

Bioidentical Hormones

The Future for the Women in you

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For too long, we have ignored the importance of hormone balance. Now, we know that the common thread in many female hormone diseases is a little known condition known as estrogen dominance. The underlying problem is a relative excess of estrogen and an absolute deficiency in progesterone.

Here are some typical complaints from patients having estrogen dominance:

* My breasts are swollen and getting bigger.

* I can't put on my rings on my fingers.

* I am more impatient now than ever.

* People tell me I am too bossy.

* I am getting cramps again like when I was younger.

* I just cannot have my period.

* I miss my periods regularly.

* My periods come irregularly.

* I get scared when I see large clots during my period.

* I have Pre-Menstrual Syndrome (PMS).

* When I get a hug, my breast hurts.

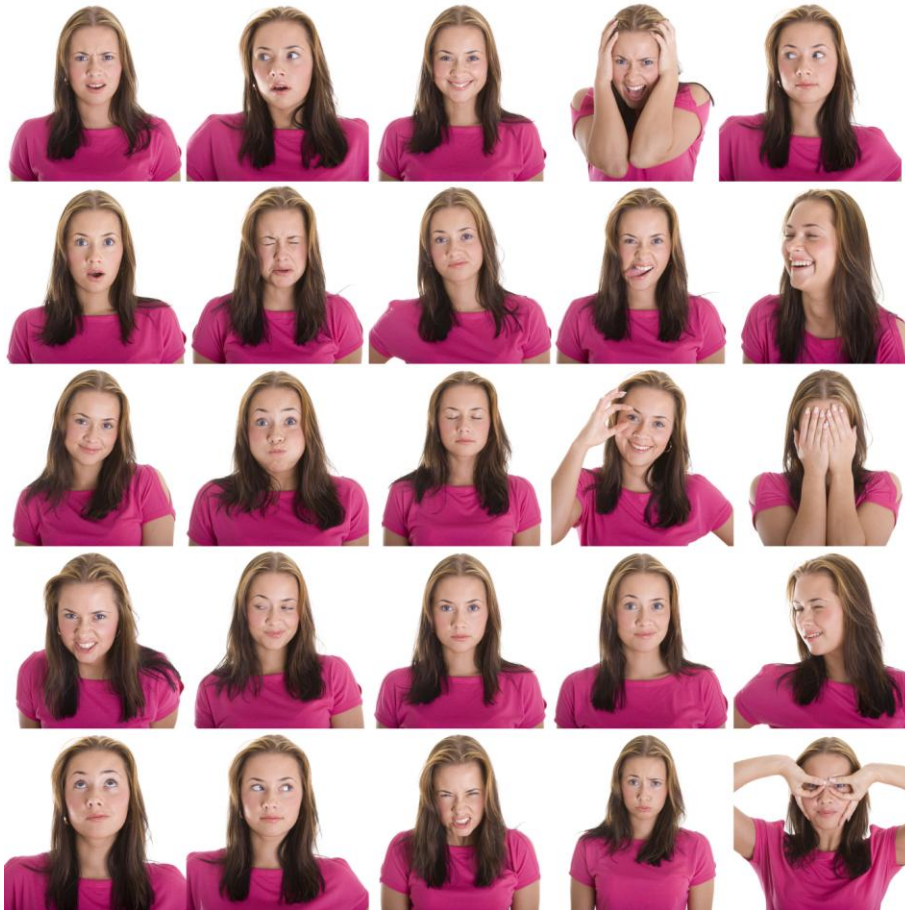
* I have fibroids.

* I have endometriosis.

* I cannot fit into my shoes.

* I have a cyst in my breast.

* I feel tired all the time.



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Before we look at estrogen dominance in more detail, let us first review the basic menstrual cycle and the key female hormones:

Overview of a "Normal" Menstrual Cycle

The menstrual cycle is like a fine-tuned symphony, a fascinating interplay of hormones and physiological responses played out in the orchestra of our magnificent body. Mother nature prepares us for a potential pregnancy every cycle, whether or not you want to actually conceive. Let us take a tour of the normal 28-day cycle known as the menstrual cycle.

Menstruation (Day 1)

Day 1 of your cycle is defined as the **first full day of menstrual bleeding**. The uterine lining built up from the immediate preceding cycle is sloughed off and cleared away. Hormone levels from the previous cycle take a sharp decline. The result is a myriad of physical and emotional symptoms commonly associated with menstruation.

Pre-Ovulation (Day 2 -14)

The menstrual bleeding usually lasts a few days. From Day 2 on, the body is already starting to prepare itself for the next cycle. The ovarian follicle starts to manufacture and secrete estrogen. Estrogen causes the uterine lining to grow. The follicles also produce estrogen, the hormone necessary for ovulation to eventually occur. **The level of estrogen slowly rises during this period as the uterus lining thickens and starts its preparation to receive the egg if ovulation occurs.**

Ovulation (Day 14-15)

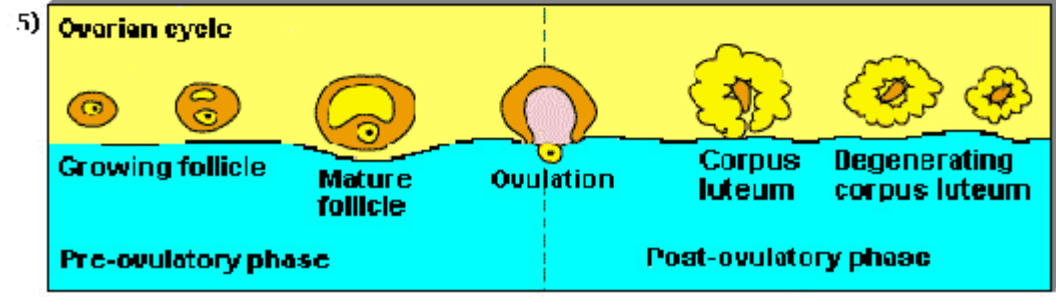
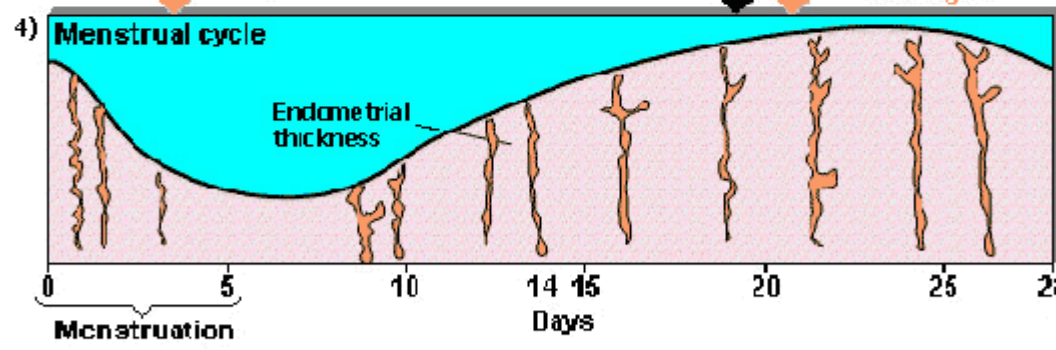
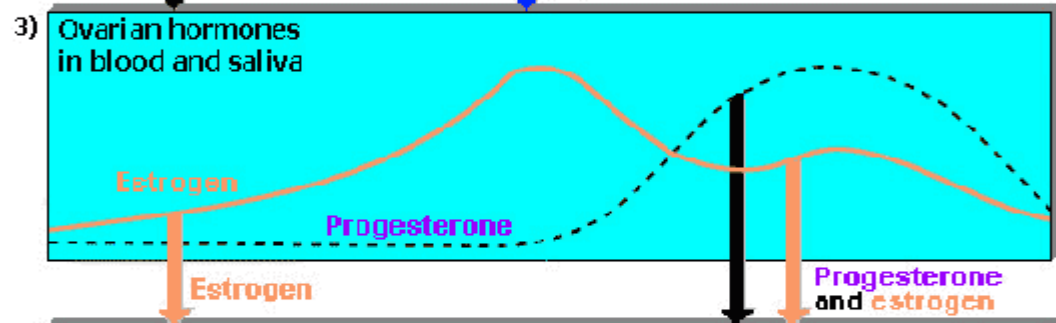
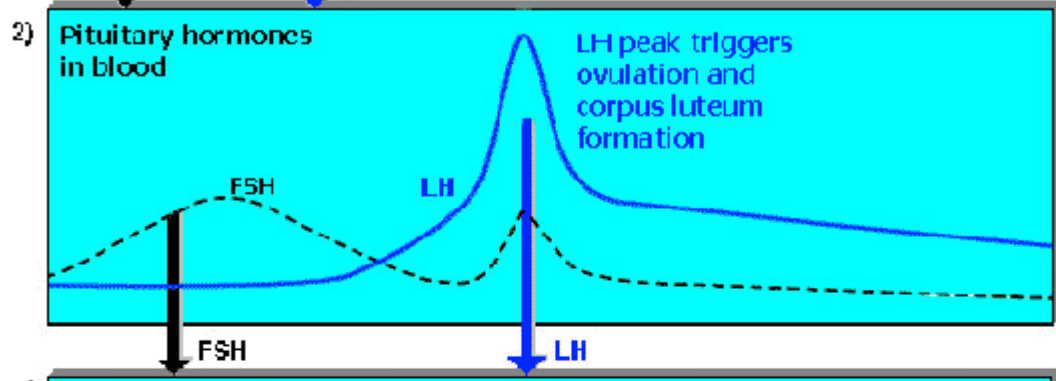
The high levels of estrogen will trigger an abrupt surge of Luteinizing Hormone (LH). It's this LH surge that causes the egg to literally burst through the ovarian wall, we call ovulation. After ovulation, the egg tumbles out into the pelvic cavity, where it is quickly transported into the fallopian tubes. The remainder of the ruptured follicle (called the corpus luteum) recedes back to the ovary and begins an important task of secreting progesterone. Why is progesterone so important? It causes an increase in blood vessels to the uterine lining in order to provide nutrients for the fetus in case fertilization occurs. It also inhibits other eggs from developing, and causes the Basal Body Temperature (BBT) to rise about half a degree.

Luteal Phase (Day 15-30)

The luteal phase is the period of time (usually 11-14 days) following ovulation. In simple terms, it is the **last 2 weeks of the menstrual cycle.**

The progesterone level reaches its peak on day 19-22, after which the level starts to fall if no fertilization took place. The progesterone in turn causes the basal body temperature to remain high throughout the luteal phase and after the 14th day. High progesterone levels are also responsible for "morning sickness" and other symptoms of pregnancy.

If the egg is not fertilized within 24 hours, the corpus luteum regresses and slows its progesterone production. After reaching peak production on day 19-22, the progesterone level starts its decline. Without progesterone's support of the rich uterine lining, menstruation begins as the slough begins and the uterus clears itself and prepares once again for the next cycle.



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Female Hormones

The two primary female hormones secreted by the ovaries are estrogen and progesterone. The properties of one offsets the other and together they are maintained in optimal balance in our body at all times. Too much of one hormone or the other can lead to significant medical problems.

Estrogen

Estrogen is produced in the ovaries. It softens the cervix and produces the right quality of vaginal secretion to allow the sperm to swim and to lubricate during intercourse. **It lifts our mood and gives us a feeling of well-being.**

Estrogen in our body actually is not a single hormone but a trio of hormones working together. The three components of estrogen are: estrone (E1), estradiol (E2), and estriol (E3). This is the combination worked out by Mother Nature as optimum for human females. Today, we use the word estrogen loosely to include also a family of hormones, including animal estrogens, synthetic estrogens, phytoestrogens (plant estrogens), and xenoestrogens (environmental estrogens, usually from toxins such as pesticides)

Progesterone

Without a proper amount of progesterone, there can be no successful pregnancy. It protects us against the "growth effect" of estrogen.

It is primarily made in the ovaries just before ovulation and increasing rapidly after ovulation. It is also made in the adrenal glands in both sexes and in the testes in males.

Estrogen Effect vs. Progesterone Effect

Progesterone acts as an antagonist to estrogen. For example, estrogen stimulates breast cysts while progesterone protects against breast cysts. Estrogen enhances salt and water retention while progesterone is a natural diuretic. **Estrogen has been associated with breast and endometrial cancers, while progesterone has a cancer preventive effect.**

Estrogen Effect	Progesterone Effect
Causes endometrium to proliferate	Maintains secretory endometrium
Causes breast stimulation that can lead to breast cancer	Protects against fibrocystic breast and prevents breast cancer
Increases body fat	Helps use fat for energy
Increase endometrial cancer risk	Prevents endometrial cancer
Increase gallbladder disease risk	
Restraints osteoclast function slightly	Promote osteoblast function, leading to bone growth
Reduces vascular tone	Restores vascular tone
Increase blood clot risk	Normalize blood clot

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Now that we have traveled the world of hormones, what do we do about it? **FIX IT**

Bioidentical hormone conversations are popping everywhere across all continents of the globe. But how much do we really understand?

After much researching and educating myself on Bioidentical hormones, I share my knowledge and personal experiences with you. They say the greatest teacher is yourself, and boy was I ever. For the last 5 years I began my quest to try and understand the imbalances women face. Our Mission should be to try and restore the balance that Mother Nature intended to preserve.

When our body begins to take a direction of its own, the path we have always been on becomes a lost territory. We become confused, scared, angry, frustrated and are not sure who to ask for directions. The internet becomes our GPS-but I am not sure that is always a good thing.



Bioidentical Hormones: ***The Future for the Women in you***

Estrogen Dominance

Estrogen and progesterone work in synchronization with each other as checks and balances to achieve hormonal harmony in both sexes. **It is not the absolute deficiency of estrogen or progesterone but rather the relative dominance of estrogen and relative deficiency of progesterone that is main cause of health problems when they are off balance.**

With the gradual drop in estrogen but severe drop in progesterone, there is insufficient progesterone to counteract the amount of estrogen in our body. ***This state is called estrogen dominance.*** **Many women in their mid-thirties, most women during peri-menopause (mid-forties), and essentially all women during menopause (age 50 and beyond) are overloaded with estrogen and at the same time suffering from progesterone deficiency because of the severe drop in physiological production during this period.**

Causes of Estrogen Dominance

Our body normally functions in perfect homeostasis. With the advent of society and industrial state in the past 70 years, our body has been subjected to **unprecedented insults from environmental estrogen-like hormones.** Worse yet, feeds laced with pesticides and hormones, both of which have estrogen-like activities, are routinely given to animals, which in turn is passed to humans.

Women in non-industrialized cultures whose diets are whole food based and are untainted with modern processed foods and pesticides seldom suffer a deficiency in progesterone and the signs of estrogen dominance manifested as menopausal symptoms.

12 of the most common reasons:

1. Commercially raised cattle and poultry.

These animals are **fed estrogen-like hormones** as well as growth hormone that are passed onto humans. Deep-sea fish such as halibut, sardines, cod, and mackerel are good to consume. Avoid all coastal fish and shellfish, which are high in contaminants. These **antibiotics can contribute to hormone disruptor exposure.** **Feeds used contain a myriad of hormone-disrupting toxins including pesticides, antibiotics, and drugs to combat disease when so many animals are packed closely together.**

2. Commercially grown fruits and vegetables containing pesticides.

Pesticide residues have chemical structures that are similar to estrogen. These are eventually passed onto humans. Produce with the **most** pesticides reported in *A Shopper's Guide to Pesticides in Produce* include **strawberries (contain vinclozolin, a known endocrine disruptor), bell peppers, peaches, apples, apricots, and spinach.** Foods with the **least** amount of pesticides include avocados, corn, onions, sweet potatoes, bananas, green onions, broccoli, and cauliflower.

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3. Exposure to xenoestrogen.

Petrochemical compounds found in general consumer products such as creams, lotions, soaps, shampoos, perfume, hair spray and room deodorizers. Such compounds often have chemical structures similar to estrogen and indeed act like estrogen. Other sources of xenoestrogen include car exhaust, petrochemically derived pesticides, herbicides, and fungicides; solvents and adhesives such as that those found in nail polish, paint removers, and glues; dry-cleaning chemicals; practically all plastics, industrial waste such as PCBs and dioxins, synthetic estrogens from urine of women taking HRT and birth control pills that is flushed down the toilet and eventually found its way into the food chain and back into the body.

4. Industrial solvents. These chemicals **enter the body through the skin.** Some common organic solvents include alcohol like methanol, aldehydes like acetaldehyde, glycol like ethylene glycol, and ketones like acetone. They are commonly found in cosmetics, fingernail polish and fingernail polish remover, glues, paints, varnishes, and other types of finishes, cleaning products, carpet, fiberboard, and other processed woods. Pesticides and herbicides such as lawn and garden sprays, indoor insect sprays are also sources of minute amounts of xenoestrogens.

5. Hormone Replacement Therapy (HRT). **HRT with estrogen alone without sufficient opposing progesterone such as the drug Premarin should be banned.** Symptoms include water retention, breast swelling, fibrocysts in the breast, depression, headache, gallbladder problems, and heavy period. The excessive estrogen from ERT also lead to increased chances of DNA damage, setting a stage for endometrial and breast cancer.

6. Over production of estrogen. Excessive estrogen can arise from ovarian cysts or tumors.

7. Stress. **Stress causes adrenal gland exhaustion and reduced progesterone output.** This tilts the estrogen to progesterone ratios in favor of estrogen. Excessive estrogen in turn causes insomnia and anxiety, which further taxes the adrenal gland. This leads to a further reduction in progesterone output and even more estrogen dominance. After a few years in this type of vicious cycle, the adrenal glands become exhausted. This dysfunction leads to blood sugar imbalance, hormonal imbalances, and chronic fatigue.

8. Obesity. **Fat has an enzyme that converts adrenal steroids to estrogen.** People who eat more wholesome foods have a far lower incidence of menopausal symptoms because their pre- and post-menopause levels of estrogen do not drop as significantly.

9. Liver diseases. Liver diseases such as cirrhosis from excessive alcohol intake **reduce the breakdown of estrogen.** Taking drugs that can impair liver function may also contribute to a higher level of estrogen.

10. Deficiency of Vitamin B6 and Magnesium. **Both of these are necessary for the neutralization of estrogen in the liver.** Too much estrogen also tends to create deficiency of zinc, magnesium and the B vitamins.

11. Increased sugar, fast food and processed food. Intake of these leads to a **depletion of magnesium.**

12. Increase in coffee consumption. **Caffeine intake from all sources was linked with higher estrogen levels.** **Tea is not much better as it contains about half the amount of caffeine as compared to coffee.** The exception is herbal tea like chamomile which contains no caffeine.

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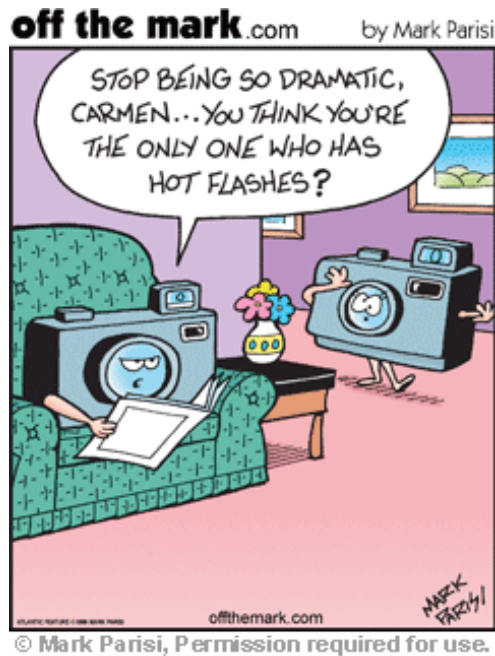


Peri-menopause (Age 35-50)

Peri-menopause is a transitional stage of **two to ten years before the complete cessation of the menstrual period** (and thus, onset of menopause). Peri-menopause is caused by the declining function of the ovaries, although women are still menstruating. A woman can find herself experiencing puzzling changes, and not know why. What is actually going on is a steep decrease of progesterone with a gradual decrease in estrogen. **Some of the common symptoms include:**

- Menstrual cycles usually become shorter, longer, or unpredictable the closer the women approaches menopause.
- Headaches and breast engorge before period.
- Cramping with periods and mid-cycle pain.
- Bleeding problems, such as spotting or heavy period.
- Weight gain around the waist.
- Muscles becoming less firm.
- Hot flashes (recur during menopause).
- Depression, fear, and apathy.
- Nasal congestion, recurrent respiratory infection.
- Memory loss and foggy thinking.
- Loss of balance and dizziness.
- Irritability
- Reduced sex drive
- Headache.

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Menopause (Age 50 and beyond)

The onset of menopause signals the ending of a woman's reproductive cycle. Menopause actually begins after the women's last period.

Smokers, those who are nutritionally depleted, those who do not have children, and those who had their uterus removed without the removal of ovaries tend to have an earlier menopause by up to 2 years or more due to reduced estrogen output from the ovaries.

Women who are obese or suffer from PMS or fibroids tend to have a later menopause because of excessive estrogen.

Asians are known to have few to no symptoms other than irregular menses. Western women, however, have much higher incidences of body changes such as **hot flashes, night sweats, fatigue, thinning of hair, insomnia, breakthrough bleeding, breast tenderness, vaginal dryness, food allergies, indigestion, reduced libido, forgetfulness, heart palpitations, loss of bladder control, frequent urination, night sweats, painful intercourse, and joint pains, to name a few.** Changes in metabolism may lead to osteoporosis, rise in blood pressure, increased fats in the blood, atherosclerosis, increased risk of strokes. Changes in emotion can result in depression, anxiety, irritability.

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What is Bioidentical Hormone therapy?

Bioidentical hormones are an exact replica of the hormones that are naturally produced by the body. The difference between bioidentical hormones and synthetic hormones is that, although both are created in labs, synthetic hormones are not identical to the hormones naturally created in your body and bioidentical hormones match your body's hormones molecule by molecule.

Who can take Bioidentical Hormone therapy?

Bioidentical Hormones can be used in women and men after being assessed by a doctor with saliva testing to determine whether you need them to improve the quality of your life.

How are Bioidentical Hormone levels measured?

There are two ways hormone levels can be checked: Saliva or Blood. Dr.Raman prefers to use saliva testing.

What happens after I get my levels checked?

After you have seen Dr.Raman for the initial consultation and the saliva testing has been done, it will take approximately 2 weeks for the results to become available. At that time, you will return to see Dr.Raman where you will discuss the results as well as the risks and benefits of taking Bioidentical Hormones.

How do I get started on my Bioidentical hormones?

Once the lab tests have been reviewed, Dr.Raman will recommend the appropriate hormones and their dosages. Dr.Raman will review the pathway of how the hormones function in the body and the risks and benefits of starting Bioidentical Hormones. The prescription is then faxed to a compounding pharmacy to be made. Dr.Raman uses

Trilogy Pharmacy in Westport.

What is a compounding pharmacy?

Pharmacy compounding is the art and science of preparing customized medications for patients. With a physician's consent, a compounding pharmacist can change the strength of a medication, alter its form to make it easier for a patient to ingest, or add flavor to it to make it more palatable. The pharmacist also can prepare the medication using several unique delivery systems, such as a sublingual troche or lozenge, a lollipop, or a transdermal gel.

How soon will I start feeling better after starting Bioidentical Hormones?

Generally, it takes about 2 months for the hormones to become close to being balanced. But women will start seeing slow improvement in their symptoms by 2 weeks.

What are side effects to Bioidentical Hormones?

Our optimal goal is to minimize any side effects. Some side effects that can be experienced if the hormones aren't adequately balanced includes bleeding, bloating, insomnia, irritability, weight gain, facial hair, acne breakout, fatigue.

Why should I choose Bioidentical Hormones vs. Synthetic Hormones?

There are some great synthetic hormones that have brought great relief to many woman. I prefer Bioidentical Hormones to treat my patients, because I feel I can look at each person on an individualized basis and give them ONLY what they need through compounding.

Why aren't Compounded Bioidentical Hormones FDA-approved?

In order for drugs to gain FDA approval they have to undergo years of rigorous clinical trials. The drug that is being tested is done under a very controlled atmosphere with little room for dosage adjustments. Remember a woman's body is not the same 365 days a year. In fact, hormones change from month to month and so it is impossible for a woman to stay on the same dose for long periods of time. Therefore, it is difficult to do a long term study when woman's body and her medicines are continually changing. That is why it is very important to find a compounding pharmacy that follows FDA approved regulations and guidelines.

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Final Thoughts

The passage of this transition challenges each of us and brings out the best of a situation that can only be understood through

the minds of other women. The phase where we cross from the familiar to a place where there are no road maps and the only directions we can follow is the innate voice inside of us that guides us

Hormonal imbalances are inevitable to varying degrees in all of us but the balance is found when there is peace between the mind and the soul. Know that this too shall pass



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