THE THYROID AND HORMONE CONNECTION

Steven F. Hotze, M.D.

TRANSFORMING LIVES, NATURALLY

At Hotze Health & Wellness Center, we are leading a wellness revolution that advances a new model of health care for our society; a model that promotes natural healing, respects the patient, and puts them in charge of their health and vitality.

OUR MISSION

At Hotze Health & Wellness Center, we look at medical problems a little differently than conventional medicine.

And that's good news for all of our patients.

Our program is designed to address your health concerns from a natural treatment perspective. Instead of masking symptoms with medications, we address the root causes of medical problems and correct them, naturally.

By listening to you and utilizing bioidentical hormones, our goal is to help you restore your health, transform your life, and renew your world, naturally.

We have successfully treated thousands of patients and look forward to serving you in your quest for a healthier and happier you!

Committed to helping you enjoy a better quality of life, I am,

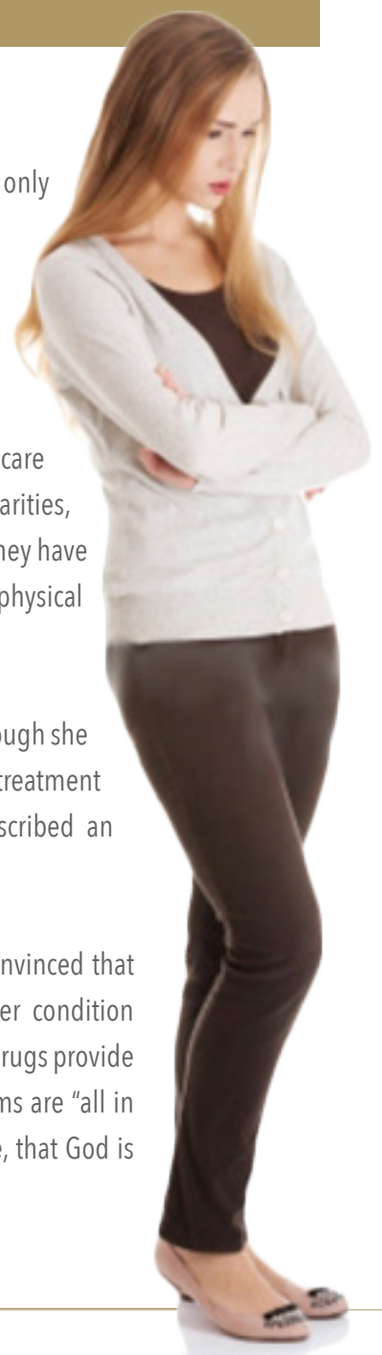
Sincerely yours,

Steven F. Hotze, M.D.

HOTZE HEALTH & WELLNESS CENTER
25 YEARS
1989 2014
TRANSFORMING LIVES

"For the care of your life."

ARE YOU SICK AND TIRED OF BEING SICK AND TIRED?



Are you weary of doctors who won't listen to you, don't understand you, and offer only prescription drugs as the solution to your health problems?

Are you frustrated with being told that your blood tests are "normal" and there is nothing wrong with you?

I understand how you feel. At my Center, I see women daily who have sought the care of numerous physicians for fatigue, weight gain, mood swings, menstrual irregularities, headaches, joint and muscle pain, loss of libido, and numerous other problems. They have had their blood drawn and their hormone levels measured, only to be told that no physical cause of their symptoms could be found.

A woman who is repeatedly told by her doctor that everything is "normal" even though she does not feel well is unlikely to get the personal attention and compassionate treatment that she deserves. Instead, she will be categorized as a hypochondriac, prescribed an antidepressant, or referred to a psychiatrist.

Initially, she may reject the idea of using antidepressants because she is still convinced that something within her body is not functioning correctly. But eventually, as her condition persists, she will comply with her doctor's wishes and take the drugs. When these drugs provide no relief, she may begin to consider that the doctor is right and that her problems are "all in her head." Even worse, she may conclude, as some women have revealed to me, that God is punishing her for her past sins.

If this is the way you feel, then please take note. Your health problems are not "all in your head." Your symptoms are very real and have a physical cause. You are not being punished by God. However, you may be suffering needlessly at the hands of unsympathetic physicians who do not have the time, the interest, or the training to determine the root cause of your problems.

The problems experienced by women during midlife are commonly a result of an imbalance in the female hormones and an overall decline in hormone production. The negative effects of this hormonal imbalance are not limited to the reproductive system. The female hormones play important roles throughout the body, in the heart, brain, muscles, bones, and other major organs and tissues.

The female hormones also interact with hormones produced by other glands, and an imbalance in levels of estrogen and progesterone adversely affects the production and use of these hormones. Fatigue, weight gain, mood and memory problems, insomnia, headaches, and menstrual disorders can all be traced back to various hormonal imbalances and deficiencies. One common result of female hormonal imbalance is hypothyroidism, or low thyroid function, which weakens the immune system and can trigger allergies, chemical sensitivities, and recurrent infections during midlife. Adrenal insufficiency often accompanies low thyroid function, worsening the problems of low energy, impaired immunity, and allergies.

Blood testing, which is a standard diagnostic tool of conventional medicine, is not the best way to diagnose hormonal problems or to assess whether the treatment of these problems is working. The most reliable indication of a hormonal problem is how a patient feels physically, mentally, and emotionally. Likewise, the most important criteria for evaluating the benefits of treatment are the resolution of symptoms and the overall improvement in a patient's well-being.

This approach, which entails listening to the patient's description of her problems and making a diagnosis based on this description, is a lost art in current medical practice. Today's physicians rely almost exclusively on laboratory tests in making diagnoses. While this may be necessary for certain diseases, it is not an effective or appropriate way to evaluate and treat the problems caused by hormonal imbalances and deficiencies that occur in midlife to both women and men.

DOCTOR, AM I A HYPOCHONDRIAC?

When thirty-two-year-old Maggie came to see me, she was experiencing a host of medical problems that had arisen after the birth of her first child two years prior. Her menstrual cycles had become irregular, with her periods occurring as frequently as one to three weeks apart, lasting as long as seventeen days, and being accompanied by severe cramps. She also experienced bouts of severe abdominal bloating, cramping, and constipation.

In the previous year, she had experienced four sinus infections and was plagued by recurrent sinus headaches. Although she had no history of allergies, she was now having wheezing attacks and allergic reactions to perfumes, hairsprays, smoke, and a variety of chemical fumes.

On top of all this, Maggie suffered from severe depression and fatigue. She complained that she was in a "brain fog" much of the time.

Maggie had sought the care of a number of physicians in her hometown of St. Louis, Missouri. She had been given antibiotics for her sinus infections, which had made her abdominal bloating worse, and antidepressants for her mood problems, which had provided no relief. When a friend of hers, a patient at the Hotze Health & Wellness Center, told her there was a natural alternative treatment for her problems, Maggie flew to Houston for an evaluation.

After telling me of her numerous problems, Maggie asked, "Dr. Hotze, am I a hypochondriac?"

WHY DOCTORS DON'T UNDERSTAND WOMEN

The physicians Maggie consulted made her feel as if her problems were all in her head. As you will see, they were wrong. Although their attitudes to Maggie's complaints were condescending, they were not surprising. If their medical education was anything like mine, a callous disregard for women's health problems was virtually guaranteed. Let me explain.

During my first semester of medical school, I took a course called History and Physical Diagnosis. This is a basic course in which medical students learn to interview a patient, identify the chief complaint or symptom, and then perform a review of the systems (digestive, respiratory, cardiovascular, musculoskeletal, etc.), asking about other symptoms the patient might be having.

The professor teaching this course instructed us that if a woman in midlife had more than one complaint during the review of systems, then she was a hypochondriac and should be placed on an antidepressant.

Now, imagine this. The class was overwhelmingly comprised of young men in their early twenties. Every man in that room had already experienced numerous problems with a girlfriend or spouse. Now they knew why. The professor was asserting that women were emotionally unstable individuals, so much so that they often needed antidepressants to make them tolerable. This was a small seed that was sown in the minds of all those young, would-be doctors. It was a seed that would sprout years later when they finally began their own medical practices. The first time they had to interview a middle-aged female patient, she would typically describe a long list of complaints. "Voila," they would think. The professor had been right about women. And of course they knew exactly what to do: prescribe an antidepressant.

What a sad commentary this is. The vast majority of women who have come to me for evaluations are already taking antidepressants, which are one of the most widely prescribed classes of drugs. Now you know why.

MAGGIE'S STORY: "I FEEL LIKE I'M FALLING APART"

When Maggie and I sat down for our first meeting, I asked her how she was feeling.

"I feel like I'm falling apart," she said. "I expected motherhood to be a time of enjoyment and excitement, but instead I feel sad and cry all the time. It is difficult for me to sleep and I never feel fully rested. I can't focus, I have no desire for sex, and I'm not the mother or the wife I want to be."

"How has this affected your relationship with your husband?" I asked.

"He doesn't understand what is going on with me. At first he tried to be supportive but then he became totally exasperated. So I did what most women do. I went to see my doctor."

I asked Maggie what her doctor had done to help her.

"My doctor said that I was depressed and sent me to a psychiatrist, who put me on antidepressants. They both made me feel like I was a hypochondriac. When the antidepressants didn't work, I was scared they might be right. But deep down, I know I'm not crazy and that something isn't right in my body. I can't imagine living this way the rest of my life."

I reassured Maggie that she didn't have to live this way. I told her that there was a simple explanation for her symptoms and a simple solution to her health problems.

ESTROGEN DOMINANCE AFTER PREGNANCY

During pregnancy, the baby's placenta produces high levels of progesterone–ten to twenty times higher than a woman normally produces. When the baby is delivered and the placenta expelled, there is a precipitous drop in progesterone levels. However, estrogen levels remain very high. Unless the ovaries can produce adequate amounts of progesterone to balance the estrogen, a condition known as estrogen dominance will occur.

Childbirth is not the only cause of estrogen dominance. It can also occur at puberty, after discontinuing birth control pills, after tubal ligation or hysterectomy, or simply as a woman moves through her menstrual life. Imbalances in the levels of estrogen and progesterone are inevitable for women in their thirties, forties, and beyond. Regardless of the cause of this imbalance, the health problems that arise are often severe and debilitating. For Maggie, the dramatic change in her hormonal balance following the birth of her child stressed her adrenal glands, altered her thyroid function, and triggered her allergic disorders.

MAGGIE'S TREATMENT PROGRAM

I reassured Maggie that her symptoms were common to women in her age group and could be easily treated. We started by addressing the imbalance in her female hormone levels. Since Maggie was producing adequate estrogen, boosting her progesterone levels would be the key to restoring proper hormonal balance. This could be accomplished safely with a natural, biologically identical progesterone supplement to be taken on days fifteen through twenty-eight of her menstrual cycle.

Maggie's history indicated that she was suffering from low thyroid function, so I prescribed a natural thyroid hormone, Armour Thyroid, to correct this deficit. Because Maggie's hormonal imbalance had stressed her adrenal glands, I also advised her to take a small dose of the natural adrenal hormone, cortisol.

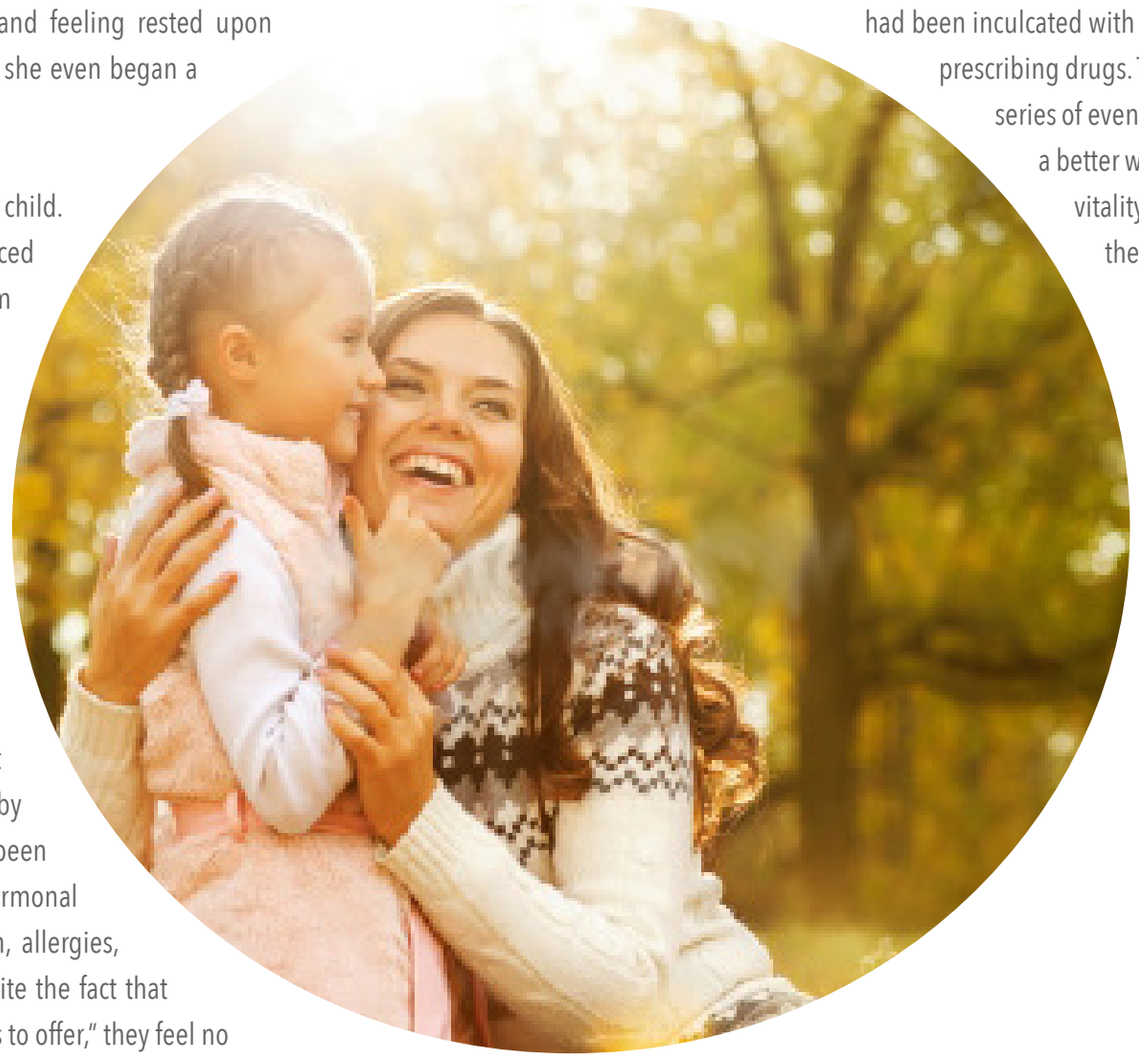
Maggie's recurrent sinus infections are a classic feature of allergies. Skin testing enabled me to determine the level at which to start her allergy treatment for common airborne allergies. Rather than giving Maggie a series of shots to desensitize her to allergens, I prescribed sublingual (under-the-tongue) allergy drops. I explained to her that this innovative approach to the treatment of allergies is safe, convenient, and very effective.

Maggie was weaned off antidepressants, which were replaced with a natural mood-elevating compound, 5-HTP. This molecule is the precursor to serotonin, a neurotransmitter that plays a key role in regulating both mood and sleep. Maggie started a customized program of nutritional supplements and a nutritionally balanced eating program.

Because Maggie's antibiotic use had contributed to yeast overgrowth and digestive problems, I explained that it was important for her to remain on a yeast-free diet for at least three months in order to restore health to her digestive tract. She was prescribed medication to kill yeast,

along with preparations of Lactobacillus acidophilus to replenish beneficial bacteria in the colon that are so important to intestinal health.

Maggie responded beautifully to this comprehensive treatment program. Within one month of beginning treatment, her depression and fatigue had resolved and her menstrual cycle had normalized. She was sleeping well and feeling rested upon awakening. Her energy was so much better that she even began a daily jogging program.



Two years later, Maggie gave birth to her second child. Because her hormones were balanced, she bounced back quickly and had none of the postpartum problems that she had experienced after her first pregnancy. When she returned to the office recently for follow-up, she told me, "I feel healthy, energetic, and happy. Thank you for giving me back my life."

A ROAD MAP TO RECOVERY

Women like Maggie are seen at the Hotze Health & Wellness Center every day. Many travel from out of state, and most have already been evaluated by several doctors before we see them. They have been prescribed numerous drugs to treat their hormonal imbalances, menstrual irregularities, depression, allergies, infections, and other health problems. Yet, despite the fact that they have been given "the best that medicine has to offer," they feel no better than they did before they took the drugs prescribed to them. In fact, they often feel worse.

This is no surprise to me. The simple fact is that, with few exceptions, prescription drugs are not cures, nor are they intended to be. By and large, prescription drugs are designed to relieve symptoms. But just as putting a new coat of paint on a house won't fix a cracked foundation, prescribing a drug to alleviate a patient's symptoms will not restore the patient to good health. It's no wonder many women who come to me tell me they feel like they are falling apart.

In this booklet, I will tell you more about safe and effective alternatives to help you restore your health. As you will see, I didn't venture off the beaten path without a struggle. After all, I had been inculcated with the belief that practicing medicine was virtually synonymous with prescribing drugs. The truth is, I left mainstream medicine reluctantly, and only after a series of events in my personal and professional life convinced me that there was a better way, a more natural way, to help my patients regain their health and vitality. Once I began to witness the amazing recoveries of my patients as they implemented these natural therapies, there was no turning back.

This booklet is a road map that will guide you to the path of health and wellness that thousands of my patients have traveled. It is a map that you can use in your own quest for good health, abundant energy, and the joy that comes from living life to the fullest.

HYPOTHYROIDISM: THE HIDDEN EPIDEMIC

Before I entered the field of allergy medicine, I believed that hypothyroidism was a relatively rare condition in the United States. The introduction of iodized salt in the 1920s had virtually eliminated iodine deficiency, a major cause of hypothyroidism. In my sixteen-year career as a physician, I had seen only one case of myxedema, end-stage hypothyroidism, and that was during my internship at St. Joseph's Hospital in Houston in 1976.

Myxedema takes years to develop and most patients with hypothyroidism are identified and treated long before this late stage occurs. The patient I saw during my internship had inexplicably gone without medical care until his condition was so severe that he required hospitalization. My mentor, Dr. Fred, was able to diagnose this patient simply by looking at him lying in his hospital bed.

One night while I was on duty, I was called by this patient's wife to his room because he had quit breathing. I had to insert a breathing tube into his windpipe and attach the tube to a ventilator. He was then transferred to the intensive care unit where the chief resident, Dr. Charles Butler, gave him intravenous thyroid hormone. Despite this frightening episode and the severity of this patient's condition, he made a remarkable recovery. In fact, five days after his near-death experience, he was chasing a nurse around his hospital room.

Although this patient's dramatic improvement made a lasting impression on me, it wasn't until I entered the field of allergy medicine that the evaluation and treatment of hypothyroidism became a cornerstone of my medical practice. For that, I have to thank Richard Mabray, M.D., a physician from Victoria, Texas.

At the 1992 Pan American Allergy Society conference in Houston, I had the opportunity to visit Dr. Mabray, a very successful obstetrician and gynecologist who also treated allergies. Dr. Mabray advised me to read *Hypothyroidism: The Unsuspected Illness*, by Broda Barnes, M.D. I did, and the insights that I gained from Dr. Barnes's book changed not only my life but also the lives of thousands of patients that I have treated for hypothyroidism.

THE UNSUSPECTED ILLNESS

Broda Barnes was a brilliant physician who studied physiology at the University of Chicago in the 1930s. His doctoral dissertation concerned the role of the thyroid gland in rabbits. Dr. Barnes noted that when rabbits had their thyroid glands removed, their development was impaired. They soon became extremely lethargic, experienced hair loss, and contracted recurrent infections. If a rabbit was given supplemental thyroid hormone, its health improved dramatically. Without it, however, its lifespan was half the length of rabbits with intact thyroid glands.

After he received his Ph.D., Dr. Barnes went on to earn a medical degree from the University of Chicago Medical School. As a physician, Dr. Barnes encountered numerous patients who had been categorized by other physicians as hypochondriacs. After listening to his patients' multiple, vague complaints and examining them, it dawned on Dr. Barnes that these patients reminded him of the rabbits lacking thyroid glands that he had studied. He decided to supplement these patients with thyroid hormone. To his delight, most of the patients responded beautifully to this therapy. Their physical symptoms disappeared, and their energy and well-being significantly improved.

Dr. Barnes's book, based on nearly forty years of medical experience, was published in 1976–the same year that I had encountered the patient with myxedema. At that time, the medical profession viewed hypothyroidism as a relatively rare condition that was best diagnosed by measuring blood levels of thyroid hormones and best treated with synthetic hormones. Dr. Barnes's message was threefold: hypothyroidism was a common but too often unrecognized problem; blood tests were not very useful for diagnosing this condition; and natural desiccated thyroid hormone, such as Armour Thyroid, was the best form of treatment.

Since the release of his book, hypothyroidism has become a regular topic in women's magazines. However, despite the greater media attention that hypothyroidism now receives, most American women who have hypothyroidism remain undiagnosed. Even those who suspect that low thyroid function is the underlying cause of their fatigue, weight gain, depressed mood, brain fog, and other symptoms seldom get help from their physicians. The reason for this is that most physicians have been influenced by a herd mentality. They don't treat patients, they treat lab values.

But Dr. Barnes was right—lab tests aren't the best way to diagnose hypothyroidism or to assess whether treatment is working, as the following two stories demonstrate.

BRENDA'S STORY

Brenda is a forty-year-old mother of two and a substitute teacher. Around the age of thirty-five, Brenda's health took a turn for the worse. She became depressed and was chronically exhausted, even though she exercised. She felt cold all the time, had recurrent infections, and began losing her hair. She was constipated despite the fact that she ate a high-fiber diet and drank plenty of water. And her libido had plummeted, a fact that distressed both her and her husband.

Within the course of a year, Brenda sought the care of a gynecologist, an internist, a gastroenterologist, and a family practitioner, trying to get help for her many problems. While some said she had symptoms of hypothyroidism, they all insisted that her blood tests were normal. Their diagnosis could be summed up in five words: "Nothing is wrong with you."

Brenda knew that something was physically wrong. As she told me later, "Two doctors told me that my fatigue and other problems were all age related. That was when I was thirty-five. I remember thinking, 'Thirty-five, give me a break. Maybe sixty-five!' I was always tired, even though I got a full night's sleep. I knew that I had some sort of a physical problem, if only I could find a doctor to figure it out."

KATHRYN'S STORY

Kathryn's story parallels that of Brenda in many ways. This forty-four-year-old mother of three works as an executive administrator for a large corporation in Houston. Kathryn was diagnosed with hypothyroidism at the age of thirty-five and was prescribed a synthetic thyroid medication, Synthroid. Kathryn had taken Synthroid (levothyroxine sodium) daily for the past nine years, yet she still had numerous symptoms of a low thyroid condition.

Kathryn suffered from extreme fatigue and had problems with her thinking and short-term memory, which made it difficult for her to function in her career. When I asked her how she managed, she said, "I use every ounce of energy to make it through the week so I can rest up on the weekends, only to have to start all over again on Monday. My friends and family tell me that I am grumpy, but if they felt the way I do, I'm sure they would be grumpy too."

Kathryn told me that she had gained seventy pounds in the past decade, although she watched what she ate. "I've seen all kinds of doctors to try to figure out why I can't lose weight," she said. "I've been to a family practitioner, ob-gyn, endocrinologist, and even a nutritionist. The doctors gave me prescriptions for diet pills and told me to stay away from fatty foods. But I didn't eat those things anyway!"

Kathryn was extremely discouraged about her lack of energy and her inability to lose weight. She was also discouraged by the dismissive attitude of the physicians she had consulted. "It's all in your head," one doctor had told her. Another had said, "You're in your forties and it's time for your body to start changing. The way you feel is normal."

Kathryn told me that she knew her problem was hormonal, but her endocrinologist insisted that she was on the right dose of Synthroid because her blood tests were normal. "But I don't feel normal," she told me.

THE SPARK PLUG INSIDE THE CELL

Both Brenda and Kathryn had significant health problems that were affecting their work performance, their personal lives, and their sense of well-being. Both had their problems dismissed by unsympathetic physicians who looked more closely at their blood tests than they did at the living, breathing human beings standing before them. After I had taken the time to listen to these women's stories, to question them about their symptoms and examine them, it was apparent to me that their problems were not in their head but in their cells, which were starved of energy.

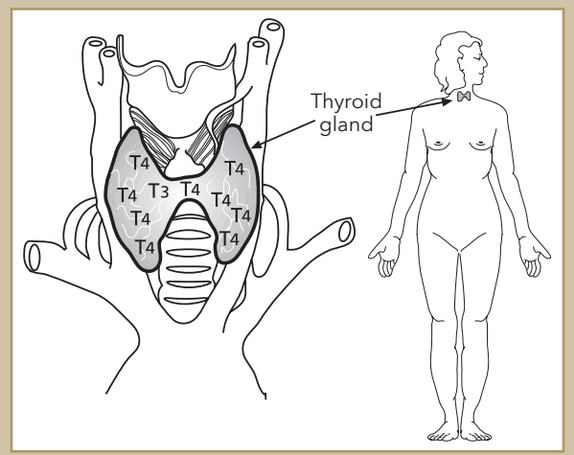
Though you may think of the food you eat as a source of your energy, your body requires more

than food to build and maintain itself. The energy currency inside your body is a molecule called adenosine triphosphate (ATP). Your cells generate ATP from glucose through a complex series of chemical reactions that require the presence of thyroid hormones.

Allow me to use an analogy to help you better understand how this process works. When you put gasoline in your car's tank, this simple act is not sufficient to make your car run. The gasoline must flow through the fuel line and into the engine's combustion chamber. Inside the combustion chamber, the spark plugs must give off a spark to rupture the bonds between the gasoline molecules, which releases energy. This energy then drives the pistons, making the car run. The excess energy is expelled through the tailpipe as heat.

In your body, thyroid hormone functions as the spark plug of the cell. It causes the combustion of glucose, converting the energy stored within its bonds into ATP, which fuels the cellular reactions that keep your body humming along. As in your car, the excess energy is generated as heat, which keeps your body warm.

THE THYROID GLAND



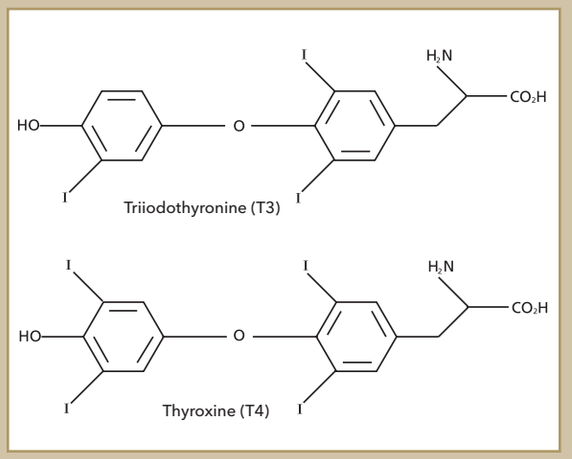
The thyroid gland, a butterfly-shaped organ located in the neck, produces two forms of thyroid hormone, T3 and T4. About 93 percent of its hormone production consists of T4; the remainder is T3.

If you have an eight-cylinder car, but only seven spark plugs are working, then your car will run, but it will run rough and will not perform optimally. In the same way, if your cells do not have adequate levels of thyroid hormone, then the energy contained in the glucose molecule will not be efficiently converted to the energy molecule of the cell, ATP. The result will be a decrease in energy and lowered metabolism. If your thyroid gland were removed, your body would wind down like a toy soldier and cease to function altogether. Without thyroid replacement therapy, you would be dead within a year or two.

Other than surgical removal of the thyroid gland, there are two primary causes for a decline in the cells' supply of thyroid hormones: inadequate production of thyroid hormones by the thyroid gland and inadequate absorption of thyroid hormones by the cells. We're going to look at these two problems in greater detail in a moment. But before we begin, let me clarify one thing.

I have been speaking of thyroid hormone as if it were a single hormone. However, there are actually two thyroid hormones: triiodothyronine (T3) and thyroxine (T4). These hormones look quite similar except for the number of iodine atoms they contain: triiodothyronine has three and thyroxine has four, thus the names T3 and T4. The thyroid gland produces very different quantities of these two hormones. Approximately 93 percent of its thyroid hormone production is in the form of T4, and the remainder is in the form of T3. Despite its higher level of production within the thyroid gland, T4 is considered an inactive form of thyroid hormone. Only T3, or T4 that has been converted into T3 inside the cells, can be used to produce energy in our cells.

T3 AND T4



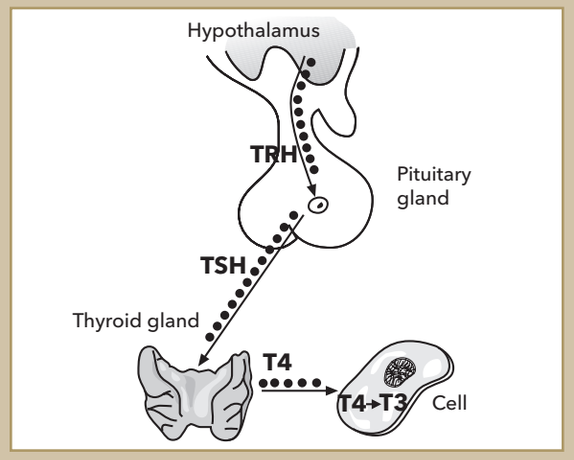
T3 (triiodothyronine) and T4 (thyroxine) have almost identical chemical structures. The only difference is that T3 contains three iodine (I) atoms and T4 contains four.

A FAULTY THERMOSTAT

Think of the thyroid gland as a heater. Just as your heater does not produce heat independent of the thermostat setting, your thyroid gland does not produce T3 and T4 independent of the signals from your internal thermostat, your pituitary gland. This tiny organ, located in the brain, is highly sensitive to changes in blood levels of thyroid hormone. When blood levels drop below a certain concentration, the pituitary gland responds by secreting thyroid-stimulating hormone (TSH). TSH travels to the thyroid gland, where it stimulates the production of more thyroid hormones.

The thyroid gland itself has no way of detecting when more thyroid hormone is needed. So if the pituitary gland is diseased and fails to produce TSH, the thyroid gland will not produce thyroid hormones, even when blood levels drop precipitously. Blood tests of a person with

FROM GLAND TO CELL



When the body's energy requirements increase, a region of the brain called the hypothalamus secretes thyrotropin-releasing hormone (TRH). TRH signals the pituitary gland to secrete thyroid-stimulating hormone (TSH). In turn, TSH stimulates the thyroid gland to produce T4. T4 is secreted by the thyroid gland into the bloodstream and travels to distant cells. After it enters a cell, T4 must be converted into T3, the active form of thyroid hormone, in order to be used to fuel metabolic reactions.

hypothyroidism due to a pituitary problem will show low levels of both TSH and T4, indicating that the thyroid gland is behaving "normally" in response to the subnormal activity of the pituitary gland.

I mentioned another cause of inadequate thyroid hormone production earlier: iodine deficiency. Remember, each thyroid hormone molecule contains three or four atoms of iodine. If your diet contains insufficient iodine, the thyroid gland will be unable to synthesize adequate amounts of thyroid hormone, even if the pituitary gland is sending an urgent message to do so. Iodine-deficiency hypothyroidism is characterized by an enlarged thyroid gland, or goiter. Blood tests will generally show high levels of TSH and low levels of T4, indicating that the pituitary gland is functioning normally but the thyroid gland is failing to respond to the signal. This type of hypothyroidism is now relatively rare in the US, although goiter regions still exist in many areas of the world.

LIKE THIEVES IN THE NIGHT

At the 1992 Pan American Allergy Society conference, Dr. Mabray advised me to evaluate my allergy patients for thyroid disease. "You will find that many of your allergy patients suffer from autoimmune thyroiditis," he said.

Autoimmune thyroiditis, also called Hashimoto's thyroiditis in honor of the scientist who first identified it, is similar to the allergic response in that it occurs when the immune system overreacts, launching an attack on something that normally would be considered innocuous. The difference is that, in autoimmune thyroiditis, the target is not an ingested or inhaled substance, but the body's own cells. Antibodies bind to the thyroid gland and prevent the manufacture of thyroid hormone.

Antibodies also may bind to the circulating thyroid hormone, making it unavailable to the cells. In 1992, I began testing all of my patients for thyroid antibodies and found that allergies and hypothyroidism traffic together like thieves in the night. A full 28 percent of my female allergy patients had this disease, as did 18 percent of my male allergy patients. This is much higher than the incidence found in the general population. In 1996, the American Academy of Otolaryngic Allergy awarded me the Sam Sanders Award for Clinical Research for my study of the relationship between autoimmune thyroiditis and allergic disorders.

A UNIQUELY FEMALE PROBLEM

Hypothyroidism affects women seven times more frequently than men. The higher incidence of genetically inherited autoimmune thyroiditis among women is one reason. The effect of female hormonal imbalance is another.

The menstrual cycle is characterized by changing ratios of the female hormones estrogen and progesterone. During the first half of the cycle estrogen dominates, and during the second half progesterone dominates. However, as the ovaries age, women produce decreasing amounts of progesterone, resulting in a condition called estrogen dominance.

Estrogen dominance causes the liver to produce increasing levels of thyroid-binding globulin (TBG), a protein that has a strong attraction to circulating thyroid hormones. When TBG latches onto a thyroid hormone, the hormone is no longer free to enter into the cells and be used for metabolic reactions.

Even in the most ideal of circumstances, only 0.05 percent of thyroid hormone circulating in the bloodstream–a mere five parts in ten thousand–remains unbound and available to the cells. The remainder–a full 99.95 percent–is bound to TBG and other proteins in the blood. In women with estrogen dominance, the situation is even worse, due to the higher levels of TBG that are produced by the liver.

Birth control pills, pregnancy, and postmenopausal estrogen supplementation also increase levels of TBG, compounding the problem for women. In contrast, the male hormone testosterone has no effect on TBG and actually stimulates the conversion of the inactive thyroid hormone, T4, to the active thyroid hormone, T3, within the cells. It's no mystery why women are much more likely than men to experience low thyroid function.

DO YOU HAVE HYPOTHYROIDISM?

Because thyroid hormones promote the burning of glucose for energy, the most noticeable effects of hypothyroidism– fatigue, weight gain, and sensitivity to cold–have to do with a slowdown in energy and heat production. However, thyroid hormones also regulate tissue growth and development, help maintain blood pressure and fluid balance, and affect the workings of virtually every cell in your body. For this reason, a deficiency state can cause a wide range of symptoms.

PHYSICAL SIGNS AND SYMPTOMS OF HYPOTHYROIDISM

- Fatigue
- Cold extremities
- Decreased sweating
- Muscle and joint pain
- Menstrual irregularities
- Miscarriages
- Recurrent infections
- Decreased mental sharpness, "brain fog"
- Hoarseness
- Dry skin
- Constipation
- Skin pallor, pastiness, and puffiness
- Brittle fingernails with ridging
- Low blood pressure
- Low basal body temperature
- Elevated cholesterol and triglycerides
- Weight gain
- Cold intolerance
- Headaches
- Enlarged thyroid gland
- Infertility
- Loss of libido
- Allergic disorders
- Depression or mood swings
- Slow speech
- Hair loss
- Fluid retention
- Enlarged tongue with teeth indentations
- Loss of hair on the outer edge of the eyebrows
- Slow pulse rate
- Tingling and/or numbness in extremities

The brain is highly sensitive to hormone depletion, and patients with low levels of thyroid hormones often experience depression and problems with concentration and short-term memory. Hair loss, dry skin, and brittle nails are common features of low thyroid function.

A deficiency of thyroid hormones can affect levels of sex hormones, causing menstrual abnormalities in women and a loss of libido in both sexes. Hypothyroidism can also impair fertility and, if it is present during pregnancy, can cause miscarriage, premature delivery, or stillbirth.

Depending upon the degree of hypothyroidism, a patient may have one, some, or all of these symptoms.

A constellation of symptoms such as these is highly suggestive of low thyroid function. Yet, as Brenda's and Kathryn's stories demonstrate, most physicians do not give these symptoms much credence. Instead, they rely on blood tests to diagnose hypothyroidism, and if the tests come out normal, the patient is labeled a hypochondriac or told that she is depressed and sent off with a prescription for an antidepressant.

If a physician relies solely on blood tests to determine whether or not a patient has hypothyroidism, then what is the purpose of the office visit? What do the clinical history of the patient and the findings from the physical examination really matter? Why not just draw the patient's blood for study and save her the time, expense, and humiliation of an office visit?

Dr. Fred had diagnosed a patient's myxedema simply by looking carefully at the patient lying in his hospital bed. He had encouraged me to consider every bit of information available to me, including the evidence of my own eyes and ears, when making a diagnosis. "Don't treat lab values," he had said. "Treat patients."

The single most important tool in determining a patient's thyroid status is a thorough review of the patient's symptoms and a physical examination. Laboratory data can be helpful to confirm the diagnosis, but when the results of lab tests do not correspond to the patient's signs and symptoms, it is the lab tests that should be considered suspect–not the patient. Let me explain why.

PATIENTS DON'T LIE–LAB TESTS DO

I have a healthy skepticism of lab tests, based on my own clinical experience with these tests. The same blood samples from several of my patients have been sent to different labs for measurement of their thyroid hormone levels, and the results have varied by as much as 50 percent. The most that can be said about a lab test is that it is a snapshot of what is going on in the blood at one moment in time. However, thyroid hormone blood levels vary throughout the day and their actions are affected by disease processes, prescription drugs, other hormones that the body produces, and even environmental chemicals.

Also, the "normal laboratory range" of thyroid hormones is an arbitrary value, defined statistically as plus or minus two standard deviations from the mean. This so-called normal range is as wide as the Grand Canyon. In practice, it means that approximately 90–95 percent of the population will always fall within the normal range. However, I assure you that 90–95 percent of the population does not feel healthy, well, and full of energy.

Not only that, but the arbitrarily defined "normal" value has actually changed over time. Between 1991 and 2002, the normal laboratory range for the free thyroxine (free T4) blood test was lowered by 15 percent, from 0.90–2.00 ng/dl to 0.76–1.70 ng/dl. What this means is that

an individual in 1991 who had a free T4 value of 0.80 ng/dl would have been classified by a conventional doctor as hypothyroid, but an individual with an identical T4 value in 2002 would be told that her thyroid function was in the normal range and would be denied treatment. Yet these two patients, separated in time by eleven years, likely would have had numerous symptoms in common–symptoms that are highly responsive to thyroid hormone replacement therapy.

DECLINING HORMONES = DECLINING HEALTH

Leaving aside the problems of conflicting lab test results and variable definitions of what is "normal," there is another reason why lab tests should not be the sole factor in determining whether an individual has hypothyroidism: thyroid hormone levels decline with age, with predictable effects on energy and well-being. It is the relative decline in your thyroid hormone level that matters, not your level compared to some arbitrarily defined standard.

Let's say that as a healthy twenty-five-year-old, your free T4 level was 1.60 ng/dl–the high end of the "normal" range. By the age of fifty, your free T4 level might be as low as 0.80 ng/dl–the low end of the "normal" range. This represents a 50 percent decline in the thyroid hormone that is available for use by your cells. Since thyroid hormones enable your cells to generate energy, is it any wonder that as your thyroid hormone level declines, your energy level also decreases?

If a doctor relied solely on a lab test to evaluate your thyroid function, he would tell you that your condition is "normal"–but you wouldn't feel normal with 50 percent less thyroid hormone. To ensure that you have plenty of energy and feel healthy, your doctor should strive to maintain your thyroid hormone level in the range that is optimal for you.

This is the approach I take with my patients. Yes, I do perform blood tests, primarily to measure free thyroxine (free T4) and to determine whether thyroid antibodies are present. I also look at the total cholesterol and LDL ("bad" cholesterol) levels because these are often elevated in patients with hypothyroidism. However, my primary criterion for diagnosis–and for evaluating the effects of treatment–is how the patient feels.

If you came to my office with symptoms indicative of hypothyroidism, even though your thyroid hormone levels might be in the so-called "normal" range, I would likely offer you a therapeutic trial of thyroid hormone replacement. I would start you on a very low dose and then slowly increase this until your symptoms diminish.

An individual with hypothyroidism must be treated gently, like a car on a cold winter's day. When you get into a cold car and start the engine, it often knocks. Cold air comes out of the heat vents. If you gun the accelerator, you might throw a rod in the engine. Instead, you let the engine warm up slowly and then take the car on the road. Likewise, in the use of thyroid supplementation, small doses are prescribed initially and increased gradually until the symptoms are relieved. The final dose varies from patient to patient.

HYPOTHYROIDISM AND HEART DISEASE

Dr. Broda Barnes was a brilliant scientist. When a friend of his experienced a heart attack in 1950, Dr. Barnes reviewed his medical history, searching for clues. He found that his friend had suffered from symptoms of hypothyroidism for years, but had not sought treatment. Could this have been a factor in his heart attack?

Dr. Barnes knew of the relationship between hypothyroidism and high cholesterol and realized that his patients who were being treated for hypothyroidism had a remarkably low rate of heart attacks, despite the fact that the incidence of heart attacks was rising in the general population.

This observation led him to conduct a twenty-year study of the relationship between supplemental thyroid hormone and reduced risk of heart attacks. He was fortunate to have a landmark study against which to compare the heart attack rate in his own patients: the Heart Disease Epidemiology Study, also known as the Framingham Study, which began in 1949 under the sponsorship of the National Heart Institute and which continues to this day. In this study, five thousand residents of Framingham, Massachusetts, were selected to be followed medically for the rest of their lives in order to determine the cause of heart disease. Each person was followed with annual medical examinations and blood work. Their diets, smoking habits, and lifestyles were documented. However, these patients did not receive supplemental thyroid hormone.

In 1970, Dr. Barnes had 1,569 patients on natural thyroid hormone who were observed for a total of 8,824 patient years. These patients were classified by age, sex, elevated cholesterol, and

high blood pressure, and compared to similar patients in the Framingham Study. Based on the statistics derived in the Framingham Study, seventy-two of Dr. Barnes's patients should have died from heart attacks; however, only four patients had done so. This represents a decreased heart attack death rate of 95 percent in patients who received natural thyroid hormone—a truly remarkable finding.

Doctors often recommend that patients with an increased risk of heart attack take a daily aspirin supplement, pointing to studies suggesting that this will reduce the incidence of heart attacks by 28 percent. Why not consider using natural thyroid hormone supplementation to reduce the death rate from heart attacks? Remember thyroid production declines as we age. Fifty- year-olds produce one half the thyroid hormones that they made during their twenties.

WHICH FORM OF THYROID HORMONE REPLACEMENT IS BEST?

Synthroid is the number one prescribed treatment for hypothyroidism. In 2002, it was the fourth most prescribed drug in the United States. But a drug's popularity is no guarantee of its efficacy, as Kathryn's experience with this synthetic hormone shows.

I had been trained to use synthetic thyroid drugs myself, but when I spoke with Dr. Mabray at the 1992 Pan American Allergy Society conference, I asked him which product he used. Dr. Mabray told me that he treated hypothyroidism with Armour Thyroid, a natural prescription thyroid supplement that he felt was much more effective than the synthetic thyroid drugs. While I had great respect for Dr. Mabray, I thought it wise to seek a second opinion. For that, I turned to Dor Brown, M.D., the patriarch and cofounder of the Pan American Allergy Society.

Dr. Brown lived in Fredericksburg, Texas, and even though he was in his eighties, at that time he had one of the largest allergy practices in the country. He is also one of the finest clinicians I have ever known. Although he is board certified in both ear, nose, and throat surgery and ophthalmology, his practice is multifaceted. Patients have traveled from all over the country seeking his expertise for a host of medical conditions.

When I asked Dr. Brown whether I should use Armour Thyroid or the synthetic thyroid replacement drugs, he recommended, "Use Armour Thyroid." When I asked why, he retorted, "Because it works!"

My clinical experience in treating some six thousand patients over the past thirteen years has convinced me that Dr. Brown was absolutely right. Because thyroid and allergic disorders often go hand in hand, I have had the opportunity to evaluate many patients for allergic disorders who were already being treated for hypothyroidism with synthetic thyroid. Most of these patients had significant symptoms of low metabolic function, even while taking synthetic thyroid. Once these patients were converted to Armour Thyroid and given the appropriate dosage, their symptoms of hypothyroidism markedly improved.

There is a very good explanation for why so many people languish on synthetic thyroid. Synthroid, Levoxyl, Levothroid, and other levothyroxine sodium products contain only a synthetic version of T4, the inactive form of thyroid hormone. Taking T4 without T3 is like replacing only seven of the eight spark plugs in your car's engine. Your body's "engine" will run, but it will never function as well as it should.

In contrast, Armour Thyroid, which is obtained from the thyroid gland of pigs, contains the same thyroid hormone molecules that the body produces, T3 and T4, along with nutrients from the thyroid gland. Armour Thyroid is an FDA- approved product that is formulated according to the exacting standards of the United States Pharmacopoeia (USP). To ensure that the product is consistently potent from batch to batch and tablet to tablet, analytical tests are performed on the raw material and the actual tablets.

T3 + T4 = IMPROVED MOOD AND COGNITION

Given the choice, most patients with hypothyroidism would prefer to take a thyroid hormone product that includes both T3 and T4. This isn't just my observation: it's the conclusion of a landmark study published in the New England Journal of Medicine on February 11, 1999 In this ten-week study, patients with hypothyroidism were randomized into two groups. One group received isolated T4 preparations for the first five weeks and a combination of T3 and T4 for the last five weeks; in the second group, this sequence was reversed. All of the capsules looked alike, so the patients were unaware of which treatment they were receiving during each five-week period.

On the last day of each five-week period, patients were administered standardized psychological tests to assess their levels of depression, anxiety, anger, and other traits. They

were also given cognitive tests of memory, attention, learning, and other functions. On eleven of seventeen measures of mood and cognition, there was no significant difference between the two treatments. However, on six measures, the combination of T3 and T4 proved superior to isolated T4. In particular, when patients received both thyroid hormones, their symptoms of fatigue, depression, and anger were significantly improved, and they performed better on tests of attention, mental flexibility, and learning.

In addition to performing better on standardized tests, patients rated their own mood and physical symptoms as significantly improved on the combination product in comparison to isolated T4. When asked which treatment they preferred, the majority preferred the combination product, stating that they had more energy, could concentrate more easily, and simply felt better.

SYNTHETIC THYROID DRUGS: A TARNISHED HISTORY

Effectiveness is the most important criterion in choosing a thyroid replacement product. But equally important is the safety of the product. Here again, natural thyroid has proven superior. Natural thyroid extracts have been in use for over a century and were approved by the FDA in 1939, a year after the passage of the Food, Drug, and Cosmetic Act. Synthroid, Levothroid, Levoxyl, and other synthetic T4 products entered the market years later without FDA approval, under the mistaken assumption that these products were not new drugs and that their manufacturers were not required to prove their safety or effectiveness.

However, in 1997, the FDA ruled that oral levothyroxine sodium products were indeed "new drugs" and that manufacturers who wanted to continue marketing these products must submit a new drug application for approval. This decision was based on a long history of potency and stability problems with these drugs. In fact, between the years 1991 and 1997, there were ten recalls of levothyroxine sodium tablets, involving more than 100 million tablets. These recalls occurred primarily because these products had a lower potency than claimed or had lost their potency before their expiration dates. In some cases, patients required hospitalization due to problems with their thyroid medication.

Despite this tarnished history, many physicians continue to prescribe Synthroid and other brands of synthetic thyroid hormone and remain opposed to Armour Thyroid. If synthetic thyroid hormone costs twice as much and is less effective, why do they use it? In my opinion, it is largely due to the massive marketing campaigns of the pharmaceutical companies that hold patents on these drugs. Because naturally occurring substances, including thyroid hormone, cannot be patented, these products have a lower profit margin, and the companies that make them do not have millions of dollars at their disposal for marketing. It is a battle of David versus Goliath. In this case, it is Goliath, the pharmaceutical industry, known as Big Pharma, that wins. The loser is the patient who is prescribed the less effective, more expensive product.

TWO HAPPY ENDINGS

Kathryn was one of the millions of patients who were mismanaged because of conventional medicine's bias against natural thyroid. Fortunately, when I switched her from Synthroid to Armour Thyroid, every aspect of her health improved dramatically. As she put it, "Mentally, I feel super. Physically... well, let me put it to you this way–I went from a size eighteen to a size eight." Kathryn was a fashion merchandising major in college, and she is thrilled to be able to go into a store and find clothes in her size. Her skin is no longer dry, her hair is thicker and fuller, and she feels more attractive and more confident. Even her friends have noticed the difference and have commented on how much happier she seems.

Brenda has also made a dramatic turnaround since beginning Armour Thyroid supplement therapy. "My energy has gone up from a two to a nine out of ten," she said. "Instead of directing my children's activities from the couch, I now get up with them in the morning and help them get ready for school." She also has more energy to do things during the day with friends. And now that her thyroid hormones are at an optimal level, Brenda no longer suffers from low libido–a change that both she and her husband appreciate.

When I asked Brenda if she had any advice for other women suffering from low energy and depression, she said, "It may take some detective work and some perseverance, but if you know that you have a health problem, keep searching until you find a doctor who will listen to you. Try different doctors until you find one who is willing to treat your underlying problem and not dismiss you as a hypochondriac. You'll know it was worth the trouble when you finally start to feel better."

NATURAL FEMALE HORMONES: THE MISSING LINK

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.

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.

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. 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.

"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."

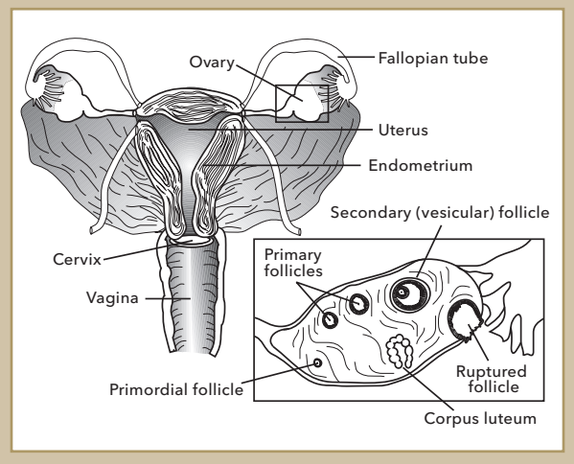
Louise had even called her own mother, who had been a recluse in her house for the past ten years, and advised her to start on natural progesterone. "My sister called me two weeks ago," she reported, "and asked me what in the world I had given to our mother. I asked her why, and she told me that Mother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

WHY ESTROGEN DOMINANCE OCCURS

Louise, her daughter, her mother, and millions of other 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



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

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 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.

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.

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.

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.

THE NORMAL MENSTRUAL CYCLE

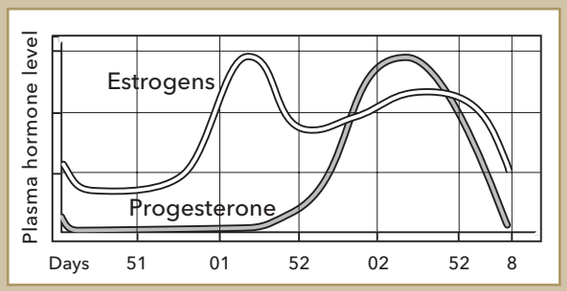
A normal menstrual cycle lasts twenty-eight days. The first day a woman starts her period is day one of her menstrual cycle. During the first fourteen days of the menstrual cycle the ovaries make increasing amounts of the estrogens. The function of these hormones is to stimulate the growth of the endometrial 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.

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.

While these symptoms may be common,

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

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.

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.

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 previously, 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.

THE DANCE OF FEMALE HORMONES

EFFECTS OF PROGESTERONE

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

EFFECTS OF ESTROGEN

- Stimulates growth of the uterine lining
- Causes growth of breast tissue
- Promotes fluid retention
- Causes thickening of the blood
- Slows bone breakdown
- Reduces bioavailability of thyroid hormones
- Inhibits the sex drive

Within three to five years, the rate of bone loss slows to premenopausal levels.

As this comparison demonstrates, the decline in progesterone levels that occurs beginning in a woman's midthirties 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 midthirties.

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 midthirties 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 booklet 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 booklet, 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 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.

ESTROGEN DOMINANCE AND BREAST CANCER

The most serious consequence of estrogen dominance is breast cancer. As I mentioned earlier, 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.

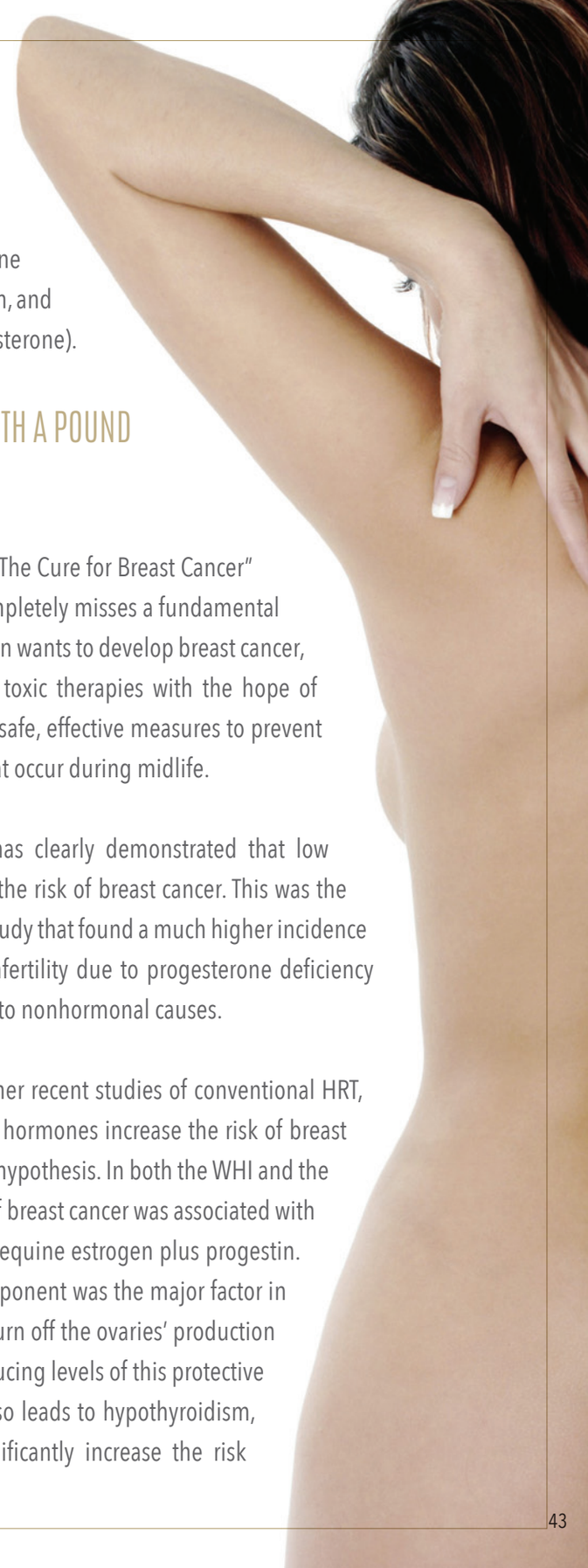
WOMEN'S HEALTH INITIATIVE

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.

A TALE OF TWO "HORMONES"

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 Pre + mar + in). 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.

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.

IF MOMMA AIN'T HAPPY . . .

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 earlier, 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!

IN CLOSING

Are you sick and tired of feeling sick and tired? Has mainstream medicine failed to address your health problems? Have you grown weary of medical specialists placing you in one category rather than looking at the big picture? Are you tired of doctors treating you like a number and not listening to what you are saying? Do you want to feel healthy, vibrant and strong like you did when you were young?

At the Hotze Health & Wellness Center we will listen and work with you to achieve optimal health. We will look at you as a person and not just another patient.

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