Natural Hormone Replacement
Your Guide To Bioidentical Hormones
by Steven F. Hotze, M.D.
**Introduction**

Dr. Hotze is founder of the Hotze Health & Wellness Center and author of the book Hormones, Health, and Happiness. He has enabled thousands of women and men to achieve optimal health using his customized 8-Point Treatment Regimen. If you would like a free evaluation regarding your health, you can contact his office by calling 877-698-8698.

*Notice: This book is intended as a reference guide, not as a medical manual. The information given here is designed to help you make informed decisions about your health. It is not intended as a substitute for any treatment that may have been prescribed to you by your doctor or therapist. If you suspect that you have a medical or emotional problem, we urge you to seek competent medical or psychiatric help.*

*The names of those whose cases are presented in this book have been changed to preserve their privacy.*

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Hormone Replacement Therapy

Walk up to any group of middle aged women and mention the phrase “hormone replacement therapy” and you will have them all running scared. I believe that the media and physicians have turned this topic into one of the most controversial subjects among women because of the amount of false information that has been disseminated. Hopefully, I will be able to straighten this out for you all.

Before I begin, let me state that if there is anything you learn from this e-Book, I hope that it is the following three points. The first is never, ever, never take any hormone manufactured by any drug or pharmaceutical company, it is guaranteed to be a synthetic or false hormone. I don’t care if your physician tells you that it is a newer and safer form or that it is natural, it will do more harm than good, trust me. My second point is to never take just estrogen for hormone replacement therapy. Estrogen must never be introduced into your body unopposed, unless it is taken along with natural, bio-identical progesterone. My last point is that natural, bioidentical hormones are a safe and natural solution for menopause and hormonal imbalance and/or decline than your average physician will lead you to believe. Trust me. I have successfully treated thousands of women using natural hormone replacement therapy and it is very effective.

Believe it or not, hormones are actually a wonderful and beautiful thing…..that is when they are balanced properly. Hormone replacement therapy is the simple act of replacing the estrogen and progesterone hormones that have declined as a result of your body aging, as you age so do your ovaries, or because your hormones have become imbalanced. Hormonal imbalance can be caused by an array of situations but here is a list of some of the more
common causes: birth control pills, stress or adrenal fatigue, hypothyroidism, allergies, hysterectomies, xenoestrogens/petrochemicals and childbirth.

In order to truly understand HRT, we need to first look at how hormones function in a normal, healthy body. So let’s take a look at a woman’s normal menstrual cycle.

**The Normal Menstrual Cycle**

A normal menstrual cycle lasts twenty-eight days. The first day a woman starts her period is day one of her menstrual cycle. During the first fourteen days of the menstrual cycle the ovaries make increasing amounts of the estrogens. The function of these hormones is to stimulate the growth of the endometrial lining, the tissue that covers the inner surface of the uterus. This two-week period during which estrogen hormones are highest is termed the proliferative stage.

Midway through a woman’s cycle, around day fourteen, one of her two ovaries will produce an egg. This is called ovulation. After ovulation, the ruptured follicle from which the egg has been released is transformed to a corpus luteum and begins producing progesterone as well as a small amount of testosterone. Both progesterone and testosterone, which peak just after ovulation, stimulate a woman’s desire for sexual relations.

The portion of the menstrual cycle that follows ovulation, called the secretory phase, is orchestrated by progesterone. Progesterone’s primary function is to mature the endometrial lining, preparing it for a potential pregnancy. Progesterone’s importance to pregnancy is suggested by its name, which literally means “promoting gestation.” If the egg fails to be fertilized and
no pregnancy occurs, the production of both progesterone and the estrogen hormones dramatically falls at the end of the twenty-eight-day menstrual cycle. The endometrial lining is sloughed, leading to a period.

This cycle repeats itself over and over again during a woman’s menstrual life, which extends from the time her periods begin at puberty until her periods cease at menopause.

The normal menstrual cycle.
Levels of estrogen rise during the first half of the menstrual cycle, promoting the buildup of the endometrium, the inner lining of the uterus. After ovulation, progesterone levels rise, preparing the endometrium for implantation of an embryo. If pregnancy does not occur, levels of progesterone decline dramatically, triggering menstruation.
Estrogen Dominance

Why Estrogen Dominance Occurs
Millions of women of all ages and backgrounds share a common plight: they suffer from a condition known as estrogen dominance. To function optimally, the female body requires an optimal balance of estrogens (a trio of related hormones called estradiol, estrone, and estriol) and progesterone. Estrogen dominance occurs when the hormonal balance is shifted in favor of the estrogens. This condition just as correctly could be called progesterone deficiency.

How does this happen? For the most part, it is the inevitable result of the aging process. A woman’s ovaries generally function best between a few years after puberty until around age thirty. However, as a woman ages, so do her ovaries. By the time a woman reaches thirty-five years of age she is over halfway through her menstrual life and her ovarian function begins to falter.
The female reproductive organs.

Fallopian tube, Ovary, Uterus, Endometrium, Secondary (vesicular) follicle, Primary follicles, Cervix, Vagina, Ruptured follicle, Primordial follicle, Corpus luteum

Each of the ovaries contains numerous follicles, which hold a woman’s eggs. At ovulation, a mature (vesicular) follicle ruptures, releasing its egg. The follicle is then transformed into a progesterone-producing corpus luteum. If ovulation does not occur, no corpus luteum forms, and no progesterone is made.

The ovaries are the primary site for the production of both the estrogens and progesterone. But while both estrogen and progesterone levels decline with age, progesterone declines much more dramatically. By menopause, a woman’s progesterone level is likely to be a mere 1/120 of the level she experienced in her
early twenties. In contrast, her postmenopausal estrogen level may remain at 40 percent of the level she experienced in early adulthood, because even when her ovaries no longer produce estrogen, her fat cells continue to do so. Thanks to this additional source of estrogen, an obese postmenopausal woman may have higher estrogen levels than a thin premenopausal woman.

Another reason why estrogen dominance becomes more common with age is that as a woman ages she begins to have anovulatory cycles, menstrual cycles during which her ovaries do not release eggs. When a woman does not ovulate, her ovaries produce no progesterone at all. The stimulatory effects of estrogen unopposed by progesterone can cause the endometrial lining to become abnormally thickened, resulting in heavier periods, clotting, and painful menstrual cramps. As women enter their thirties, anovulatory cycles become more common, and symptoms of estrogen dominance become progressively more severe.

**Other Causes of Estrogen Dominance**

**Surgical Menopause**
While estrogen dominance is usually a progressive condition that develops as women move through their menstrual lives, it is virtually inevitable after a hysterectomy. As with natural menopause, surgically induced menopause obliterates progesterone production—immediately, rather than over years. Even if the ovaries have been spared the surgeon’s knife, ovarian dysfunction or atrophy commonly occurs within two years following removal of the uterus, causing a predictable decline in progesterone levels.

**Bilateral Tubal Ligation**
Bilateral tubal ligation also can lead to a decline in the production of hormones by the ovaries. This procedure, in which the fallopian
tubes are cut, burned, or tied off to prevent pregnancy, cuts off a portion of the blood supply to the ovaries. Many women who have undergone this procedure develop bilateral tubal ligation syndrome with symptoms of estrogen dominance.

**Childbirth**
Estrogen dominance can also occur following childbirth. During pregnancy, the placenta produces progesterone at levels that are many times higher than a woman’s body normally produces. When the baby is delivered and the placenta is expelled, there is a precipitous drop in the progesterone level. However, estrogen levels remain high. Unless the ovaries can produce adequate amounts of progesterone to balance the estrogens, estrogen dominance is likely to occur.

**Xenoestrogens and Petrochemicals**
Another factor contributing to estrogen dominance is the presence of xenoestrogens in our bodies. Xenoestrogens are found in petrochemical products such as plastics, herbicides, pesticides, soaps, clothing, industrial by-products, and countless other manufactured goods. The prefix “xeno” means alien, an apt description of these synthetic chemicals, which pollute the water, air, soil, and animal and plant life on this planet. Xenoestrogens can cause estrogenic effects even in doses on the level of a billionth of a gram, and because they are stored in the fat cells of our bodies, most of us carry a significant burden of these toxic chemicals.

**Birth Control Pills**
Oral contraceptives are another common cause of estrogen dominance, because they work by suppressing ovulation and ovarian function. Keep in mind that a woman who is not ovulating produces no progesterone in her ovaries. Oral contraceptives
contain progestins, not progesterone. Like xenoestrogens, synthetic progestins are alien to a woman’s body, and although they target the same cell receptors that progesterone targets, their effects do not perfectly mimic those of the natural hormone. In fact, they depress the body’s production of natural progesterone, leading to estrogen dominance and its associated symptoms.

My Background Regarding Hormones

Pulling It Together
After several years as an allergist, I began to notice an interesting pattern among my allergy patients. While my male patients typically had a lifelong history of allergies, many women were consulting me for help with allergies that had appeared, seemingly out of the blue, in midlife. For some women, childbirth seemed to be the trigger. For others, the onset of allergies was associated with a change in their menstrual cycles.

It became obvious to me that there must be a relationship between allergic disorders and female hormone fluctuations in midlife. However, I was an allergist, not a gynecologist. When I determined that a woman needed help with hormonal problems, I referred her to a gynecologist. But one day after work, I was sitting at my desk going through my mail when I came across a monograph by Julian Whitaker, M.D., on the therapeutic use of natural hormones. Because I was having great success treating hypothyroidism with natural thyroid replacement, I was eager to read what Dr. Whitaker had to say about this topic.

That evening at home, I read the chapter on natural thyroid. Dr. Whitaker’s writings confirmed my own experience in treating
patients with low thyroid function. Symptoms, not blood tests, are the best way to diagnose and manage hypothyroidism, he wrote, and natural thyroid extracts such as Armour Thyroid are the best way to treat this very common condition.

**Natural Female Hormones: The Missing Link**

Dr. Whitaker’s monograph contained chapters on other hormones, including estrogen, progesterone, testosterone, dehydroepiandrosterone (DHEA), and growth hormone. I read them all. By the end of the evening, I had a much greater appreciation of the therapeutic potential of hormones than I had just twenty-four hours earlier. I also had a much better understanding of the difference between natural hormones and the counterfeit hormones produced by drug companies.

**A Patient Teaches Me**

There is an old adage that states, “When the student is ready, the teacher will appear.” And I was ready.

The day after I read Dr. Whitaker’s monograph, I walked into Guest Room 2 at my center and there, sitting on the examination table, was Linda, a long-time patient of mine in her late thirties. She held out an audiocassette and said, “Dr. Hotze, would you like to learn about natural progesterone therapy? This is a tape by Dr. John Lee.”

“That’s interesting,” I replied. “I just spent last night reading about natural progesterone and would be very interested in listening to what this doctor has to say about its use.”

On my thirty-minute drive home that evening, I listened to the tape. Dr. Lee had been recommending natural progesterone supplementation to his female patients for almost twenty years
with amazing results. On his audiotape, he explained how premenstrual complaints, reproductive difficulties, and menopausal symptoms could be triggered by the inevitable decline in a woman’s production of progesterone, beginning in her midthirties.

Dr. Lee’s descriptions of his patients’ symptoms were the same problems about which my patients were complaining. “Natural progesterone could be the missing link that could help these women,” I thought.

The next day, I reached Dr. Lee by phone in California and asked him, “Where in the world do I get natural progesterone?”

Dr. Lee replied that progesterone could be purchased with a prescription through a compounding pharmacy. A few days later, a local compounding pharmacist, Phil Pylant, dropped by my office to introduce himself and offer his services. It turned out that Phil was a highly respected compounding pharmacist who taught other pharmacists how to compound prescriptions. Phil told me that he was not only familiar with natural female hormones, but that he could also compound natural progesterone and the natural human estrogens (estradiol, estrone, and estriol) for my patients.
Case Studies

“The Black Cloud Lifted”
The first woman for whom I prescribed natural female hormones was Louise. Louise, the wife of a minister, had originally consulted me for help with her chronic bronchitis, for which she had been taking antibiotics almost year-round. She also had terrible headaches, felt cold even in warm weather, and was concerned about her irregular heartbeat.

Allergy testing revealed that Louise was highly allergic to corn, which was causing her headaches. Based on her history and examination, I also determined that Louise suffered from functional hypothyroidism, which was the reason for her low body temperature and her slow and irregular heartbeat. Once Louise began taking Armour Thyroid, her heartbeat stabilized and she no longer felt cold all the time. And as long as she avoided corn, she no longer experienced debilitating headaches. However, she still suffered from irritable and depressed moods, which she described as a “black cloud” hanging over her head.

Louise underwent a total hysterectomy in her early thirties and had been on Premarin, horse estrogen unbalanced by progesterone, for nearly twenty years. Her depression and irritability began after her hysterectomy, but none of the doctors she consulted acknowledged that the removal of her reproductive organs and her use of Premarin could be blamed for her moodiness. They simply wrote her prescriptions for antidepressants. When the side effects of these drugs became unbearable, Louise stopped taking them.

When I saw Louise for a checkup shortly after reading Dr. Whitaker’s monograph and listening to Dr. Lee’s tape, it occurred to me that the counterfeit hormones that Louise had been taking for
the past twenty years might be contributing to her emotional problems. Since Phil Pylant had already agreed to compound natural hormones for me, I advised Louise to stop taking Premarin, and I wrote her two prescriptions for the natural, bioidentical hormones progesterone and Bi-Est (bi-estrogen).

When Louise returned for follow-up two months later, she was beaming. She could hardly wait to tell me how much better she felt. “When I started using the progesterone, it felt like my body was receiving something it had been missing for twenty years,” she said. “The black cloud that had been hanging over my head was lifted. I was so excited that I called my daughter, who had been experiencing the same troubles I had when I was her age. Her doctor had already suggested that she have a hysterectomy. I told her not to make the same mistake that I had made, but instead, to give natural progesterone a try.”

She had even called her own mother, who had been a recluse in her house for the past ten years, and advised her to start on natural progesterone. “My sister called me two weeks ago,” she reported, “and asked me what in the world I had given to our mother. I asked her why, and she told me that Mother was throwing a party for the neighbors. She said she couldn’t remember Mother ever being so happy.”

**A Thirty-Year History of Suffering**

Gail had always suffered from painful periods with heavy bleeding. At the age of eighteen, she was prescribed oral contraceptives to reduce her heavy menstrual flow. She remained on contraceptives until the age of thirty-two, when she became concerned about their link to cancer and discontinued them. At that time she began experiencing a heavy vaginal discharge, which seemed to coincide with her menstrual cycle. She also experienced
a return of her painful cramps and heavy bleeding. And although she had lived in the same geographic region for years, she began to develop allergy symptoms.

Over the next ten years, Gail’s allergies became more severe, so by the time she was forty-two, her symptoms persisted even when she took a prescription allergy drug. Her menstrual symptoms continued to worsen, and she began experiencing premenstrual breast tenderness and bloating. When her father died a year later, Gail’s health went into a downward spiral. She contracted recurrent colds and suffered from mood swings and insomnia. She also began putting on weight.

Beginning in her thirties, Gail consulted a number of physicians for help with her premenstrual symptoms, painful periods, and other health problems. The responses of these physicians were at best unsympathetic and at worst insulting. One physician told her the heavy vaginal discharge was caused by her underwear. Another told Gail that she suffered from PMS—as if Gail didn’t know that—and advised her to take vitamin B6, drink lots of fluids, and keep her chin up.

Gail underwent two highly sensitive Pap smears during this ten-year period, both of which came back with a diagnosis of “high estrogen effect.” Yet neither of the physicians who had performed these tests told Gail that she was estrogen dominant and that natural, bioidentical progesterone could help alleviate her symptoms. A gynecologist that Gail consulted was pleased to tell her that the antidepressant Prozac could now be prescribed for PMS and urged her to make an appointment with a psychiatrist.

Gail had moved to the Houston area with her husband when she was forty-six. A female ob-gyn whom she consulted suspected that
Gail’s severe menstrual pain was caused by endometriosis and recommended that she undergo diagnostic laparoscopy. This procedure confirmed that Gail had endometriosis, which had spread to the bladder and had caused the colon to adhere to the uterus. She was once again put on oral contraceptives to reduce her menstrual flow.

One day, Gail happened to hear me speaking about female hormone problems on my radio program. She immediately called and made an appointment. When I sat down with her to discuss her symptoms, she told me that she was still experiencing menstrual cramps and premenstrual breast tenderness, along with some new symptoms, including low libido, intermittent hot flashes, premenstrual mood swings, and heart palpitations. In addition, she suffered from sinus headaches, cold hands and feet, restless sleep, decreased energy, and allergies to certain foods, pollens, and molds.

It was evident just from listening to Gail’s description of her symptoms that she was estrogen dominant, even though she was also experiencing symptoms of menopause such as hot flashes. I suspected that she had functional hypothyroidism as well. After examining her and performing allergy testing, I prescribed natural, bioidentical estrogen and progesterone, Armour Thyroid, and sublingual allergy drops to address the underlying causes of her health problems.

A year and a half later, Gail was a vibrant woman. She was twenty-eight pounds lighter and radiated energy and well-being. Her sinus headaches had vanished, as had her hot flashes. She slept restfully and her moods were upbeat.
Symptoms of Estrogen Dominance

Symptoms of estrogen dominance range from mildly annoying to severe. When a woman consults a physician for help with these symptoms, she is generally given two options: surgery, usually a hysterectomy, or prescription drugs, most often counterfeit hormones that actually worsen the problem. Rarely is she told that her problem is likely the result of estrogen dominance and that natural, bioidentical progesterone could alleviate her symptoms.

Common Symptoms and Disorders Associated with Estrogen Dominance
- Severe menstrual cramps
- Heavy periods with clotting
- Irregular menstrual cycles
- Uterine fibroids
- Ovarian cysts
- Endometriosis
- Infertility
- Multiple miscarriages
- Fibrocystic breast disease
- Premenstrual breast tenderness
- Premenstrual fluid retention and weight gain
- Anxiety, panic attacks, or depression
- Premenstrual mood swings
- Premenstrual headaches
- Migraines
- Decreased libido

While these symptoms may be common, they are not normal. They are indications of declining ovarian function and the resulting imbalance of estrogen and progesterone. If you suffer from any of these problems, you owe it to yourself to find a doctor who is
experienced in treating female hormonal imbalances with natural, bioidentical hormones.

Estrogen Dominance and Your Body

Estrogen Dominance and the Reproductive Organs
Gail’s story reads like a textbook case of estrogen dominance. Her painful periods and heavy bleeding are classic symptoms of a relative excess of estrogen. As I mentioned earlier, estrogen is a stimulative hormone, and too much of this hormone causes overgrowth of endometrial tissue. Estrogen also makes the blood clot more easily. When large clots of blood are passed during menstruation, the result is severe cramping.

Endometriosis, which afflicted both Gail and Louise, is another condition in which estrogen dominance plays a major role. This painful condition occurs when cells that make up the inner lining of the uterus, the endometrium, form colonies outside of the uterus. These endometrial implants may attach to the uterus, fallopian tubes, colon, bladder, or other organs. Despite their position outside of the uterus, they respond to estrogen just as the cells within the uterine lining do. They multiply, swell with blood, and then bleed into the surrounding tissues during the menstrual period. Because the blood has nowhere to go, it can cause inflammation, scar tissue, and adhesions.

Estrogen also fuels the growth of uterine fibroids. These noncancerous growths shrink at menopause when estrogen levels decline. However, long before this occurs, a hysterectomy is usually recommended to women with symptomatic fibroids. In fact, fibroids are the number one reason for hysterectomies, even though in many cases it is possible to remove the fibroids and
leave the uterus intact. Few women are given this option, and fewer still are given a therapeutic trial of natural, bioidentical progesterone to determine if this will alleviate their pelvic pain and other symptoms and enable them to avoid surgery altogether.

Like the uterus, the breasts are highly sensitive to the stimulatory effects of natural estrogen, counterfeit estrogens, and xenoestrogens. The premenstrual breast pain and tenderness that Gail began experiencing in her early forties is a classic symptom of estrogen dominance. Fibrocystic breast disease is another. This condition is characterized by lumps in the breasts that are noncancerous but very painful.

**Estrogen Dominance and the Thyroid Gland**

As I mentioned in the previous chapter, hypothyroidism affects women seven times more frequently than men. The epidemic of estrogen dominance among women in this country is the cause of this disparity. When estrogen levels are high, the liver produces high levels of thyroid-binding globulin (TBG), a protein that binds to thyroid hormones in the blood and prevents them from being taken up by the cells. Birth control pills, pregnancy, and counterfeit estrogens prescribed during and after menopause also cause estrogen dominance and increased levels of TBG.

Women suffering from estrogen dominance may have a normally functioning thyroid gland that produces adequate amounts of thyroid hormone, and blood tests to measure levels of thyroid hormone and thyroid-stimulating hormone may be read as “normal.” However, because the hormone is bound to and inactivated by circulating proteins, little of it is actually getting into the cells. A physician who relies solely on blood tests for diagnosis is likely to tell a woman that there is nothing wrong with
her, despite the fact that her symptoms all point to a state of functional hypothyroidism.

I have said it before, but it bears repeating: Listening to the patient’s symptoms rather than relying on blood tests is the best way to diagnose and treat hormonal problems. This is true not only of thyroid problems, but also of problems relating to the female hormones. Unlike body temperature, which varies little from day to day in a healthy person, hormone levels can vary widely, even within the same twenty-four-hour period. This is especially likely to occur among women in their premenopausal years.

**Estrogen Dominance and the Bones**

Conventional thinking attributes osteoporosis to the decline in estrogen hormones that occurs in a woman’s postmenopausal years. As it turns out, conventional thinking is wrong. Women begin losing bone mineral density years before menopause, and it is progesterone, not estrogen, that is crucial to preventing osteoporosis.

If estrogen were the most important hormone in maintaining bone health, then women would maintain their peak bone density until their fifties. They would experience bone loss only after menopause, when estrogen levels decline dramatically. However, this is not the case. A woman attains her peak bone density at approximately thirty years of age, after which she begins to lose bone at a rate of about 1–1.5 percent per year. While it is true that bone loss accelerates at menopause, this is a temporary phenomenon. Within three to five years, the rate of bone loss slows to premenopausal levels.
The Dance of Female Hormones

Effects of Progesterone
• Matures the uterine lining and prevents excess tissue buildup
• Inhibits breast tissue overgrowth
• Increases metabolism, promoting weight loss
• Mobilizes fluid and decreases swelling
• Thins the blood, preventing blood clots
• Stimulates the production of new bone
• Enhances the action of thyroid hormones
• Increases sex drive

Effects of Estrogen
• Stimulates growth of the uterine lining
• Causes growth of breast tissue
• Promotes fat storage and weight gain
• Promotes fluid retention
• Causes thickening of the blood
• Slows bone breakdown
• Reduces bioavailability of thyroid hormones
• Inhibits the sex drive

As this comparison demonstrates, the decline in progesterone levels that occurs beginning in a woman’s mid-thirties is a much more critical factor in causing bone loss than the decline in estrogen levels that occurs at menopause. This is due to the interaction of progesterone and estrogen with specialized bone cells called osteoclasts and osteoblasts.

Osteoclasts are responsible for breaking down old bone, while osteoblasts build new bone. “Out with the old, in with the new” is your body’s way of replacing worn-out bone cells with new, healthy cells. However, this only occurs when the activity of osteoclasts is balanced with that of osteoblasts.
Estrogen helps slow bone loss by curbing the activity of bone-dissolving osteoclasts, but it has no effect on osteoblasts. On the other hand, progesterone attaches to specialized receptor sites on the surface of the osteoblasts and stimulates bone-building activity.

The prevention of osteoporosis is yet another reason that I recommend women supplement with natural progesterone beginning in their mid-thirties.

**Estrogen Dominance and the Brain**

Louise, the first woman to whom I prescribed bioidentical hormones, suffered from depressed and irritable moods from the time of her hysterectomy at the age of thirty until she began using progesterone more than twenty years later.

Gail made it into her forties with her uterus intact before she began experiencing depression, mood swings, and emotional fragility. Both Louise and Gail attempted to pinpoint the source of their emotional problems in their stressful lives, but they also had the feeling that something was not right in their bodies, and that this something had to do with their hormones.

They were correct.

On the biochemical level, mood is largely the result of the balance of neurotransmitters—especially serotonin, dopamine, and norepinephrine—in the brain. Low levels of one or more of these chemical messengers are common in patients with depression. But levels of these and other neurotransmitters can be affected by hormonal variations. For example, the mood-elevating neurotransmitter norepinephrine is inactivated by an enzyme called monoamine oxidase (MAO), and when levels of MAO are high,
the resulting decline in bioavailable norepinephrine can induce depression. This process can be reversed by estrogen, which inhibits MAO and frees up more norepinephrine.

On the other hand, chronically elevated levels of estrogen can actually induce depression and anxiety by causing functional hypothyroidism. When thyroid hormone cannot be adequately assimilated into the cells, cellular oxygen declines. This is bad news for the brain, which uses a full 25 percent of the oxygen you breathe. Hypothyroidism also results in a slowdown of cellular metabolism, which causes a drop in levels of the neurotransmitter gamma-aminobutric acid (GABA). GABA is a calming neurotransmitter, which prevents the brain from being overwhelmed by stimulation. Extremely low levels of GABA can cause epileptic seizures, but even moderately low levels are linked to mood swings, anxiety, and panic attacks.

The brain is highly sensitive to progesterone. In fact, progesterone is found in brain cells at levels twenty times higher than in the blood serum. Here, as elsewhere in the body, progesterone counterbalances the effects of estrogen. Whereas estrogen has an excitatory effect on the brain, progesterone’s effect is a calming one. Women with estrogen dominance sleep restlessly, whereas progesterone replenishment enhances sleep.

The phenomenon of postpartum depression provides further evidence of the important role that progesterone plays in the brain. Keep in mind that during pregnancy, the placenta produces massive quantities of progesterone—ten to twenty times the normal amount produced in a woman’s body—while the ovaries’ production drops to virtually zero. After the baby is delivered, the woman’s progesterone levels fall precipitously, leading to a state of estrogen dominance and functional hypothyroidism. Postpartum
depression can be easily treated by taking supplemental doses of Armour Thyroid and natural, bioidentical progesterone.

Estrogen dominance is also a culprit in premenstrual headaches and migraines. One reason for this is that estrogen promotes water retention. Because the brain is confined to the fixed space of the skull, when it swells the pressure that develops causes a headache. Estrogen also causes dilation of the blood vessels. The constriction of blood vessels followed by rebound dilation is a key factor in migraines. Finally, estrogen dominance leads to depletion of the mineral magnesium, which is crucial to normal blood vessel tone. Magnesium deficiency can cause a spasm of arteries in the brain.

“Not tonight, dear . . . I have a headache,” is not a tired cliché. For many women in their mid-thirties and beyond, frequent headaches are the inevitable result of estrogen dominance. So is low libido. Sexual desire does not occur in the sexual organs—it occurs in the brain. Estrogen dominance can dampen sexual desire by increasing levels of sex hormone–binding globulins. These proteins attach to progesterone and testosterone in the bloodstream and inactivate them, just as thyroid-binding globulins do to thyroid hormones. Keep in mind that both progesterone and testosterone peak at ovulation, enhancing libido at the time when a woman is fertile. If a woman is estrogen dominant, with correspondingly high levels of sex hormone–binding globulins, she may be disinterested in sex even at the most fertile time in her cycle.

**Estrogen Dominance and Allergies**

I opened this chapter by commenting on a curious relationship I had observed between the onset of allergies and changes in a woman’s menstrual cycle. This relationship is no mere coincidence. Once again, estrogen dominance plays a role. Maggie, whose story opened this book, developed allergies after giving
birth to her first child. Gail’s allergies emerged in her midthirties, around the time that she began experiencing painful periods and other symptoms of estrogen dominance.

One explanation for the link between estrogen dominance and allergies is that estrogen promotes the release of histamine, the chemical that is responsible for troublesome allergy symptoms such as nasal congestion, watery eyes, coughing, and wheezing. Another explanation, which I’ll be discussing in greater detail in the next chapter, has to do with the relationship between progesterone and the adrenal hormone cortisol. Cortisol, which is made in the adrenal glands from progesterone, is the body’s natural anti-inflammatory hormone. In fact, synthetic drugs, commonly called “cortisone,” are sometimes prescribed for bronchial asthma, a severe allergic condition, because they mimic the anti-inflammatory action of the body’s own cortisol.

Because cortisol is made by the body from progesterone, a decline in progesterone levels will result in a decline in cortisol levels as well. It is not surprising, then, that new mothers, women in their middle years experiencing anovulatory cycles, and menopausal women whose ovaries are no longer producing progesterone may also have insufficient cortisol and begin experiencing allergies to substances that were previously innocuous to them.

Breast Cancer

Estrogen Dominance and Breast Cancer
The most serious consequence of estrogen dominance is breast cancer. As I mentioned earlier in this chapter, estrogen dominance could also be called progesterone deficiency, because it is the imbalance between estrogen and progesterone in a woman’s body that causes so many physical and emotional problems at midlife. A
number of studies have found that insufficient progesterone may be a more important factor than excessive estrogen in increasing a woman’s risk of breast cancer.

One of the most significant studies of the relationship between low levels of natural progesterone and increased breast cancer risk was published in the American Journal of Epidemiology in August 1981. In this study, conducted by researchers from Johns Hopkins University’s School of Public Health, women of childbearing age who were having difficulty conceiving were divided into two groups. The first group consisted of women whose infertility was attributed to progesterone deficiency, while the second group was composed of women with infertility due to nonhormonal causes. All of the women were followed for thirteen to thirty-three years and the incidence of breast cancer in each group was recorded.

At the study’s conclusion, researchers found that the infertile women with progesterone deficiency had a premenopausal breast cancer risk that was 540 percent greater than that of women whose infertility was not related to their hormone status. Not only that, but these women had a 1,000 percent greater risk of death from all types of cancer. After menopause, when estrogen levels declined, the breast cancer risk was similar in the two groups, suggesting that progesterone’s protective effects were much more critical during the premenopausal period.

While I would not presume to suggest that progesterone is a cure for breast cancer, this study certainly supports the theory that it can help prevent it. Other research suggests that natural, bioidentical progesterone may delay the progression of this often deadly disease. Several studies have found that topical estrogen increases the rate of cellular division of breast epithelial cells, which are the
cells that can become malignant. In contrast, topical progesterone slows down this cell division.

If you are wondering why so little has been written about natural, bioidentical hormones until recently, the answer is that for almost four decades counterfeit hormones were universally embraced by the medical profession as wonder drugs. The mainstream media reinforced this image, portraying counterfeit hormone replacement therapy (HRT) as a veritable fountain of youth. The counterfeit estrogens in particular were credited with seemingly magical powers to prevent age-related maladies as varied as osteoporosis and Alzheimer’s disease, colon cancer and heart disease. Negative studies, of which there were a growing number, were largely ignored by the media in favor of glowing reports that suggested female hormone replacement could enhance a woman’s quality of life and extend her years. But ignoring the negative studies didn’t make them go away.

**Women’s Health Initiative**

For this reason, in 1993, the Women’s Health Initiative (WHI) began enrolling postmenopausal women for a nationwide, long-term study of the benefits and risks of conventional HRT using the popular drug Prempro, a combination of Premarin and Provera. Once enough women had been recruited, the study was scheduled to last eight and a half years. However, it was ended abruptly three years early due to the increased risk of breast cancer in women using counterfeit hormones. The study findings, published in the Journal of the American Medical Association on July 17, 2002, sent shockwaves through the medical profession, the media, and the public.

The researchers reported that the risk of breast cancer increased with each year that a woman remained on HRT, so that after five
years, a woman who was taking HRT had a 26 percent higher risk of breast cancer than a woman who was not using hormones. Women using counterfeit hormones also experienced significantly higher risks of coronary heart disease, stroke, and pulmonary embolism (blood clots to the lungs) than women who were not using hormones.

A year after the findings from the WHI were reported, British researchers reported equally disturbing findings from the Million Women Study, a five-year analysis of the relationship between HRT and breast cancer risk in the United Kingdom. In this study, which was published in the premier British medical journal The Lancet on August 9, 2003, researchers found that postmenopausal women who were current users of HRT had a 66 percent higher risk of developing breast cancer and a 22 percent higher risk of dying of breast cancer than women who had never used HRT.

Based on their findings, these researchers estimated that the use of HRT by postmenopausal women in the United Kingdom had resulted in twenty thousand extra cases of breast cancer over the preceding decade. The most dangerous HRT combination, which was responsible for 75 percent of the breast cancers, was synthetic equine (horse) estrogen (e.g., Premarin, Cenestin, and Ogen) plus progestin (counterfeit progesterone).

**An Ounce of Prevention Is Worth a Pound of Cure**

There has been a tremendous push for “The Cure for Breast Cancer” in this country. However, this slogan completely misses a fundamental truth about what women want. No woman wants to develop breast cancer, then submit to disfiguring, painful, or toxic therapies with the hope of being cured. Women want and deserve safe, effective measures to prevent breast cancer and the other maladies that occur during midlife.
The past quarter-century of research has clearly demonstrated that low levels of human progesterone increase the risk of breast cancer. This was the conclusion of the 1981 Johns Hopkins study that found a much higher incidence of breast cancer among women with infertility due to progesterone deficiency compared to women with infertility due to nonhormonal causes.

The WHI, Million Women Study, and other recent studies of conventional HRT, all of which have found that counterfeit hormones increase the risk of breast cancer, provide further evidence for this hypothesis. In both the WHI and the Million Women Study, the highest risk of breast cancer was associated with the use of the combination of synthetic equine estrogen plus progestin. In fact, it is likely that the progestin component was the major factor in this increased risk, because progestins turn off the ovaries’ production of naturally occurring progesterone, reducing levels of this protective hormone. The use of counterfeit HRT also leads to hypothyroidism, which has been demonstrated to significantly increase the risk of cancer. This is because hypothyroidism causes a state of low oxidative metabolism, an environment in which cancer thrives.

There is a huge, multi-billion-dollar cancer industry in America. There is also a multi-billion-dollar pharmaceutical industry and a multi-billion-dollar medical industry in this country. While these highly profitable industries may pay lip service to preventive practices such as healthy eating, exercise, and smoking cessation, they will never embrace prevention as a primary strategy for reducing the death toll from cancer or any other disease. The reason is simple economics. There is no money to be made from preventing disease. Healthy people do not need surgery, drugs, or doctors.
The primary goal of medicine should be the prevention of disease rather than the treatment of disease. The old adage remains true, “An ounce of prevention is worth a pound of cure.” Clearly, the first step in prevention is to refrain from using counterfeit hormones, which have been demonstrated to cause cancer rather than to prevent it.

Step two is to use bioidentical hormones. This means first and foremost bioidentical progesterone, both to reduce the risk of breast cancer and to alleviate the symptoms of estrogen dominance that occur in midlife. Progesterone supplementation should begin around the age of thirty-five or younger, whenever the symptoms of progesterone deficiency occur. Premenstrual symptoms such as breast tenderness, headaches, mood swings, depression, fluid retention, weight gain, and irregular or heavy periods are common signs of progesterone deficiency and are highly responsive to treatment with bioidentical progesterone. As women enter menopause, the addition of bioidentical estrogen may be warranted to alleviate menopausal symptoms.

Fake Hormones vs. Natural Hormones

**Prempro & Premarin**
What exactly is Prempro, and why is it so harmful to a woman’s health? Prempro refers to the most popular form of HRT, a counterfeit estrogen called Premarin combined with a counterfeit progesterone called Provera. Premarin is a combination of horse estrogens derived from pregnant mares’ urine (hence the name Premarin). While this may be a fine preparation for mares in menopause, it is of dubious benefit for human beings. Not only
does counterfeit estrogen fail to improve the quality or length of a woman’s life, it can cause serious and even fatal diseases including endometrial cancer, breast cancer, strokes, and life-threatening blood clots in the lungs.

And what of the counterfeit progesterone drug, Provera? Like conjugated equine estrogens, Provera is the invention of the pharmaceutical industry. Although its generic name (medroxyprogesterone) makes Provera sound like it is a form of progesterone, it is not. It is a progestin, a drug that exists nowhere in nature. Unlike natural progesterone, which is essential to the development of the unborn baby, Provera can cause miscarriage or birth defects if taken during the first four months of pregnancy. It can also cause symptoms identical to those caused by estrogen dominance, including breast tenderness, migraines, allergy and asthma symptoms, weight gain, and depression. Taking higher doses of Provera in a misguided attempt to correct a condition of estrogen dominance won’t alleviate these symptoms, because Provera isn’t natural progesterone. It’s a counterfeit hormone, and you can’t fool Mother Nature.

What Does “Natural” or “Bioidentical” Mean?
I have been using the word “counterfeit” to refer to patented drug company hormonal preparations and “natural” or “bioidentical” to refer to the kinds of hormones that I and other wellness physicians recommend. I prefer the term “bioidentical” because it accurately conveys the most important aspect of these hormones. They are biologically identical to hormones produced in our bodies.

Natural, bioidentical hormones are derived from a plant molecule called diosgenin found in soybeans and wild yams. After diosgenin is extracted from these plants, it is converted into bioidentical progesterone in the laboratory. In turn, progesterone can be
converted by a chemist into the three human estrogen hormones: estradiol, estrone, and estriol.
Because natural progesterone and the estrogens are biologically identical in structure to the hormones produced by the body, the cells of a woman’s body respond to them in exactly the same way that they respond to the hormones produced in her own body. This is good news for women, but the fact that these bioidentical hormones cannot be patented makes them unattractive to the pharmaceutical companies. Pharmaceutical drugs can only be patented if they are chemically unique, unlike any currently existing drug and unlike any substance that exists in nature.

This is the reason that you will rarely see major drug companies producing and promoting natural hormone preparations. Drug companies derive the bulk of their billion-dollar profits from the first seventeen or so years of a drug’s life, when its patent status protects it from competition and enables the company that holds the patent to charge whatever the market will bear. Without the possibility of patenting natural, bioidentical hormones, the drug companies have no incentive to produce and sell these hormones. The profit margin is just too low.
Where Can I Get Natural, Bioidentical Hormones?

Compounding Pharmacy

The compounding of medications from bulk ingredients for individual patients, as deemed appropriate by a prescribing physician, is the historic practice of pharmacy and has been occurring since the inception of the profession of pharmacy, centuries ago. Drug compounding is the process by which a pharmacist prepares a medication, prescribed by a physician, to meet an individual patient’s need. The practice of drug compounding is also known as compounding pharmacy.

The dosage or route of administration of compounded bioidentical hormones, such as natural progesterone, varies from that of commercially available drugs and is customized for each individual patient. On the other hand, drugs manufactured by pharmaceutical companies are mass produced and distributed to wholesalers who in turn sell to pharmacies for resale to the public. These drugs have limited dosage strengths and means of administration. They are not tailored for a specific patient. There is no direct personal interaction between the pharmaceutical manufacturer and the physician, pharmacist, or patient.

Pharmacies that compound bioidentical hormones purchase these hormones in bulk from pharmaceutical companies and laboratories that are registered and governed by the Food and Drug Administration (FDA).

Natural, bioidentical human hormones cannot be patented because they occur in nature, just like you couldn’t ever put a patent on air
or water because they are naturally occurring substances. Drug companies make their profits by creating and patenting chemicals that never before existed in nature. This allows the drug companies to have a proprietary product that no one else can produce for at least seventeen years. Owning the patent rights to a drug enables the pharmaceutical company to advertise and sell that drug without competition, thus dramatically increasing profits.

In order for women to receive bioidentical hormones in the appropriate dosage, they must be prescribed for them by a physician experienced in their use. Few, if any, chain pharmacies specialize in compounding bioidentical hormones. There are many small, independent community pharmacies that dabble in compounding. However, for my patients, I always recommend that they obtain their compounded bioidentical hormones from pharmacies that specialize in compounding bioidentical hormones.

**Wild Yam Cream is Not the Same as Natural Progesterone**

Many health food stores carry wild yam creams that contain the plant hormone diosgenin. While diosgenin can be converted into human-identical progesterone in a laboratory, it cannot be converted into progesterone or any other hormone in a woman’s body. Wild yam creams will not yield the benefits of a bioidentical progesterone product that contains the human-identical form of this hormone.

Transdermal skin creams containing genuine USP progesterone are available without a prescription, but their strengths are low and their qualities vary widely. Some contain mineral oil, which prevents the progesterone from being readily absorbed through the skin. Others are improperly stabilized, meaning that exposure to oxygen over time will degrade the potency of the product. Still others contain insufficient dosages of progesterone to achieve any
real benefits. This is why it is best to be evaluated and treated by a physician trained in the use of bioidentical hormones so that an optimal dose of progesterone can be prescribed.

The type of progesterone that I recommend and use in my practice is oral micronized slow-release progesterone in capsule form. Oral progesterone that has not been micronized is poorly absorbed by the body—only about 10 percent ends up in circulation as progesterone—and therefore extremely high doses must be taken in order to get a therapeutic dose to the cells. It is also excreted from the body very rapidly, so there is a surge in progesterone levels, followed by a dramatic drop.

These problems do not occur with oral micronized slow-release progesterone. Micronized comes from a Greek word micron, which is a measure of length equal to one-millionth of a meter. Micronized progesterone contains extremely tiny particles, 80–90 percent of which are absorbed by the body, so that lower doses may be used. And because the hormone is released slowly, it is absorbed through the lymphatic system and the tiny capillaries of the small intestines, which allows for a steady delivery of progesterone to the cells.

Natural Estrogen: Use Only as Needed
Not all women, even those who are menopausal or who have had a hysterectomy, need estrogen. As I hope I’ve made clear, many of the symptoms attributed to estrogen deficiency are actually caused by a relative excess of estrogen and are best treated with natural progesterone to restore the proper balance. In addition, even after menopause or a hysterectomy, a woman’s body continues to make estrogen in her fat cells. However, for women who are experiencing hot flashes, night sweats, or vaginal dryness, bioidentical estrogen can be beneficial.
When used in conjunction with progesterone, bioidentical estrogen also may be useful for women at risk of osteoporosis. While it will not help build bone, which is the function of progesterone, the use of bioidentical estrogen can help slow bone breakdown.

Bioidentical estrogen is available only by prescription. Recall that “estrogen” is actually the name for a class of hormones. The form of bioidentical estrogen that I recommend is oral micronized bi-estrogen, called Bi-Est. Bi-Est is composed of 80 percent estriol, the least stimulating of the estrogens and the one that seems most beneficial to the vagina, cervix, and vulva, and 20 percent estradiol, the most stimulative of the estrogens. The ratio of estriol to estradiol may be varied to control symptoms.

In Closing

The old adage, “If momma ain’t happy, ain’t nobody happy,” is really true. When a woman is suffering from a hormonal imbalance, it affects much more than her reproductive organs. It affects her mood, her energy, her outlook on life, as well as her relationships with family members, friends, and coworkers.

Louise, whose story I shared at the beginning of this chapter, had no idea of the toll that her hormonal imbalance had taken in her life and in her relationships with loved ones until the proper balance was restored. Not surprisingly, when I saw her for her follow-up visit after she had begun taking bioidentical hormones, her elation over finally feeling well was mixed with sadness and regret.

“I reflected on my life over the past twenty years,” she told me, “and then wrote my son a letter apologizing for being such an
irritable, moody, depressed mother. He was five years old when I had my hysterectomy. I just wish I had known about natural progesterone then.”

Gail also expressed regret that she had not known about natural progesterone when she was in her twenties and thirties. A year and a half after she first consulted me, she told me that the treatment had had an unexpected dividend—it had improved her marriage. “Life is so much happier around the house. My husband has said he would pay double for all that you have done for my health.”

I was pleased by the news that Gail’s relationship with her husband had improved, but was not surprised. I often remind our staff that we save marriages without doing any counseling. When women achieve hormonal balance, the improvement in their health and quality of life enhances their family lives, their marital lives, their social lives, and their work lives.

It would have been so easy for me to have ignored the problems caused by hormonal imbalances that occur in so many women during midlife. But Dr. Fred had taught me the importance of asking questions, listening to what my patients had to say, and always looking for the underlying patterns in illness. As I applied this simple principle in my medical practice, patterns did indeed begin to emerge. Now all that I had to do was determine what was causing these patterns to develop. Because I was willing to accept information from my patient, Linda, concerning natural progesterone, a whole new opportunity to offer health and wellness to my patients presented itself.

Thank you, Linda!