

Creating and Maintaining Balance

AGUIDE TO
SAFE, NATURAL
HORMONE
HEALTH



By Holly Lucille, ND, RN

Foreword By Jacob Teitelbaum, MD

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Publishers' note:

The information herein can be a valuable addition to your doctor's advice, but it is not intended to replace the services of a trained professional. It is not safe to self-diagnose. If you have symptoms suggestive of a condition discussed in this book, please consult a healthcare practitioner, preferably a naturopathic doctor (ND).

Before experimenting with natural treatments, discuss them with your care provider. Since many conventional healthcare practitioners may not be aware of the natural alternatives available, you may need to help educate him or her. Bring this book along with you to the doctor's office.

DEDICATION

This book is for all women looking for a safe, natural, effective way to deal with hormone health in our modern times. I am fully aware that there are many options to choose from when it comes to taking care of oneself. No matter what choices we make to remedy what ails us, there are two ingredients that cannot be left out, or any attempt will be useless. Those ingredients are love and compassion. I would like to give special thanks to the women in my life who have taught me most about these aspects of myself:

Lucille Niebel,

Naomi,

and Cathy.

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To my friends and family who make me who I am. And thanks to my patients, with whom I am privileged to work and without whom I am nothing.

BY JACOB TEITELBAUM, MD

Foreword

Medicine is evolving. When I was in medical school in the early 1970s, the focus of treatment was how to “poison” one body system to remedy another. A contemporary example is Prozac, which poisons the system that brings serotonin into cells for storage, thus raising extracellular serotonin levels. This can work well to treat depression, but altering one system often throws others out of balance. For example, Prozac also causes sexual dysfunction and other side effects in approximately one-third of the people who use it. Nonetheless, in a society based on economics and quick fixes, prescription medications and surgery have surged ahead of other healing arts. Although there are certain benefits to this approach, there are also great costs for patients.

By learning how healthcare came to be the way it is today, we gain understanding and the ability to choose where we want to go. In the 1800s, there was little research and regulation in the healing arts. For much of human history, treatments were based on hundreds or thousands of years of experience and social traditions. The healers and wise women in the tribe would learn what worked from experience and pass on the information to their apprentices in a chain that often spanned thousands of years. As world wars and the expansion of Western civilization began to destroy long-standing social structures around the planet, much of this information and experience was lost. Accountability was also lost, and we began to see the rise of snake oil salesmen—people selling so-called natural remedies that actually had no health benefits. Natural medicine entered a period of decline.

It was in this context that science came to the forefront. People longed for proven healthcare methods developed by people who were accountable for their claims. Scientists provided this, using techniques that allowed ideas to be tested, reproduced, and validated. Because of the natural competition in

the field, these ideas initially had to survive other scientists' skepticism before being accepted. Testing and validation began to take hold in the healing arts.

As in any system that generates a large amount of money and power, factors other than truth began to have their say. In the early 1900s, research focused on both biophysics (treatments that affect the body's energy systems) and biochemistry (treatments that modify chemical reactions in the body). Because the biochemists had more money and political clout than the biophysicists, they gained the upper hand. *Who* you know can be more powerful than *what* you know, and the rise of biochemistry over biophysics had little to do with how effective and safe a treatment was. The lower standing of biophysicists meant research and treatment using biophysics was marginalized and suppressed. Seeing which way the winds of change were blowing, many of the greatest names in modern medicine switched from biophysics to biochemistry.

Medical schools were founded (many of which initially focused on using natural therapies), standardized curricula and tests were developed, and it became possible to develop reliable conditions for being licensed. To counteract snake oil salesmen who were preying on the public, state governments developed licensing requirements for the practice of the healing arts, bringing more credibility, power, and respect to the field. Medicine was therefore able to attract compassionate healers. The fields of allopathic medicine and chemistry flourished.

As our understanding of chemistry evolved, it began to change the face of our country. New chemically derived fibers and materials became a part of everyday living. We went from almost no foreign chemicals in our environment to thousands of new ones for our bodies to detoxify. These chemicals are part of our food and water supply, building materials, clothing, and—not surprisingly—our medications. Money fueled this development: A natural substance cannot be patented, but new chemicals can be. A patent prevents competition, so more money can be made. For example, to treat indigestion, patentable acid blockers can cost two dollars or more per pill, whereas nonpatentable calcium carbonate may cost a nickel. People realized there was a lot of money to be made in medicine and, in particular, patentable medications. Corporations used this money to influence legislation and people's perceptions in an attempt to eliminate competition.

Language was added to legislation to consolidate allopathic medicine's

power. As the U.S. Food and Drug Administration (FDA) was developed to protect public safety in the face of thousands of new chemical treatments, language was also added to legislation stating manufacturers could not claim something was effective for treating an illness unless it went through the FDA approval process. This process costs \$400 million to \$800 million per treatment, so only treatments that can be patented (meaning not natural supplements) can recoup these enormous costs. An excellent example of the challenge faced by natural product manufacturers is the use of vitamin B6 for carpal tunnel syndrome. Treating carpal tunnel syndrome with 250 mg of B6 daily for six weeks costs about \$9 per patient. Because the treatment cost is so low, vitamin B6 manufacturers would find it impossible to recoup the cost of getting FDA approval for this treatment. Without FDA approval, they cannot advertise B6 for this use. As such, most patients instead spend between \$2,000 and \$4,000 on surgery. The situation is the same for hundreds of other nonpatentable, effective, inexpensive, and relatively safe treatments. The FDA has even been fighting to prevent stores that sell supplements from handing out copies of scientific studies about supplements.

In one legislative stroke, it became illegal for the manufacturers of natural medicines and products to advertise or even give consumers information about how to treat illnesses, regardless of how good the scientific data supporting the claim. Legislation was also pushed through Congress allowing only medical doctors and osteopathic physicians to diagnose and treat people. It became illegal for other healthcare providers to give patients the information needed to make informed decisions. At the same time, medical schools taught students that nutritional and natural therapies had no scientific basis and were only used by quacks. Thus, despite a large body of scientific data supporting natural medicine, you may find your doctor uninformed about it, hostile to it, and resistant to even look at the studies. Modern medicine went from being the wonderful tool of science to becoming an exclusive belief system that rejects outside ideas.

Fortunately, as always, life moves forward seeking balance and growth. Although it has its strengths, allopathic medicine's weaknesses are becoming apparent. Despite lack of funding and acceptance by mainstream journals, research continues on natural and energy therapies (acupuncture, for example). Many practitioners are exploring this expanding body of research, but the majority in Western medicine has been hostile to this research and has

turned a blind eye to it. So most medical doctors, like myself, often are introduced to this information by our patients.

As a physician, I was given the impression that if an important treatment existed for an illness, I had been taught about it. If someone claimed he or she could effectively treat a nontreatable disease, that person was a quack. If such a treatment existed, I would surely know about it.

I was wrong.

When I first started my practice, patients would ask me if I knew about certain herbal or nutritional treatments for illnesses. One patient asked me if I had ever heard about using coenzyme Q10 for congestive heart failure. “That’s nonsense,” I answered. “If coenzyme Q10 helped congestive heart failure, don’t you think I would have been taught to use that instead of doing heart transplants?” Still, I said that I would look into it.

Joyce Miller, the librarian at Anne Arundel Medical Center in Annapolis, Md., has always been happy to procure studies for me (and she has gotten me many thousands through the years). When she did a literature search on coenzyme Q10, she found a number of studies showing it could be quite beneficial in treating congestive heart failure. I found this curious. During the following few months, this scene played out again and again. I decided to keep notes on these rare “pearls” in a 30-page spiral notebook. My notes are now more than a thousand pages long.

The area of natural medicine has been growing tremendously during the past few decades and can now treat many difficult and often debilitating conditions. For example, combining natural and prescription therapies has allowed us to develop highly effective treatments for people with chronic fatigue syndrome and fibromyalgia. These syndromes are characterized by exhaustion, widespread pain, “brain fog,” and insomnia. They debilitate more than 6 million Americans. Most doctors tell their patients nothing can be done for these illnesses and the symptoms simply must be tolerated. Natural practitioners, however, know this is not the case. Well-conducted research demonstrates that more than 91 percent of patients can now find marked improvement using an integrative medical approach. In fact, natural medicine is now able to significantly improve the treatment of most illnesses.

So how can you get access to this information? Recognize that more than 95 percent of the clinical training your physician received was in treating severe, life-threatening illnesses. I was taught more about how to tell

whether fluid coming from a patient's nose was from a skull fracture than I was taught about how to treat a common cold. It was somehow presumed that if a physician could save a person in a life-threatening emergency, he or she also would know how to treat common, nonemergency problems. As most of you with pain, fatigue, hormonal, or other day-to-day problems have learned, this is not the case.

A change is occurring in healthcare education, perhaps in response to the shortcomings of allopathic medicine. Schools of naturopathy have developed standardized, four-year curriculums and board exams that ensure excellent training and quality control. Naturopathic doctors are predominantly trained in treating day-to-day illness and in maintaining health—often with a mix of both natural and prescription therapies. I would certainly want to be treated with allopathic therapies in emergency situations such as a cardiac arrest or acute appendicitis, but naturopathic approaches can be powerful for treating day-to-day problems and maintaining optimum health.

Because of their training and the large body of scientific literature they are taught, naturopaths are being licensed as doctors by many states. In California, Holly Lucille, ND, RN, the author of this book, spearheaded this licensing. As president of the California Naturopathic Association, she is dedicated to making optimum health and healing available to everyone. Instead of poisoning your body with medications in an attempt to make you well, Dr. Lucille will teach you how to give your body what it needs to restore health and balance naturally. Although this approach may take a little longer—it takes longer to build a building than to tear one down—I think you'll find it feels much better than the healthcare you might be used to, and it is highly effective.

Dr. Lucille is passionate about giving people the information they need to restore and maintain optimum health safely. She is both incredibly knowledgeable and compassionate; I am honored to count her as a friend. This book is a breath of fresh air—I think you'll really enjoy it.

Love and best wishes,
Jacob Teitelbaum, MD

Dr. Teitelbaum is a board-certified internist and director of the Annapolis Research Center for Effective CFS/Fibromyalgia Therapies. Having suffered with

and overcome these illnesses in 1975, he spent the next 25 years creating, researching, and teaching about effective therapies. He is the senior author of the landmark study “Effective treatment of chronic fatigue syndrome and fibromyalgia—a placebo-controlled study” (J Chronic Fatigue Syndr 18, 2001, 3-28; full text available at www.vitality101.com). He lectures internationally and is author of the best-selling book From Fatigued to Fantastic! (Avery Penguin Putnam, 1996) and Three Steps to Happiness! Healing Through Joy (Deva Press, 2003).

Introduction

Growing up the daughter of two pharmacists, I was well versed in the Western medical approach: “You don’t feel well? Here take this pill.” Even at a very young age, I had difficulties with this approach to health. I always wanted to know, “Why?” I wouldn’t stop asking questions until things made sense to me. “What will it do for me? Will it hurt me? Will I need it all the time? How much does it cost?” My parents say I drove them crazy, leading them to hypothesize they had taken the wrong baby home from the hospital. However, my ability to question and the desire to know more has not stopped; in fact, it is why I’m writing this book about women’s health. Fueled by curiosity and the desire to make a difference, I’ve learned women’s health is much more than symptom management. It is about creating a balance in our exquisite collection of hormones through healthy living.

My professional journey began more than a decade ago when I decided to become a nurse because I wanted to help people. The inspiration came during a class for volunteers at a local hospital. I learned when people become ill or need to be hospitalized, they give up some of their personal rights, such as the right to privacy, the right to choose, and the right to be informed and understand all of what’s going on. I was incensed and thought, “I have to get into this system and help.”

But the questions didn’t subside when I became a nurse. Soon, I was disillusioned with the simple directive of carrying out doctors’ orders. I wanted more rationale behind some of the decisions being made. I wanted a more active role in caring for people.

In my quest to find a satisfying place for myself in healthcare, I found the American Holistic Nursing Association. Completing a post-graduate program in holistic nursing provided me with an environment in which I was guided by instruction and philosophy that supported and treated

people, not just their diagnoses or symptoms. This felt perfect! After seven years in holistic nursing, becoming a naturopathic physician seemed the next natural step.

NATUROPATHIC THEORY

As a naturopathic doctor, I was taught to think about health and approach healing in a comprehensive—or holistic—way. Not only are naturopathic doctors trained in the medical and clinical sciences (biochemistry, pathophysiology, anatomy, and microbiology), we also are guided by principles and a unique philosophy of care. I use these principles to guide my practice.

- *First, do no harm*

Naturopathic doctors use methods and medicinal substances that minimize the risk of harmful side effects. They use interventions that exert the least possible force to restore health. They respect and work with each patient's inherent self-healing processes.

- *Identify and treat the cause*

The theory behind naturopathic medicine is to discover and then remove the underlying cause of an illness, not just eliminate or suppress symptoms. It is about restoring function in an individual, not artificially replacing it. Understanding symptom management and helping make people comfortable are extremely important; however, getting to the root of the problem is the goal.

- *Treat the whole person*

In naturopathic medicine, doctors recognize that people are more than just their physical bodies. People are complex beings bombarded by physical, mental, emotional, social, spiritual, biological, environmental, vocational, and many other influences that all contribute to their health and well-being. Naturopathic doctors look at all potential factors that might be contributing to a physical illness.

- *Doctor as teacher*

The Latin word for *doctor* also means *teacher*. Naturopathic doctors strive to educate their patients and work with them to optimize each patient's health. When people are informed, they are empowered. Educated people can take back responsibility for their health and their bodies.

- *Prevention is the cure*

Naturopathic medical theory is based on prevention. Each patient is treated as an individual, and his or her current and past health history is evaluated. Risk factors, including heredity and susceptibility to diseases, are explored; appropriate interventions are suggested to prevent illness. Paying attention to physical, emotional, and mental health throughout life can help prevent serious illness.

- *Nature's healing power*

Naturopathic doctors recognize that everyone has an inherent self-healing process that is ordered and intelligent. In practice, naturopaths support, facilitate, and assist this process by identifying and removing obstacles to health or correcting important deficiencies to create healthy internal and external environments.

As my private naturopathic practice evolved, I realized instead of a general family practice, I would be specializing in women's health. Day after day, appointment after appointment, women came to me for hormone-related issues. I saw women having difficulty transitioning into menopause, and I also saw an extraordinary number of younger women experiencing weight gain, irritability, insomnia, decreased libido, and hot flashes. There were also women with sexual and reproductive problems—infertility, uterine fibroids, endometriosis, ovarian cysts, and severe premenstrual syndrome (PMS)—as well as breast and uterine cancer. Most of these women came in with a recommendation from their physician that they begin taking synthetic hormones. For women entering menopause it was hormone replacement therapy (HRT), and for the younger women it was the birth control pill. In conventional medicine, the theory is that if declining hormones trigger menopausal symptoms, women should take “replacement” hormones to alleviate those symptoms. To treat PMS and other complaints, conventional medical doctors frequently prescribe birth control pills, which manipulate the body by providing replacement hormones throughout the month to moderate the effects of the natural hormone cycle. These artificial hormones suppress the body's natural cycle; they do nothing to address why the symptoms are occurring. Intuitively, these women knew synthetic hormones weren't the best solutions for them, so they came to me searching for something more.

A pattern was emerging among my patients, but it really hit home when my own 38-year-old body started to flare up. My periods became unbearable; I had cramping, clotting, and bloating. My PMS and irritability got so bad my family would mark the two weeks beforehand as the “red zone.” I wrestled with debilitating fatigue for the first time in my life, not to mention the unwelcome weight gain and changes in body temperature. I was frustrated because I couldn’t attribute these changes to anything different in my diet or lifestyle. I was desperate to figure out what was going on, and more importantly, what I could do about it.

The stress of building my practice and business, having a family, being president of the California Association of Naturopathic Physicians, and having an overall unrelentingly stressful lifestyle was taking a toll. I had moved back to one of the most polluted—yet beautiful—areas in California. And my dietary choices tended to be less than ideal in times of stress when I needed quick energy. I was drinking coffee in the morning to get me going and looking forward to a glass or two of wine on the weekends so I could finally relax. I was completely out of balance.

My stress level was taxing my adrenal glands. I developed digestive disturbances, which I knew were compromising my liver’s ability to do its many jobs, including processing and neutralizing hormones. The effects on my body were manifesting in the form of annoying and uncomfortable symptoms. I knew the last thing I needed was more estrogen from birth control pills. I needed to get my body back in balance. If I didn’t work to correct some things, I knew I was increasing my risk down the road for dangerous health conditions, such as cancer.

Listening to the signals my body was sending, such as the difficult periods (which are not normal), then making some profound changes in my diet, lifestyle, and supplement regime got me back on track, in balance, and wiser than before.

What I discovered in treating my patients and myself is that women are experiencing this common collection of symptoms because all of their hormones—not just estrogen and progesterone—are out of balance. This imbalance throws off other bodily systems. Most important, treatment with synthetic hormones is not helping women live longer, healthier lives. Most of these conditions, including difficult transitions to menopause, can be traced to hormone imbalance; more hormones are the last thing women

need. In fact, this course of action could be harmful. Hormone imbalance can not only cause the symptoms mentioned above, but also can lead to cancer, heart disease, osteoporosis, and Alzheimer's disease.

Women's hormone health did not become more problematic overnight. It has a lot to do with our modern environment and lifestyles. Pollution, stress, food quality, and prevailing medical practices take their toll on bodily systems. The good news is once we understand what creates imbalance, we can tap the many safe ways of restoring balance and eliminating uncomfortable, irritating symptoms while preventing disease and increasing overall quality of life and well-being.

Hormones IOI

“Touch one strand and the whole web trembles.” —Deepak Chopra, MD

Our bodies are brilliant and built to stay in balance through the harmonious efforts of many interrelated systems. These systems, including the nervous and endocrine systems, work with internal and external influences to keep our bodies functioning on an even keel. The nervous system works with electrical impulses and neurons to adapt to stimuli, and the endocrine system uses chemical messengers called hormones to affect bodily activities. Hormones are powerful messengers that travel through the blood to stimulate a response or cause a reaction. These two systems are intimately related and their activities coordinated. For example, the nervous system can stimulate or inhibit hormone release via the endocrine system.

You can think of hormones as keys and receptors as locks. When a key is placed in a compatible lock, the cell receives instructions to perform a task related to that specific hormone. We used to think only one key worked for each lock, but now we know many keys can fit into the same lock. This is beneficial information, because of all those interchangeable keys, some are helpful and some are harmful. Phytoestrogens, or plant-based hormones, are helpful keys. These can fill receptor sites and block cells from being stimulated by stronger hormones. Harmful hormonal keys, most often from man-made sources such as pesticides and pollution, can stimulate toxic cellular behavior.

Although the best-known hormones—estrogen and progesterone—play a significant role in women’s health, the endocrine system produces a variety of other hormones, including cortisol, thymosin, melatonin, glucagon, calcitonin, and thyroxine. Hormones initiate bodily activities when they attach to receptors on the surfaces of cells. They deliver messages. For example, when

the uterus is stimulated by estrogen, cells grow and proliferate to create a nourishing lining in preparation for pregnancy.

SPECIALIZED GLANDS

The endocrine system glands are located throughout the body and are intricately related. Each gland secretes hormones that help maintain balance by altering the physiological activities of an organ's cells or of cells in organ groups. Hormones also may directly affect the activities of all the body's cells, such as the thyroid hormone's effects on metabolism. The body's need for any particular hormone determines how much is released. The glands and hormones influence each other and all aspects of growth and development. The system is built with some redundancies for safety and efficiency. All this interconnection is what makes the endocrine system both powerful and vulnerable. Because endocrine activity influences the entire body, healthy endocrine gland function is paramount.

Hypothalamus. Located in the brain, the hypothalamus can be considered the CEO of the endocrine system. It provides direction to the other glands and controls their activity. The hypothalamus is involved in controlling water balance, sugar and fat metabolism, body temperature, and the secretion of releasing and inhibiting hormones.

Pituitary. The pituitary gland is also located in the brain. The hormones it secretes—including follicle-stimulating hormone (FSH) and luteinizing hormone (LH)—help regulate reproduction, growth, and thyroid function. Most tissues in the body are influenced by the pituitary gland.

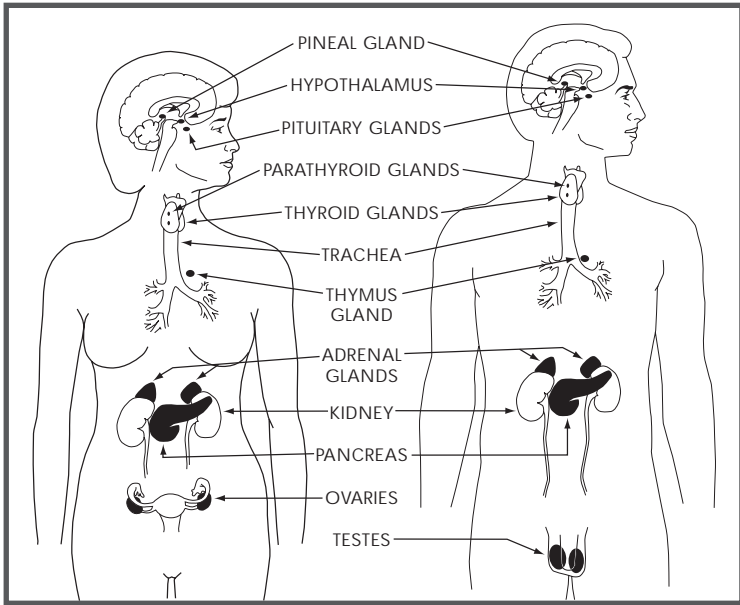
Pineal. The primary function of this small gland located in the brain is to release melatonin, which helps regulate the daily rhythms of sleep and wakefulness.

Thymus. Sometimes referred to as the master gland of immunity, the thymus is located in the neck. It is intricately involved with immune system development and function.

Pancreas. This gland is located behind the stomach. It works closely with the liver, and its primary function is to help control blood sugar levels. It secretes pancreatic fluid and contributes to digestion of all foods in the small intestine.

Adrenal. Located on the upper portion of the kidneys, these glands are controlled by the sympathetic nervous system and func-

THE ENDOCRINE GLANDS



tion in conjunction with it. They adjust bodily responses to stress and emotional changes by releasing norepinephrine and epinephrine. Another part of the adrenal gland secretes other hormones, including cortisol, estrogens, and progestins.

Thyroid. The thyroid is a bow-shaped gland located just below the voice box. It controls metabolism and many other bodily functions. The thyroid gland secretes calcitonin, which is important for maintaining a dense, strong bone matrix and regulating blood calcium levels.

Parathyroid. These small endocrine glands located near the thyroid secrete parathyroid hormones, which regulate calcium and phosphorus metabolism.

Ovaries. These two glands produce eggs and two known hormones, estrogen and progesterone. The ovaries are almond shaped and are located on either side of the pelvic cavity, attached to the uterus by ligaments. FSH and LH primarily control ovarian activity.

Testes. These glands are located in the scrotum and produce sperm and the male hormones testosterone and inhibin.

The hormone messengers are controlled by the endocrine system, which comprises the adrenal, hypothalamus, pancreas, pineal, pituitary, reproductive (testes and ovaries), thyroid, and thymus glands. Their harmonious activities have a significant effect on overall health. If any one of these glands isn't able to function properly because of stress, lifestyle, or dietary influences, the effects are far-reaching and felt body-wide. For example, hormones secreted by the pituitary, thyroid, and ovaries stimulate bone growth. Without the proper amounts of these hormones, bones can become weak, which increases osteoporosis risk. An unhealthy or unbalanced endocrine system can also tax the digestive system, creating ulcers, constipation, or diarrhea. If the endocrine system can't send the proper messages to the thymus gland, the immune system may become compromised, increasing susceptibility to illnesses.

When the endocrine system is functioning properly, there is internal harmony. The endocrine system is designed to maintain balance by using a variety of complex feedback loops. Through numerous internal reactions, the endocrine glands diligently attempt to maintain or create balance through a woman's hormonal stages—puberty, ovulation, menstruation, pregnancy, perimenopause, and menopause.

LIFE CYCLES

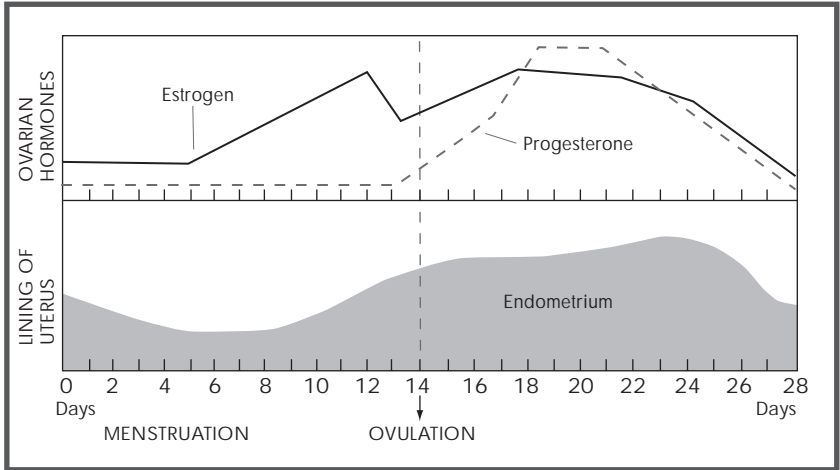
Puberty defines the onset of our hormonal cycles and generally occurs between the ages of 9 and 16. In addition to stimulating growth in breast tissue, body hair, and overall height, female puberty is characterized by the onset of menstruation—the monthly discharge of the uterine fluid in the absence of pregnancy.

A typical menstrual cycle lasts about 28 days but can vary from woman to woman. The menstrual cycle's purpose is to stimulate the ovaries to release an egg for possible fertilization and the uterine lining to prepare for possible implantation of that fertilized egg. Estrogen and progesterone are the two predominant hormones driving this process. The menstrual cycle is an excellent example of how connected and intricate the endocrine system is.

The steps of a typical menstrual cycle:

1. The hypothalamus signals the pituitary to release FSH, which causes the ovaries to secrete estrogen so the egg can mature.
2. When estrogen reaches a specific level, the hypothalamus tells the

MENSTRUAL CYCLE



pituitary to secrete LH, which stimulates the release of a fully developed egg. The release of an egg is called ovulation.

3. Estrogen levels then fall as progesterone levels rise to help build the uterine lining to prepare it for the fertilized egg.
4. If the egg is not fertilized after 13 to 15 days, estrogen and progesterone levels both drop, and menstruation begins.
5. The process starts anew.

A balance of estrogen and progesterone levels is necessary for healthy ovulation and menstruation to occur each month. In a normal cycle, estrogen dominates the first half of the cycle until ovulation; progesterone dominates the second half until menstruation.

The dynamic interplay between estrogen and progesterone is extremely important to women's overall health and hormonal balance. Remember, estrogen's primary function is to cause cells to multiply and grow. In the case of normal menstruation, cell growth is a safe and necessary component. However, excessive cell or tissue growth stimulated by excess estrogen is unhealthy and can lead to conditions such as PMS, endometriosis, fibroids, or even cancer. To keep estrogen levels in check, the endocrine system allows progesterone levels to rise and fall, creating a balance. If stress or other factors tax the endocrine system, hormones can get out of balance, leading to all manner of symptoms and disorders.

Another natural part of a woman's hormonal life cycle is menopause, or the cessation of menstruation. As a woman approaches this phase, she may begin feeling hormonal fluctuations when she is as young as 35, though they typically begin three to six years before her last period. This transition between reproductive years and menopause is commonly called premenopause or perimenopause. It is characterized by hormone fluctuations more resembling puberty's wild ride than the rhythmic hormonal flow of the reproductive years. The perimenopausal experience can be subtle or dramatic, depending on heredity, health, stress levels, diet, lifestyle, and whether or not hormones were manipulated with birth control pills during the reproductive years.

During perimenopause, symptoms such as menstrual irregularities, breast tenderness, clouded thinking, weight gain, insomnia, and moodiness may appear as a result of altered hormone activity. As the reproductive years wind down, the ovaries don't always produce an egg every month. (A cycle without ovulation is called an anovulatory cycle.) Without ovulation, the ovaries don't produce progesterone, which leaves estrogen unopposed or unbalanced, and this is attributed to many perimenopausal symptoms.

Menopause begins for the majority of women in their mid-40s to early 50s; the average age is 51. Paramount among the hormonal changes is that the ovaries stop producing estrogen and progesterone. When this happens, menstruation ceases and women may experience other changes as well, including hot flashes, vaginal dryness, mood swings, insomnia, and night sweats, to name a few.

The production of estrogen and progesterone does not stop completely at menopause, but the primary sources of these hormones shift. When the ovaries cease production of these hormones, the adrenal glands and fat cells take over. The body is designed to accommodate this natural process, just as it is able to adjust to puberty and pregnancy.

WHEN SOMETHING'S WRONG

From puberty through fertility to menopause, the flow of a woman's hormones, especially estrogen and progesterone, affect every cell in her body. Estrogen and progesterone are considered sex hormones, because they are so intimately involved in our reproductive cycle. However, in addition to reproduction, these hormones influence bone, heart, brain, and skin health.

That's why when the endocrine or other bodily systems are out of balance, we can have so many different symptoms, ranging from stiff joints, brain fog, and weight gain to PMS and hot flashes.

Symptoms are our bodies' way of sending us messages. They signal something is going on internally. Symptoms of hormonal imbalance, such as mood swings, bloating, hot flashes, and insomnia, are direct messages from the endocrine system that something is changing, that balance has been disrupted. It's important to pay attention to those messages and not just cover them up or drown them out.

Think of symptoms as a smoke alarm in your home. Once activated, the alarm won't subside until the source of the smoke is extinguished. Just treating the symptoms of an illness is like disconnecting a fire alarm instead of extinguishing the fire. Sure, it stops the alarm's irritating noise, but somewhere a fire is still smoldering. If we have symptoms, we must address the source.

Unfortunately, many women have been led to believe their varied hormone-related symptoms, especially during menopause, are caused by estrogen deficiency and should be treated with HRT. However, most health symptoms and conditions can be linked directly or indirectly to an internal environment of estrogen dominance. It is a case of too much estrogen and not enough progesterone—the exact opposite of what women are being told. Prescribing additional estrogen fuels the flame. We must endeavor to keep our endocrine systems functioning effectively so hormonal disruption and the symptoms and illnesses it can cause are mitigated. To successfully ease symptoms and avoid conditions such as osteoporosis and heart disease, we must address the underlying cause of estrogen dominance and overall imbalance.

Addressing the Underlying Cause

Hormones are the potent chemical messengers that keep the body functioning properly. However, the same substances the endocrine glands rely on for efficient communication also can contribute to dysfunction if the system is out of balance in any way. Even small amounts of errant hormonal activity—whether from a stressed organ (the liver, for example), gland (maybe the adrenals), or system (digestive perhaps), or from an external source—can create a profound negative effect.

UNDERSTANDING ESTROGEN

Among the most powerful classes of hormones the body produces is estrogen. Although we commonly think of estrogen as one substance or one type of hormone, it is actually a class of naturally occurring sex hormones produced by the ovaries and the adrenal glands. There are at least two dozen known estrogens, all with various functions; every organ, including the brain, heart, ovaries, and liver, has estrogen-sensitive receptor sites. The most commonly discussed estrogens are estrone, estradiol, and estriol.

Estrone is converted from estradiol primarily in the liver and in fat cells from the precursor hormones androstenedione, progesterone, and dehydroepiandrosterone (DHEA). Estradiol, the principal estrogen, is produced in the ovaries from cholesterol. It has the ability to convert to estrone and back to estradiol in the small intestine. Estradiol is considerably more potent and has been known for decades to be more carcinogenic than the others. It is metabolized into either 2 alpha-hydroxyestrone or 16 alpha-hydroxyestrone. If more 2 hydroxyestrone (an anticancerous agent) is produced, then less 16 hydroxyestrone is made. The 16 hydroxyestrone is more potent than estradiol; it increases cellular growth and can cause cancer in estrogen-sensitive tissues. The third estrogen, estriol, is a bit different

