrogen a woman takes, the higher her risk of developing blood clots. Premarin is very potent form of estrogen. It is understandable that women in the Premarin-only part of the study had more strokes because they were likely taking much more estrogen than they needed. An advantage of BHRT is a woman's ability to individualize a dose just for her. It does not take large doses of estrogen to correct imbalance and relieve menopausal symptoms. When dosed correctly, women can avoid the large doses of estrogen that are known to be problematic. Supplementing a diet with quality Fish Oil capsules and low dose Vitamin E has also been shown to decrease the risk of developing clots. Still, if you have a history of thrombophlebitis or thromboembolism you should consult with your prescriber and discuss the risks before starting any hormone replacement therapy.

#### ■ **What is the difference between Bioidentical Hormones and Synthetic Hormones?**

Synthetic hormones are drugs that have "hormone-like" effects in the body, but they are not exact copies of the human hormones. They do not interact with receptors exactly the way that identical hormones do. Synthetic ethinyl estradiol (found in Estinyl® and Femhrt®) has "estrogen-like" activity, and synthetic medroxyprogesterone (Provera®) has "progesterone-like" activity but they also can cause unwanted side effects such as blood clots, nausea, vomiting, and gallstones.

#### ■ **If natural hormones are so much better, why don't the drug companies market them instead of the synthetic drugs?**

It all has to do with patents and profits. Because they are created by Mother Nature, natural hormones cannot be patented; just as you cannot patent air or water. Patent protection gives the drug manufacturer exclusivity on the sales and profits of the patented drug. A single, patented drug can generate billions of dollars in revenue for a drug company. Synthetic hormones can be patented because they have been chemically altered in a laboratory and are not identical in structure to natural human hormones. With natural hormones, a drug company can only patent the way the drug is administered or delivered. A good example of this is the patent-protected transdermal patch for delivery of estradiol. The patch itself is patent-protected, but the natural ingredient, estradiol, is not.

#### ■ **What are the natural hormones used in BHRT?**

The primary hormones used to achieve balance are Estrogen, Progesterone, Testosterone, and DHEA.

#### ■ **What is Estrogen and what does it do in the body?**

Estrogen is not a single hormone but a "family" of hormones. There are approximately two-dozen estrogen substances produced by the human female. Our products are formulated using various combinations of the main estrogen substances: estrone (E1), estradiol (E2), and estriol (E3) depending on your needs.

Estrone (E1) is the estrogen most commonly found in increased amounts in postmenopausal women. It performs functions similar to estradiol but is much less potent. In premenopausal women, estrone levels are generally similar to estradiol levels. In menopausal women, estrone levels are usually higher.

Estradiol (E2) is the most potent of the three estrogens, and is most responsible for improvement of hot flashes, increasing mental acuity, and improving memory. Estradiol alone may not adequately relieve vaginal dryness. Combining estradiol with estriol (E3) is usually very effective for vaginal dryness.

Estriol (E3), which is the least potent of the three substances, plays an important role in keeping estradiol under control and is thought to be anti-cancer causing. In European countries, doctors have been using estriol as a hormone replacement drug for over fifty years. High levels of estriol are found in vegetarian and Asian women (largely because of soy products in their diets) – both of these groups have a lower risk of breast cancer. Interestingly, when Asian women move to the US, Canada, or Europe, their risk of breast cancer soon rises -- one reason for this is that soy in their diet decreases significantly. Estriol is also active in relieving vaginal dryness and atrophy, both of which can predispose a woman to vaginitis and bladder infections. Triple-estrogen (Tri-Est) products contain estriol, estrone, and estradiol in a ratio that mimics Mother Nature's own recipe. Bi-estrogen (Bi-Est), which is popular with many prescribers, contains estriol and estradiol and eliminates estrone (estradiol is converted to estrone in the body).

■ **Aren't there any commercially available natural estrogens?**

Yes. Estrace® contains natural estradiol. Estrace® is an immediate-release oral tablet that is quickly metabolized by the liver to estrone. Immediate-release means the entire amount of hormone is released at once – this does not mimic the gradual release from the ovaries. The popular, but expensive, transdermal patches contain 100% estradiol and provide a nice gradual delivery of estrogen. What's lacking is the balancing effects of the other estrogens. Unfortunately, many women experience skin irritation from the adhesive material used in the patches and some women do not like the patch for aesthetic reasons.

■ **Isn't Premarin® considered a natural estrogen?**

Remember, when describing natural hormones, the word “**natural**” always refers to the structure of the hormone, not the source. You have probably heard by now that the word Premarin® is an acronym that stands for “**PRE**gnant **MAR**e's **urINE**.” Premarin® is extracted from concentrated horse urine. It contains estrone and equilin (horse estrogen) – which is natural if you eat hay, but it is foreign to a woman's body! Equilin is estimated to be eight times more potent than human estrogen in the human body. Premarin® was the estrogen product used in the WHI trial and all women were given the exact same dose – this was an excessive amount of estrogen for many of the participants.

■ **What about the risk of breast cancer and uterine cancer associated with estrogen?**

There is a risk of breast cancer and uterine cancer in women who take high doses of estrogen, without the balancing effects of natural progesterone. This risk can happen with both bioidentical estrogen and synthetic estrogen. The key is using a low dose and always balancing estrogen with natural progesterone. We only recommend balanced estrogen formulations that provide estrogen in the same natural ratios found in the body. This should not increase a person's risk of developing cancer when taken with natural progesterone. However, if your doctor has advised you not to use estrogen because you have a high risk for cancer, or you are a breast cancer survivor, you might benefit from a product made with 100% estriol. Estriol (E3) is the least potent of the three types of natural estrogen and has the shortest binding time to estrogen receptors. Low doses of estriol can help relieve vaginal dryness without putting you at an increased cancer risk – especially when prescribed with natural progesterone. Estriol has been used in Europe for many decades.

■ **What is Progesterone? Some women say this is the only product they use. Is this true?**

Progesterone is produced by the ovaries and adrenal glands in women (men also produce progesterone). Progesterone is often called the “feel good hormone” because of its important role in brain function, mood enhancement, and anti-depressant activity. Optimum levels of progesterone can lead to feelings of calm and well-being, while low levels can result in feelings of anxiety, irritability, and even anger. Studies have

shown that women in their forties with a high level of their own progesterone have 1/5<sup>th</sup> the rate of breast cancer and 1/10<sup>th</sup> the rate of other cancers later in life when compared to women with low progesterone levels. Progesterone plays a role in maintaining the central nervous system, the sense of touch, and motor function. One of progesterone's major functions is helping keep "unopposed" estrogen in check, which is why you commonly see it prescribed in combination with estrogen. Adult women of all ages can benefit from progesterone supplementation. Keeping progesterone to optimum levels can help fight depression and anxiety, increase sexual libido, fight aging skin (wrinkles and brown spots), give you a better night's sleep, control acne, reduce thinning hair, and reduce hot flashes. Progesterone is also a natural diuretic agent and helps with bloating and water retention.

■ **Are there any commercially available natural progesterone products?**

Yes. Prometrium<sup>®</sup> is an oral product that contains micronized natural progesterone in a peanut oil base. Oral progesterone is extensively metabolized by the liver and is very sedating. Prometrium provides some degree of protection against unopposed estrogen; however, progesterone cream provides more of a sustained effect in the body. Do not take Prometrium<sup>®</sup> if you are allergic to peanut products.

■ **Is progesterone the same as medroxyprogesterone (Provera<sup>®</sup>)? What is a progestin?**

No. Many people, physicians included, do not realize that Provera<sup>®</sup> starts out in life as natural progesterone. Natural progesterone is then chemically altered by the manufacturer and turned into synthetic medroxyprogesterone so that it can be patented. Provera<sup>®</sup> is classified as a "progestin" which means it has "progesterone-like" effects, but it is not identical to natural progesterone. The body does not recognize it as being completely natural and that is why it causes side effects such as bloating, headaches, coronary vasoconstriction, and gallbladder disease that are not seen with natural progesterone.

■ **I have heard that natural progesterone alone is good for PMS symptoms. Is this true?**

Yes. PMS affects over 25 million women. It was once considered to be "in a woman's head," but now PMS is recognized as a real health problem. The PMS symptoms of anxiety, cramps, irritability, depression, headache, dizziness, and bloating usually occur within two weeks prior to menstruation and resolve shortly after the onset of menses. The cyclical nature of PMS is directly attributable to the hormonal changes that accompany the menstrual cycle. A higher level of estradiol and a lower level of progesterone have been observed in patients with PMS. Progesterone given on days 15-26 of the cycle, combined with dietary changes, exercise, and stress management has shown significant benefit in relieving PMS symptoms – one physician reports effectiveness in 95% of his patients with this therapy. Many women are choosing this natural option instead of using anti-depressant agents.

■ **Can natural progesterone help with endometriosis, fibroids, or fibrocystic breasts?**

One of the common factors involved in these conditions is a higher level of circulating estrogen relative to the level of progesterone. Progesterone helps to normalize estrogen activity within the body. It has shown to be beneficial in treating these conditions when taken regularly for 4-6 months.

■ **Can natural progesterone be used to treat Fibromyalgia Syndrome?**

New research suggests that Fibromyalgia syndrome can be worsened due to progesterone deficiency and estrogen dominance. One prominent researcher has been treating Fibromyalgia patients with therapeutic doses of progesterone cream and reports that the symptoms disappear within 6-12 months of therapy.

■ **What happens to my hormones during menopause that causes me to have to replace them with BHRT?**

With age, the body's ability to produce estrogen, progesterone, and testosterone declines. By the time you reach menopause, estrogen levels have dropped by 40-60%. This is just enough of a drop for you to stop menstruating. Progesterone levels on the other hand have dropped dramatically; down to near zero in some patients. All menopausal women can benefit from hormone balance. Some women may only need progesterone, while others may need progesterone plus a low dose of natural estrogen to help control hot flashes, mood swings, and vaginal dryness. Many women also need low-dose testosterone and DHEA supplementation to help alleviate fatigue, improve their brain function, and improve their sex drive.

■ **Do postmenopausal women or hysterectomized women still produce hormones?**

Yes. A hysterectomy can be described as "surgical" or "instant" menopause. Hysterectomy patients, who have had their ovaries removed, frequently require estrogen and testosterone supplementation following surgery to control hot flashes and vaginal dryness. However, even after their ovaries have been removed, women continue to produce estrogen in fat and muscle cells. For all women, the more body fat they have, the more estrogen they produce. Some obese women produce more estrogen after menopause than thin premenopausal women. There is recent information indicating that women who put on significant weight during perimenopause are twice as likely to develop breast cancer as women who maintain their weight. This is because of the significant amount of estrogen produced in the adipose tissue of heavier women and the lack of natural progesterone to balance it. Progesterone levels decrease dramatically during perimenopause and no production comes from adipose tissue.

■ **Will BHRT bring back my periods?**

The goal of replacement therapy is not to restore your periods. Your formula can be tailored so that you get the benefits of BHRT without periods. Menopausal women might notice some light spotting when they first begin using natural estrogen and progesterone; however, this usually subsides with continued use.

■ **I have had a hysterectomy. I was told all I need is estrogen. Do I also need progesterone?**

The original school of thought was to supplement estrogen with a progestin to prevent endometrial cancer. Since hysterectomy patients do not have a uterus, they cannot possibly develop endometrial cancer - Why would they need progesterone? The fact is, progesterone receptors are everywhere in your body. Just because your uterus is gone does not mean you no longer need progesterone. Natural progesterone participates in almost every physiologic process in the human body.

■ **What are the different ways that bioidentical hormones can be administered?**

**Topical:** This is also referred to as transdermal delivery. This preferred route is very popular because it mimics the natural secretion patterns of the ovaries. It is also the most cost effective way to deliver hormones. Because topical hormones bypass the liver metabolism, much lower doses are used topically to achieve the same effects when compared to oral administration. Topical creams are 5-10 times more potent than oral hormones. Your skin acts as a drug reservoir and the natural hormones are gradually released into your blood, which mimics the secretion of hormones from the ovaries. Topical administration reduces the burden of the liver in metabolizing the drug. This may decrease the potential for liver problems that are associated with oral synthetic hormone replacement.

**Oral:** Bioidentical hormones can be taken orally. One problem is that oral hormones are quickly and extensively metabolized by the liver. Oral hormones can also stimulate the production of binding globulins that render the hormones inactive. If taken orally, hormones should be prepared as slow release capsules or oil capsules. Slow release capsules allow the hormone ingredients to be gradually released into the bloodstream over an 8-10 hour period. This helps mimic the natural secretion that occurs from the ovaries. Oil-filled capsules are theorized to be absorbed directly into the lymphatic system thus bypassing extensive liver metabolism.

**Sublingual:** Concentrated drug (either in the form of a tablet or liquid) is administered under the tongue. The drug is absorbed quickly into the bloodstream and is an acceptable method of administration for some women. Sublingual delivery also has the advantage of bypassing the liver metabolism process. The disadvantage of sublingual administration is that it does not have a sustained effect in the body.

■ **If I choose topical administration, where are the best places to apply the topical creams and how frequently are they applied?**

You can apply creams to most areas of the body. Good application sites include the areas on top of the arm (between the wrist and elbow), and on the top of the thigh. Some prescribers recommend the creams be applied to the wrists, chest, stomach, neck, or vagina. We recommend that estrogen creams not be applied directly to the breasts. Our creams are concentrated so that they only need to be

applied to a small area – they are readily absorbed. Most women find that applying the creams once or twice daily works best and provides consistent hormone levels. We recommend that you rotate your application sites – do not just use the same site repeatedly. **After applying the cream, be sure to wash your hands and cover the skin area with clothing for 1-2 hours after application if you are going to be holding children or babies. This will prevent drug transfer from your skin to theirs.** If you use the cream vaginally, use it at least 6 hours prior to any sexual activity to prevent drug transfer to your partner.

■ **Does Apothecary Options use micronized hormones? What does ‘micronized’ mean?**

Yes. We use only micronized, pharmaceutical-grade natural hormone powders, and incorporate them into all of our products. Micronized powders have been specially processed and refined to the smallest particle sizes. Micronization of the drug in this manner allows for steady, even absorption, whether the medication is applied through the skin or taken by mouth. Our topical creams are further milled using a special German ointment mill, which produces a very elegant cream product that is easily absorbed into the skin.

■ **When will I notice maximum benefits?**

Although some women report immediate benefit, it may take a few months of use before maximum benefits are experienced – depending on your level of hormone imbalance. Your imbalance did not happen overnight and rebalancing your body requires patience. On your journey to hormone rebalance, you should start “low” and go “slow.” Keep track of your symptoms. Knowing what type of imbalance causes the symptoms will help you dial-in the individualized dose you need much sooner. When you start on replacement hormones, your dosage should be evaluated and adjusted periodically. Natural estrogen is not nearly as potent as horse estrogen or strong synthetics – but dosed correctly it can have a dramatic effect on controlling your symptoms and making you feel good again.

■ **What if I eat lots of Tofu or Yams?**

Asian women have higher levels of estradiol (E2) and a lower risk of breast cancer because of the soy content of their diet. However, genetic factors play a larger role in determining your risk factors. Dietary changes can certainly help with menopausal symptoms, but you will not get therapeutic amounts of hormones by eating yams or soy.

■ **What about Wild Yam Extract Cream?**

Some companies and health food stores are selling “wild yam concentrate” as a medicinal supplement. Don’t be scammed by yam creams. These products contain *diosgenin*. Your skin does not possess the chemical machinery required to convert diosgenin into useful hormones. Our progesterone cream contains pure, micronized, natural progesterone in measurable and exact concentrations.

■ **What kind of follow-up do I need to show that BHRT is working for me?**

The most important follow-up will be to regularly evaluate how you are feeling. Remember, the goal is to individualize your therapy and make you feel better. Use our Symptom Survey Log to track weekly changes in how you are feeling. Use the Symptom Log Answer Key to assist you in working with your prescriber to dial in a dose that works best for your body. Make sure that you discuss any proposed dosage changes with your prescriber. Symptom Surveys and Answer Keys can be downloaded for our website ([www.apothecaryoptions.com](http://www.apothecaryoptions.com))

You should continue the same type of routine check-ups and physical examinations with your prescriber that you are already doing. Regular cholesterol testing, bone density testing, mammography, pap smears, colon cancer screening, and cardiac testing are very important. If any of these tests show an unfavorable trend, then intervention with your prescriber is warranted.

■ **Will I put on weight by taking bioidentical hormones?**

Many women ask this question. High doses of estrogen can cause women to put on weight (especially at the hips). However, low, physiologic doses of estrogen, balanced with natural progesterone, DHEA, and testosterone will not cause you to put on weight. In fact, if you put on weight with BHRT, you are still not balanced. Imbalance results in weight gain.



■ **Is there some kind of laboratory test that can identify hormone imbalance?**

Yes. We recommend saliva testing. More than 95% of blood hormones in women and men are bound to specific proteins, which carry them throughout the bloodstream. The remaining amount represents your **free** (or *bioavailable*) hormones. As blood circulates around the salivary glands, your bioavailable hormones (those that are not bound by blood components) freely diffuse through the cells of the salivary gland and into the salivary ducts. Studies in the scientific literature have shown that there is a strong correlation between the levels of hormones found in saliva and the bioavailable levels of hormones found in the bloodstream and tissues. Only the free form of the hormone is physiologically active - meaning that it is readily available and can move throughout the body and into the cells of your organs and tissues to perform its designated functions.

Some common blood tests only measure total hormone levels - which is the sum of the protein-bound portion plus the non-protein bound portion. These blood tests are unable to distinguish how much is free and available, versus how much is bound and unavailable. Saliva testing is becoming recognized as a non-invasive, reliable, and accurate way to measure free hormone levels and test for hormone deficiencies. Saliva testing only measures unbound (**free**) hormone levels. Saliva testing is more accurate than blood testing for topically administered hormones -- the preferred method for hormone replacement. For more information on saliva testing, visit [www.salivatest.com](http://www.salivatest.com)

**How often should levels be checked?** Hormone levels should always be assessed initially to establish baseline levels and determine a starting point. If a patient wants to get started on BHRT right away, without any baseline levels, we suggest prescribing 3 months of therapy based on your symptoms. Start with a low dose, and then check saliva levels. Once hormone balance is achieved, check levels yearly. Check more frequently if the patient is still experiencing symptoms of hormonal imbalance.

**Women:** Check your Estradiol, Progesterone, Testosterone, DHEA, and Cortisol levels  
**Men:** Check your Testosterone, Estradiol, DHEA, and Cortisol levels

Hormones in saliva are very stable. Samples can be stored at room temperature for extended periods (a week or more) without any loss of activity. Samples are shipped to the testing facility by regular mail – there is no need for special refrigeration. Saliva testing is a covered benefit by some insurance companies – *check with the individual laboratory to find out specifics about insurance coverage*. Patients can avoid any insurance delays by paying the out-of-pocket cost of approximately \$30 per hormone level tested (this is about 70% less than the cost of blood testing). Apothecary Options recommends ZRT labs.

Hormone imbalance is associated with every major disease that plagues Western society (cancer, heart disease, osteoporosis, and diabetes). The goal of saliva hormone monitoring is to assess your level of imbalance and help determine whether hormone replacement therapy or another form of intervention is appropriate. If you are already taking hormones, testing will allow you to adjust your individual dosage, thus optimizing benefits while at the same time helping to minimize risks.

**Apothecary Options receives no kickback or financial reimbursement from the laboratory for recommending saliva testing**

<p><b>Aeron Lifecycles</b> (San Leandro, CA)</p> <p>1933 Davis Street Suite 310 San Leandro, CA 94577</p> <p>Phone (800) 631-7900 Fax (510) 729-0383</p> <p>e-mail: <a href="mailto:aeron@aeron.com">aeron@aeron.com</a></p> <p>website: <a href="http://www.aeron.com">http://www.aeron.com</a></p>	<p><b>ZRT Labs</b> (Beaverton, OR)</p> <p>1815 NW 169th Pl. Suite 5050 Beaverton, Oregon 97006</p> <p>Phone: 503 466-2445 Fax: 503 466-1636 <b>Hormone Hotline:</b> 503-466-9166</p> <p>e-mail: <a href="mailto:info@zrtlab.com">info@zrtlab.com</a></p> <p>website: <a href="http://www.salivatest.com">www.salivatest.com</a></p>	<p><b>BioHealth Diagnostics</b> (San Diego, CA)</p> <p>2929 Canon Street San Diego, CA 92106</p> <p>Phone: 1-800-570-2000 Fax: 1-800-720-7239</p> <p>e-mail: <a href="mailto:mailto:btimmins@biodia.com">mailto:btimmins@biodia.com</a></p> <p>website: <a href="http://www.biodia.com/">www.biodia.com/</a></p>
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■ **Why might I need testosterone? Isn't testosterone a hormone for men?**

Often called the “hormone of desire”, testosterone is produced by female ovaries and plays a role in maintaining sexual desire, energy level, sense of well-being, as well as the strength and integrity of skin, muscle, and bone. Testosterone was discovered more than sixty years ago, but only recently have we begun to understand its role in women. Women produce about 1/10<sup>th</sup> as much testosterone as men. There is a gradual drop in testosterone production in women beginning at age 30. Women who have had their ovaries removed have much lower levels of testosterone. Stress may also play a roll in decreased levels. A saliva test can help determine if testosterone supplementation is right for you. There are several convenient ways to administer low-dose testosterone. The most popular product for women is testosterone cream that can be applied directly to the external vaginal mucosa (labia and clitoris). Many women supplement with low-dose testosterone 2-4 times weekly with good results. We can also put a low daily dose of testosterone in our topical estrogen/progesterone cream formulations. Apothecary Options also makes a low-dose, natural testosterone sublingual tablet that can be dissolved under the tongue and is a preferred method of administration by many women. Natural testosterone for women is only available from compounding pharmacies such as Apothecary Options.

■ **What is DHEA?**

DHEA (or dehydroepiandrosterone – Now you know why people call it DHEA!) is a natural steroid hormone that is produced by the adrenal glands, brain, and skin, and is the most abundant steroid in the body. DHEA levels rise steadily through puberty and then peak around age twenty-five to thirty. After age thirty, levels decline at a rate of about 2% per year. DHEA is currently the focus of much interest because it is thought to be a potent protector against cancer, helps fight fatigue and depression, improves memory, strengthens the immune system, reduces body fat, protects us from diabetes and autoimmune diseases, and enhances our feelings of well-being. Oral DHEA is available without a prescription. Some people find its effects too strong and somewhat unpredictable when taken orally. Topical DHEA is very effective and lower dosages can be used. Saliva testing will show if you are low in DHEA. We can add it to your tailored replacement regimen.

Dr. David Zava – founder of ZRT labs in Oregon, has done some outstanding work looking at hormone profiles of women and men and how they correlate with specific cancer risks. The following table is a summary of his findings

<b>Analysis of Hormone Profiles and Risk of Cancer</b>	
<b>Increased Risk of Breast Cancer in Women</b>	<b>Increased Risk of Prostate Cancer in Males</b>
High Estradiol (E2)	High Estradiol (E2)
Low Progesterone	Low Progesterone
High Testosterone	Low Testosterone
Low DHEAS	Low DHEAS
High Night Cortisol	High Night Cortisol

From the book What Your Doctor May Not Tell you about Breast Cancer by John Lee and David Zava

■ **How long should I take natural hormone replacement?**

That is a quality of life issue only you can answer. The osteoporosis prevention benefits of estrogen stop when you stop using estrogen. For that reason, many women continue using low-dose BHRT well into their senior years. Women that have achieved hormone balance look great and they say they feel better than ever. They are happy and healthy and do not have any plans to stop using low-dose BHRT!

## ■ What else can I do to help my menopausal symptoms improve?

- Do regular, weight-bearing exercise for at least 30 minutes, three or more times a week.
- Stop smoking. In addition to well-known associations with heart disease, lung disease, and cancer, smoking has an anti-estrogenic effect, which can worsen menopausal symptoms.
- Maintain your ideal body weight. Overweight women have more hot flashes than thin women do.
- Maintain an active circle of friends. Find time to relax and enjoy life. Look for ways to redirect stress.
- Maintain a diet high in fiber, with good sources of protein (including soy), whole grains, fruits, vegetables (especially cruciferous vegetables that are high in indole-3-carbinol or I3C), and low in fat.
- Decrease your salt and sugar intake and try to limit caffeine & alcohol consumption. Alcohol, caffeine, and high carbohydrate diets have estrogenic effects that can worsen estrogen dominance symptoms.
- Take a multi-vitamin + mineral product daily with antioxidants + a good calcium supplement. Vitamin C (~1000mg /day), Vitamin E (~200u /day), Magnesium (~300mg/day) & Vitamin B-6 (~50mg/day) are particularly helpful for controlling menopausal and premenopausal symptoms.

## ■ Do Bioidentical Hormones require a prescription?

Yes, a prescription is required. Many over-the-counter (OTC) products are advertised in such a manner that you might think they contain estrogen or other natural hormones. Read the labels of these products closely. There is currently no legal OTC estrogen or testosterone product. Over-the-counter “estrogen” products actually contain phytoestrogens. Phytoestrogens are plant substances that do have some estrogen-like effects but they are not the same as natural estrogen. At best, phytoestrogens have 1-2% of the potency of natural estrogen. In the United States, natural Tri-Est and Bi-Est and natural testosterone are available only with a prescription. Natural progesterone, on the other hand, is available without a prescription in low concentrations. There are some good OTC progesterone creams, but unfortunately, there are also creams that are contaminated with estrogenic substances. Our prescription-strength progesterone cream is more concentrated than the health food store variety and it will save you money. Moreover, we know what’s in it! Prescription-strength progesterone cream may be covered on your insurance. A physician, nurse practitioner, or physician assistant can prescribe BHRT for you. Because of our experience with BHRT, many prescribers will sign a prescription based on our recommendation.

## ■ Will my insurance pay for BHRT?

Many insurance companies reimburse for prescription compounded hormone products - we estimate that >75% of our patients are reimbursed for our products. We do not bill insurance companies directly. We give our patients a detailed and completed claim form that they simply sign and submit to their insurance company for reimbursement. We learned early on that one of the ways we are able to keep our prices affordable for all patients is by not haggling with insurance companies over reimbursement issues. A 90-day supply of our BHRT combination cream (Bi-Est, progesterone, testosterone, DHEA) costs less than \$30 per month. This is less than your total co-pay if you had to get two different prescriptions. Many insurance companies are realizing the benefits (and cost-savings) of BHRT. If you have questions about benefit coverage, they are best answered by speaking with the benefits coordinator at your insurance company. Tell that person that you are getting a compounded prescription and you would like to know the steps necessary for being reimbursed.

## ■ I am 47 years old, and having menopausal symptoms (hot flashes, night sweats).

You are probably experiencing perimenopause and your symptoms could be caused by what is referred to as **estrogen dominance**. This condition is characterized by fluctuating levels of estrogen combined with low levels of progesterone. The natural decline in your own progesterone production makes it worse. You should have a saliva test to determine your level of imbalance and establish baseline levels. Start on natural progesterone (you may get more immediate benefit from the sustained release capsule formulation). Try taking progesterone initially during the last 12-15 days of your cycle (usually days 12-26). If after a couple of months you still are experiencing symptoms such as vaginal dryness or a lack of sex drive, you might consider adding low-dose testosterone and/or low dose Bi-Est or estriol (E3) cream applied topically or vaginally. Many women with vaginal dryness (a good indicator of estrogen deficiency) and low sex drive experience great benefit with a cream containing Estriol (E3), low dose testosterone, and low-dose progesterone applied externally to the vaginal area.

■ **I am 56 and was previously taking hormone replacement but stopped after the WHI results.**

Have saliva testing done to establish a baseline. Hormone level testing will help identify your level of balance/imbalance and determine which hormones are deficient and should be replaced. Test your estradiol, progesterone, and testosterone levels. Replacement should provide physiologic dosages that control symptoms but do not provide unneeded excess. In some women, natural progesterone is all they need to control their symptoms. However, for many women in their 50's, progesterone supplementation works well for a few months and then they report a plateau and a return of their menopausal symptoms. This is likely due to a phenomenon known as "down-regulation" of estrogen receptors by progesterone. For these women, daily doses of progesterone without interruption can cause a decrease in the quantity and sensitivity of estrogen receptors in their body. The progesterone is essentially blocking their own estrogen's effects and contributing to a return of menopausal symptoms. There are certain medical conditions such as endometriosis and uterine fibroids where down-regulation of estrogen receptors by progesterone is desirable -- excessive estrogen production plays a role in both of those conditions and blocking estrogen receptors with larger doses of progesterone is often beneficial. However, progesterone used as a single agent to control menopausal symptoms, in postmenopausal patients, is not always effective and women should not use progesterone every day without taking a break from it or varying the dosage. Women in their fifties will usually benefit more from a formulation that contains balanced estrogen, progesterone, and/or testosterone supplementation.

■ **I am 68 years old and feel that I could benefit from a small amount of hormone replacement. What do you suggest?**

Older women should also have saliva testing done. We have many women your age and older who are feeling great by using a topical cream formulated with a low dose of natural estrogen (Tri-Est, Bi-Est, or plain estriol), progesterone, and testosterone. We can put all of your replacement hormones into one cream formulation that it is easy to apply and very affordable.

■ **How can I get my prescriber to write a prescription for BHRT?**

Prescribers only recommend what they know best, and while some physicians, nurse practitioners, and physician assistants are becoming familiar with BHRT therapy, many others are not. Educate yourself completely about natural hormones before talking with your physician or prescriber. Take an extra copy of this information to share with them as well as a completed Symptom Survey Tool and Answer Key. Our pharmacists can also make a personalized recommendation for you that you can discuss with your prescriber

### Quick Reference Guide for BHRT

Hormone	Premenopausal	Perimenopausal	Menopausal	Postmenopausal
Natural Estrogen	Usually not needed	<u>Lowest dose</u> needed to control menopausal symptoms – if a trial of progesterone alone is not effective	<u>Lowest dose</u> needed to control menopausal symptoms	<u>Lowest dose</u> needed to control menopausal symptoms
Natural Progesterone	Needed for PMS (days 14-25 only)	Replacement is frequently needed	Replacement is frequently needed	Replacement is frequently needed
Natural Testosterone	Usually not needed	Occasionally needed for sex drive (low dose)	Occasionally needed	Occasionally needed

## A final word about Bioidentical Hormone Replacement

By choosing natural hormone replacement over conventional replacement therapy, you are personally deciding to take control of your hormone imbalance. You have determined that you want a natural regimen that is customized for your individual needs. You are not interested in the “one-dose-fits-all” philosophy of replacement to which so many women are subjected.

With conventional HRT, a woman typically sees her prescriber and then is given a standard hormone prescription - with instructions to come back in a year for a follow-up appointment. It is estimated that only 20% of women started on HRT in this manner remain on it two years later. Some women experience side effects (weight gain, bloating, and breast tenderness) that are worse than their menopausal symptoms. Because they cannot fine-tune their hormone therapy, they elect instead to discontinue treatment.

### **Women with balanced hormones live longer than women with unbalanced hormones.**

The approach to BHRT is highly individualized. Two women can have identical saliva or blood hormone levels, yet their replacement needs can be very different based upon their symptoms. What works for you may not work for your best friend or even your twin sister! By choosing BHRT, you are saying that you are going to listen to what your body is telling you. You are going to learn as much as you can about how your hormones work and how they interrelate with each other. You are going to evaluate your symptoms regularly – keeping logs or journals as necessary. You will learn to recognize the signs and symptoms of hormone excesses and deficiencies - and how to work with your prescriber to correct those imbalances. Remember, even the most skilled prescribers can never be expected to guess what your exact replacement needs will be -- that is why correlating symptoms to saliva testing results is the best way to get started on BHRT.

## Would You Like More Information? Internet Resources

### ✓ [www.womeninbalance.org](http://www.womeninbalance.org)

Women in Balance is a national, non-profit organization comprised of women, doctors, health care professionals, national organizations and their members dedicated to supporting safe, effective and natural solutions for women's health issues in general and for the menopausal transition in particular. Women in Balance promotes safer, natural, and more effective approaches for alleviating menopausal symptoms and creating optimal health. The site contains very good scientific information regarding bio-identical hormone replacement

### ✓ [www.salivatest.com](http://www.salivatest.com)

ZRT Laboratory was established in 1998 and is independently owned and operated by David T. Zava Ph.D. a biochemist and breast cancer researcher. Dr. Zava developed saliva testing as a simple non-invasive, inexpensive way to identify hormone imbalances associated with diminished health and wellbeing. It is the mission of ZRT Laboratory to educate the public and health care professionals about the importance of Hormone Balance in maintaining optimal physical and mental wellbeing. This website is a great resource for men and women who would like more information on hormone balance, cancer resources, and help finding a prescriber in your area who is experienced in BHRT. ZRT laboratory has a 24-Hour Hormone Hotline (503-466-9166) where you can listen to a variety of audiotapes on hormone balance and Bioidentical Hormone Replacement. ZRT also has physician consultants that can help prescribers interpret saliva test results and make dosing adjustments.

### ✓ [www.project-aware.org](http://www.project-aware.org)

Project Aware is a website by women, for women. The website offers objective and comprehensive health information, especially related to menopause, perimenopause, and postmenopause.

### ✓ [www.hystersisters.com](http://www.hystersisters.com)

HysterSisters Hysterectomy Information and Support website provides women with resources, information, discussions, and support for their hysterectomy needs. HysterSisters is a "women to women" website. This website is a good resource for women who are contemplating a hysterectomy, as well as those who have already undergone the procedure.



# APOTHECARY OPTIONS

## Consultation Services

Our Pharmacists are available to consult with you **free-of-charge** regarding any of our products.

Our toll free number is 1-866-586-4633

**Please note: Women who are requesting BHRT consultation must have a completed BHRT Confidential Medical History Form and a completed Symptom Survey on file prior to any consultation services.** Forms can be downloaded from our website ⇒ [www.apothecaryoptions.com](http://www.apothecaryoptions.com)

Due to the large number of consultation requests, it is usually necessary to consult with patients before or after our normal business hours or via e-mail.

**If you are considering hormone replacement, gather as much information as you can and learn about all the options available to you. Talk with your prescriber, and then make an informed decision about what is best for your body.**

[www.apothecaryoptions.com](http://www.apothecaryoptions.com)

Hormone	Deficiency Sign	Excess Signs
<b>Estrogen</b>	Vaginal Dryness, hot flashes, night sweats (vasomotor symptoms), vaginal atrophy, less fullness of the breasts, urethritis/urinary incontinence, painful intercourse, dry skin, lack of mental sharpness, osteoporosis, interrupted sleep,	<b>Rapid Weight gain (especially at the waist/hips), breast tenderness, migraines and headaches, water retention (puffiness), uterine fibroids, anxiety/panic attacks, heavy periods, nausea, fatigue, tingling of fingers (pins &amp; needles). Excess estrogen can also suppress the activity of the thyroid gland.</b>
<b>Progesterone</b>	PMS, depression, anxiety, poor sleep; early AM waking, irregular periods	Dizziness, somnolence, acne, bloating and edema. Adequate progesterone helps the thyroid gland.
<b>Testosterone</b>	Depression, fatigue, decreased libido, osteoporosis, decreased immunity, lack of muscle tone/strength, poor overall sense of wellbeing	Acne, oily skin, Rosacea, aggressiveness, increased sex drive, hair loss, anxious mood, rage, weight gain at the waist, high triglycerides, polycystic ovary syndrome
<b>DHEA</b>	Fatigue, depression, decreased immunity, autoimmune diseases, decreased sense of wellbeing	Acne, hair loss Adequate DHEA helps with high cortisol levels
<b>Cortisol</b>	Chronic fatigue, allergies, asthma, susceptibility to illness and infection, arthritis, fibromyalgia	<b>Sleep Disturbances, Muscle and bone loss, abdominal fat, elevated blood sugar, sugar craving, insulin resistance, high blood pressure, decreased libido, feeling of being “burned-out” impaired memory, irritability</b>