



Anti-Aging Therapies #2: Energy Restoration



*Today, the wisdom of the ancients has merged
with ingenious, constantly evolving energy
therapies. Along with pure water, sun, and air,
these age-defying techniques make it easy and fun
to restore our precious jing.*

By the time we reach our 40s many of us have strongly ingrained habits that are often harmful. For example, women often get stuck in the “caretaker” mode and feel guilty when they spend money or time on themselves. Many of us, both men and women, have become true workaholics and can’t simply just “be here now.” And of course, we Baby Boomers were far more fortunate than our parents and grandparents; and we still have an almost programmed, unquenchable desire to experience and have it all. This has cost us dearly in terms of our precious prenatal jing energy.

Now you’ve arrived at the time in your life when you *must* start to find therapies to restore that gift given to you at birth.

When you begin to search for rejuvenation treatments to increase your life-force energy, you'll quickly discover that there are an overwhelming number of therapies available now, and many more will be emerging in the future. When the choices become confusing, always remember that your time and money are best spent on those who will replenish your prenatal jing. This chapter features a few favorite options.

So, how does one choose the therapies that are best for your unique brain, body, and spirit?

The *Principle of Step by Step* is your road map. It teaches that before you can restore your prenatal jing, heal from anything, or even look and feel younger, you must first and foremost create energy. With it, your body will have the vitality to consistently eliminate physical and emotional toxins. With more energy you will digest your foods better and your cells will no longer be craving vital nutrients. More energy provides the immune system with the power it needs to overcome fungal, viral, and bacterial infections. And, as each of these causes of aging is overcome, you'll find you once again have more energy. You will be creating a "benevolent" cycle . . . quite the opposite of a vicious cycle that spirals downward, causing you to grow old far sooner than you should.

The *Principle of Balance* is also about energy. As you practice this Universal Principle, your goal will be to increase your core energy by creating balance in your body, in the foods you eat, in your relationships, and in the way you structure your time. All of these should be carefully nurtured. Are they making you feel more alive? Or are they draining your inner essence? So it is time right now to begin seeking out those therapies that add more energy, and carefully evaluating those things around you that take away from your constitutional life force.

The Great Healers of Chinese Medicine

No other practitioners of health and healing have focused on creating energy in quite the same way as the great sages of Chinese medicine. For thousands of years, these brilliant healers, who used acupuncture, acupressure, and herbs as natural daily routines, understood that if you "tonify the chi" or create a sufficient amount of energy on a day-to-day basis, your body will take any surplus energy and replenish your prenatal jing while you sleep.

Those of us with more of a Western mind-set might find the concept a little easier to understand if we think in terms of money instead of energy.

Remember your rich “Uncle Freddie” in Chapter 3? He gifted you with \$5 million when you were born. Well, let’s say that your parents, who were very wise, added to this great inheritance. As you grew up, they taught you to replace any money debited from your account with new deposits as quickly as possible. For example, perhaps you did odd jobs (babysitting or cutting grass or lifeguarding) to make the spending money you needed each week so you didn’t have to tap into your inheritance. Even better, you might have often added a little extra to your account knowing that you might need it in the future—to go to college, perhaps, or to buy a house or have a baby. Nevertheless, you didn’t touch your precious inheritance unless it was prudent and farsighted to do so.

Now reread the above paragraph and replace money with energy. Your ancestors gifted you with energy. By creating at least enough to use each day, you were careful to never deplete it. At night your body stored what it didn’t need. You were mindful to create a way of life where you could often *increase* your energy. At times when you needed to expend extra (to create a baby or if you were traveling, changing jobs, or moving), you always had enough in your energy account to never deplete your original inherited energy.

Many Baby Boomers are focused on creating, conserving, and saving money these days. That’s great and very necessary. However, because of the number of years we’ve spent literally depleting our constitutional energy, we must now also start accumulating more energy than we spend each day to create a reserve.

It’s never too late to start saving and restoring your jing. Whatever you do to replenish your original prenatal energy will enhance the quality of your life. It is also the secret to longevity.

The sun on your skin; the air you breathe; restful sleep; stress-management techniques; the quality of the water you drink; a probiotic-rich, sugar-free diet; the right supplements; and doing exercise that you enjoy will all become important tools to replenish that life-force energy. But can there be anything more? Absolutely yes! Stem cells; restoring youthful

hormone levels; and even an active, loving sex life can also be powerful tools. So keep reading.

Chinese Herbs for Energy and Longevity

Chinese herbs have always had a prominent place in Asian cultures. They are associated with long life, slowing the aging process, radiant health, physical energy and vitality, mental acuity, and sexual vigor. Entirely natural, these herbs provide special nutrients for physical and mental health, and can be used to treat a variety of conditions, from anxiety to weight problems.

In a conversation with my friend the herbal master George Lamoureux (www.jingherbs.com), he gave this advice on restoring prenatal jing:

“In Chinese medicine, there are two organ systems that must be ‘tonified’ or strengthened as you restore your prenatal jing—your digestive system and your lungs.

“Healthy digestion is crucial for obtaining the nutrients we need from our food, while healthy lungs are crucial for acquiring ‘nutrition’ from the air. These two energies together create our daily chi—our bodies live and move on them. Create more than enough *daily* chi and you begin to restore your prenatal jing.”

Chinese herbs used to increase our day-to-day vitality are *tonic* herbs. Examples of chi tonics are ginseng, American ginseng, cordyceps, codonopsis, and astragalus. Eleutherococcus root is known to increase oxygenation of the blood. When you increase oxygen, it reaches the mitochondria, those microscopic energy factories in each cell, and this increases chi.

Three Brothers is a liquid herbal supplement from Jing Herbs that combines three tonic herbs, each a superstar in its own right. The first of the three herbs is cordyceps (a favorite of martial artists and athletes). The second is astragalus (a premier herb that increases lung function and builds immunity by increasing white blood cells and natural killer cells). A study at the University of Texas showed that it prevents shortening of the telomeres on the end of DNA strands, greatly lengthening life span. The last is codonopsis, which supports digestion and helps keep lungs moist and protected. You could slip several droppers full of Three Brothers into any breakfast drink to wake you up instead of that morning cup of caffeine.

Finding that Yin/Yang Balance

In Western medicine it is well understood that the adrenals produce our energy and sexual hormones. Chinese medicine views these organs slightly differently. The kidneys/adrenals are understood to house two separate yet interwoven energies. One is a cooling energy, and the other is warming.

The cooling energy (called *yin/water essence*) controls the fluids in the body, including the saliva; blood; sweat; tears; sexual, lymph, and spinal fluids; and overall moisture. When this adrenal/kidney cooling or yin essence is compromised, you tend to exhibit more sensation for “heat,” with depleted body fluids, and dry skin, hair, and eyes. You are most likely often thirsty and become agitated easily and are more inflexible. **Three Sisters** is an example of a liquid herbal blend from Jing Herbs that was created to nurture balance by providing herbs that are cooling and nourish the fluids.

The warming energy (called the *yang/fire essence*) is responsible for sex drive, physical vitality, skeletal structure, willpower, courage, and overall energy. This warming energy enables all organs in your body to function; and when it is depleted, you are lethargic, tired, and introverted. Your immune system will be weak, and you will feel cold all the time. You will be very pale, have a frail voice, will not have a lot of spark in your personality, and will be more withdrawn in character. Urinary incontinence is a sign of weak adrenals or an adrenal/kidney yang deficiency. For this problem, Jing Herbs created what they call the **Deer Antler Essence**. As you might suspect from the name, it contains deer antler, which is considered very “yang” or strong. To create a balanced formula, two anti-aging herbs, *he shou wu* and *lycium* (goji), were added.

Take a look again at the symptoms you experience when your adrenal/kidney yin and adrenal/kidney yang essences are depleted. They are described in the two paragraphs above. Add the symptoms together and you have the perfect definition of an aging man or woman. It becomes clear, then, that restoring your adrenals is vital to rejuvenation! (To tonify or strengthen both essences in your adrenals, you would take both formulas.)

Adaptogens

Most of the tonic herbs are considered adaptogenic. To be called an “adaptogen,” an herb must strengthen and provide energy. Examples of some of the most popular adaptogens are panax, Siberian and American ginseng, ashwagandha, shatavari, tribulus, maca, suma, mucuna pruriens, muira puama, rhodiola, schisandra, and matcha green tea.

While adaptogens energize, they also work by calming down negative energy. They help restore your sexual vitality and are excellent for your adrenals. Adaptogens and Chinese herbs work best when combined with the food and lifestyle changes recommended in the Baby Boomer Diet.

As we begin to have an even greater appreciation for how valuable adaptogens are for restoring youthful vitality, we’ll probably seek out and discover more of them growing all over the Earth—especially in the Amazon rain forest—a potential “Garden of Eden.”

Two special herbs worth singling out are holy basil and ashwagandha. Holy basil, also known as tulsi, is not related to the herb basil often used in cooking. It is revered in Tibetan and Indian medicine. It brings down elevated cortisol and sugar levels. It is highly recommended to take one or two capsules from Gaia Herbs if you feel your cortisol levels are too high, especially if you are having trouble falling asleep or staying asleep. Ashwagandha is an Ayurvedic herb that has also been shown to restore prenatal jing energy. To be effective, take 1,500 milligrams in the morning and again at bedtime.

As effective as tonic herbs and adaptogens can be, it is a waste of your money to take them while continuing to eat a high-sugar diet, overindulging in caffeine or alcohol, and failing to manage the stress in your life. Also, please understand that herbs are not substitutes for minerals and vitamins. They do different things in your body.

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Stress

Boomers know all about stress, and we tend to take on a lot more of it than we can handle. Because we want to pack as much living as possible into a 24-hour day, we often ignore the toll stress and an overextended lifestyle are taking on our bodies. We forget to take time to decompress and honor our need for quiet and rest.

Stress weakens the immune system, making us more susceptible to a wide range of illnesses, from heart disease to depression. Unmanageable stress often leads to other unhealthy behaviors, such as overeating, drug and alcohol abuse, and destructive relationships.

A little stress is okay. Small amounts can increase the intensity of a good experience and heighten creativity and mental focus. But unmitigated stress—when it persists without the body having a chance to return to its resting state—may be what ages us most quickly. When the famous fight-or-flight response is on overdrive, we start to feel high-strung, irritable, and run-down.

What is happening to us in medical terms? Well, when we find ourselves in a highly demanding situation or an emergency, our bodies are flooded with cortisol, which boosts our immune response. However, cortisol must then inform the immune system that the emergency is over so that it can return to normal. Stress that doesn't die down keeps cortisol circulating in the body for too long, causing our immune cells to become sluggish and opening the door to infection.¹ Interestingly, cortisol also determines where the body will store fat, locating more of it on the belly, rather than on the hips and thighs, where it would be less harmful.

Stress-Management Tips

There are many stress-management techniques, but the most important thing to remember about stress is that we create a lot of it ourselves by trying to be superwoman or superman. Much of our anxiety can be alleviated if we choose to do less and delegate more. When we say, "I don't have time to exercise," or "I don't have time to relax," what we are really saying is "I am not a valuable person unless I am always busy."

Make quiet time for yourself a priority. Actively pursue those activities that support you emotionally and spiritually.

This might mean keeping a journal; working on a photo album of your grandchildren; listening to a little Mozart before you go to bed; taking a short, meditative walk in the early morning; or painting a watercolor. Set aside some time each day to do something nice for *you*.

When life becomes too overwhelming, turn to family and friends for support. Even if they can't solve your problems for you, sharing how you feel with an empathetic listener always helps you feel better and arrive at new perspectives and options you might not have been able to come up with on your own.

Massage Therapies

There are many kinds of massage, from Swedish and deep tissue to hot stone and craniosacral. All have a wide range of benefits. Below is a discussion of a special kind of massage called Ohashiatsu®, which is a unique combination of touch and acupuncture.

Ohashiatsu

Developed by a Japanese man named Ohashi who came to the United States in the early 1970s, Ohashiatsu is a special method of touch derived from traditional shiatsu, exercise, and Zen philosophy. Ohashiatsu manipulates the energy within the body, but places an emphasis on the special synergy between giver and receiver. When you receive Ohashiatsu, your posture, mobility, and overall well-being are improved, and it is an excellent way to relieve stress and enhance range of motion. When you give Ohashiatsu, you are energized and rejuvenated by your body's own dance-like movements and the meditative quality of your work. This massage involves deep but painless pressure applied to the acupuncture meridians, along with gentle stretches and limb rotations.

To learn more, go to: [**www.ohashi.com/ohashiatsu.html**](http://www.ohashi.com/ohashiatsu.html).

Meditation

People practice meditation for any number of reasons—to improve concentration and focus, to reduce stress, and to even overcome an addiction. Research reveals that meditation can literally “reshape” the brain and transform the body.

Meditation has been shown to reverse the buildup of plaque in the coronary arteries and to increase antibody levels in the bloodstream, boosting the immune system. It is often used to mitigate and manage pain associated with chronic health problems such as cancer, high blood pressure, and AIDS. Even more astonishingly, new research is showing that meditation and other relaxation techniques *actually turn off the genes that are associated with inflammation and cell aging*.²

Gone are the days when you had to be a mystic to meditate. More and more people are doing it! In 2008, data was released by the National Center for Complementary and Alternative Medicine that showed that 9.4 percent of adults surveyed in 2007 had tried meditation at least once during the previous 12 months! Simply sitting in silence for 10 to 30 minutes and concentrating on your breath, a word, or an image can clear away the cobwebs and shift the activity in the prefrontal cortex from the right hemisphere to the left, reorienting you from the typical fight-or-flight mode to greater acceptance and equanimity.³

Meditation can be divided into two types: *concentrative* and *mindful*. In concentrative meditation, you fix your attention on a particular object (a repetitive prayer or mantra), and empty your mind of all other thoughts. As you do this, you try to minimize distractions, continually returning to the chosen object. In mindfulness meditation, you can also focus on your breath or a word or an object, but in this case you keep your focus open. Distractions are not considered intrusions, but rather something to simply observe without judgment or analysis. The emphasis is on staying in the present.

Meditation Practices

There's a meditation practice to suit every need or disposition. Here are just a few of the options out there today:

1. **Mindfulness:** Beginning and ending with the breath, mindfulness practice teaches an evenhanded awareness toward whatever thought arises, by simply acknowledging it and returning to the breath.

2. **Compassion meditation:** The aim of compassion meditation is outward, designed to foster a feeling of loving-kindness toward a cause or person.

3. **Movement meditation:** An example of movement or motion meditation is “walking meditation,” which involves walking very slowly, with deliberate and conscious awareness of every step. T’ai chi and qigong might also fall in this category.

4. **Transcendental Meditation (TM):** Many Boomers experimented with TM in the 1960s. This type of focused meditation often involves repeating a mantra over and over. Dr. Herbert Benson, author of *The Relaxation Response*, was doing something truly radical in 1967 when he ran various tests on a group of 36 TM practitioners to measure heart rate, blood pressure, and skin and rectal temperatures. He found that when they meditated, they used 17 percent less oxygen, lowered their heart rates by three beats a minute, and increased their theta brain waves (the brain waves that dominate during periods of deep relaxation).⁴

5. **Visualization:** This technique involves generating a mental image (a cross, a mandala, a journey, a safe place, or what have you); and can revolve around the achievement of a specific goal, such as losing weight, running a marathon, or curing a disease. This self-aware type of meditation often includes the repetition of an affirmation or intention.

Acupuncture/Acupressure for Rejuvenation

Any discussion of energy would be incomplete without the mention acupuncture, an ancient Chinese practice (dating to the 2nd century B.C.) used for a variety of physical and psychological issues. Acupuncture and herbs work hand in hand. The herbs can also stimulate the acupuncture points, especially when combined into formulas, but both together is ideal.

Acupuncture utilizes touch and very thin disposable needles to stimulate the body’s own healing mechanisms. In a similar way, acupressure uses pressure from the palms, fingers, and thumbs to heal, but without the needles.

The last chapter talked about detoxification pathways in the body that must be unblocked in order for cleansing to occur. We also have energy pathways, called *meridians*, which are routes through which chi energy moves and flows throughout our bodies. Acupuncture points are specific areas along these

Boomers on the Cutting Edge

Qigong

Lower Your Blood Pressure with This Time-Honored Energy Practice

We know that stress ages us. It tires us out and weakens the immune system. Eventually, chronic stress will start to show up in our joints and aging skin. This makes qigong, an ancient energy practice from China, an especially effective anti-aging remedy, as it directly impacts our energy and replenishes our blood.

In China, qigong is the name given to the study, practice, and cultivation of chi, which we already know to mean “created energy.” The word *gong* comes from *gongfu*, which refers to energy and time. Although there are different ways to perform qigong, most practices involve breathing exercises and a series of carefully choreographed movements or gestures designed to facilitate the flow of chi. A consistent qigong practice has the ability to strengthen physical power, increase mental alertness and endurance, and promote long life.

As it relates to longevity, qigong is especially important because, in addition to restoring and moving lost chi, it also replenishes the blood. As we age, our blood supplies dwindle; and our bodies become dry, brittle, and less elastic. In both Western and Chinese medicine, it is our bone marrow that maintains healthy levels of red and white blood cells—the fluid that protects and nourishes the body. Certain qigong exercises restore the suppleness of this marrow, which in turn strengthens the brain and enhances our mental capacity.

In addition, medical studies have found that qigong practice reduces sympathetic activity (the fight-or-flight response that is activated under stress) in the central nervous system. At the same time, qigong increases parasympathetic activity, which is restorative and most active during periods of rest. Qigong is considered a viable therapy for protecting the heart, lowering blood pressure, and reducing anxiety . . . all without the need for drugs!¹

¹John Seim, “Qigong Reduces Stress in Computer Workers,” *Natural News* website, February 25, 2008, <http://www.naturalnews.com/022718.html> (accessed 6/20/11).

routes where chi energy collects, which makes them especially significant for healing. These critical points on the body can be accessed through gentle pressure, heat, and more commonly, acupuncture needles.

Some people have likened chi meridians to a system of pipes through which water flows. The energy in these pipes can get stagnant, impeding or even stopping the easy movement of water. Just as our cleansing pathways must be open and unobstructed, so must our chi pathways be unblocked to allow the free flow of energy. When we are ill, one might say that a pathway has become dammed up somewhere. Acupuncture breaks up the dam.

Shown to increase energy and alleviate pain, acupuncture can also be used to address a variety of other conditions in which the body is in disharmony, such as hormone imbalances; sleep disorders, including insomnia; weight gain; chronic fatigue; anxiety; depression; jet lag; or susceptibility to illness.

The Five Tibetan Rites

The Five Tibetan Rites (also called the Five Rites of Rejuvenation) are another “must-have” in your growing toolbox of anti-aging remedies. Developed by Tibetan monks who condensed 21 yoga poses into 5 yoga movements, these rites were designed to stimulate our energy centers (also called chakras) that correspond to the endocrine glands in our bodies.

The “Rites” were first brought to American readers in a 1939 book entitled *The Eye of Revelation: The Original Five Tibetan Rites of Rejuvenation*, by Peter Kelder, who said he learned them from a wide-traveling retired British army colonel who had lived and studied with Tibetan monks. Subsequent editions of the book have brought these ancient “youthing” rites into the popular mainstream. They are believed to be Tibetan in origin because Tibetan yoga focuses on continuous movement (*Vinyasa*) rather than static poses. Each of the five movements is done 21 times because 21 is a mystical number in Tibet.

The rites lay a good foundation for any yoga practice and should be practiced with a focus on synchronizing the breath. Typically completed in about 15 minutes, the Five Tibetan Rites do not take as much time as a traditional yoga flow series. In a sense, they are the “best of the best.”

Boomers on the Cutting Edge

Yoga Nidra

*F*or some of us, it can be nearly impossible to unwind after a stressful day. Our minds race, and our limbs feel restless and jumpy. Yoga Nidra is an ancient practice that means “yogic sleep,” and it can be very calming for even the most frustrated insomniacs. When you practice Yoga Nidra, you are brought to a state of conscious deep sleep that is between wakefulness and dreaming. Although you are deeply calm, you are still awake and aware. During Yoga Nidra, the brain is at the delta brain-wave level, which is much slower and is the frequency of deep sleep. An excellent biofeedback practice, Yoga Nidra can involve breathing exercises, body surveys or “scans,” and mental points of relaxation. It is ideal for stress reduction, insomnia, asthma, imaginative reveries, and even spiritual explorations.

You can find out more about this unique practice at: **www.holisticonline.com/Yoga/yoga_nidra_home.htm**.

The benefits of the Tibetan Rites are many:

- They help detoxify and move the lymph system. (In fact, you may feel a little dizzy when you first start doing them as they move toxins around.)
- They enhance bone mass and help tone your muscles.
- They improve your posture and help create a more flexible spine.
- They flatten your abdomen and help you become more flexible.
- Many report that daily practice soon even eliminates an unattractive symbol of an aging body, the double chin.

A Word of Caution

If you do an Internet search on these exercises, you will discover that there is a lot of variation in how the poses are done and the speed at which they are done. If you are out of shape or

unaccustomed to yoga, you might want to do the movements quite slowly at first. Many practitioners report struggling with the poses when they first try them, but then becoming stronger and more adept at them with practice. The important thing is to do them every day. It would be wise for any new practitioner to learn the proper way to do the movements so as to avoid injury. You might try Dr. Dariah Morgan's DVD, which shows the proper way to do the poses and offers modified poses depending on your level of fitness. It offers a warm-up and breathing exercises as well.

The Five Tibetan Rites are described below, with explanations taken from *The Eye of Revelation*.⁵ Remember, each one must be done 21 times.

— The **First Rite** (spinning) strengthens the inner ear for balance. "Stand erect with arms outstretched, horizontal with the shoulders. Now spin around until you become slightly dizzy. There is only one caution: you must turn from left to right."

— The **Second Rite** (leg lifts) is for core (abdominal) strength. "Lie on your back full length on rug or bed. Place your hands flat down alongside your hips. Fingers should be kept close together with the finger-tips of each hand turned slightly toward one another. Raise your feet until the legs are straight up. If possible, let your feet extend back a bit over the body toward the head, but do not let the knees bend. Hold this position for a moment or two and then slowly lower the feet to the floor, and for the next several moments allow all of the muscles in the entire body to relax completely. Then perform the Rite all over again."

— The **Third Rite** (camel) activates the spine, opening the heart and solar plexus. "Kneel on a rug or mat with hands at sides, palms flat against the side of legs. Then lean forward as far as possible, bending at the waist, with head well forward—chin on chest. The second position of this Rite is to lean backward as far as possible. Cause your head to move still further backward. Your toes will prevent you from falling over backward. Your hands are always kept against the side of the legs. Next come to an erect (kneeling) position, relax as much as possible for a moment, and perform Rite all over again."

— The **Fourth Rite** (table) stimulates the sacral area and is excellent for building arm, leg, and gluteal strength. “Sit erect on rug or carpet with feet stretched out in front. Your legs must be perfectly straight—back of knees must be well down or close to the rug. Place your hands flat on the rug, fingers together, and the hands pointing outward slightly. Chin should be on chest—head forward.

“Now gently raise your body, at the same time bend your knees so that your legs from the knees down are practically straight up and down. Your arms, too, will also be vertical while your body from shoulders to knees will be horizontal. As your body is raised upward allow the head gently to fall backward so that your head hangs backward as far as possible when your body is fully horizontal. Hold this position for a few moments, return to first position, and RELAX for a few moments before performing the Rite again.”

— The **Fifth Rite** (up dog and down dog) focuses on your upper-back muscles and is excellent not only for an immediate elevation in energy but for alleviating stress and depression. “Place your hands on the floor about two feet apart. Then, with your legs stretched out to the rear with your feet also about two feet apart, push your body, and especially your hips, up as far as possible, rising on your toes and hands. At the same time your head should be brought so far down that your chin comes up against your chest. Next, allow your body to come slowly down to a ‘sagging’ position. Bring your head up, causing it to be drawn as far back as possible.”

Energizing Supplements for Endocrine Health

Well over 2,000 years ago, Hippocrates, the father of modern medicine, said, “Let food be thy medicine and medicine be thy food.” And yet today, we have come to rely too much on synthetic drugs to cure what ails us. Even advocates of the “natural-foods movement” rely too heavily on vitamin and mineral supplements and components of plants. There are about 60 nutrients known at this time to be essential to human nutrition. Yet even if we swallowed a megavitamin/mineral pill consisting of generous quantities of all these nutrients, we could not maintain our health. This is because whole foods give us something we can’t get anywhere else—they contain a live, spiritual essence that modern science has not yet identified.

Supplements can be healthy in the short term, until your inner ecosystem is reestablished. A wise way to supplement is to consider your personal lifestyle and habits and to follow the step-by-step process covered in Chapter 9. Answer these questions about the supplement:

- Does it create energy?
- Does it help correct digestion?
- Does it help conquer an infection?
- Does it help cleanse toxins from your body?

Remember—toxins are very damaging to the endocrine system. That's why the principles of cleansing set out in the previous chapter are an important first step in nurturing and healing the endocrine system.

The Adrenal-Thyroid-Pituitary Axis

When I first began studying Chinese medicine, every teacher and book referred to the kidneys as the root of “chi” or life force, supplying energy to all other organs in the body. After many years of relentless personal study, I now believe that this is a modern-day misinterpretation of this ancient system of healing. I believe that what ancient practitioners meant to convey is that *creating energy in a person's body is essential in order to establish, regain, or maintain health*. Certainly your kidneys are important organs, but if it is energy you seek, look to your adrenals.

The Adrenals

While not mentioned in the many textbooks I researched, the adrenals—and the thyroid—are the most important organs of focus if you want to regain youthfulness, health, and vitality. What happens when the adrenals and thyroid have lost their life force or “spirit”? Your digestive system, brain, sexual organs, heart, and central nervous system suffer.

Because of the stressful world we live in, and the confusion and negativity all around us these days, we are often in a fight-or-flight mode whether we realize it or not. This puts incredible stress on our adrenals. We have to find ways to calm them, and then nourish them back to health. In addition to

stress-reducing techniques, like meditation and gentle exercise, the following supplements are indispensable to resetting the adrenals. Certain amino acids (GABA, tryptophan, DLPA, and tyrosine), holy-basil extract, B vitamins, and vitamin C help to calm down this fight-or-flight response so that you can then nourish the adrenals back to health. The *shen* herbs like reishi help calm the adrenals so that the tonic herbs can start to rebuild them.

Minerals are the most important part of the equation when nourishing your adrenals. Every second of your life, your adrenals must obtain the minerals they need from your bloodstream. How do we ensure that we have mineral-rich blood? An 80 percent plant-based, sugar-free, probiotic diet is a must. A healthy digestive tract that digests food and eliminates efficiently is also essential. While athletes try to replace minerals with sugary drinks like Gatorade, there are far better alternatives. (For more information on mineral supplements, visit: www.bodyecology.com.)

The Thyroid

Then there's the thyroid. Located slightly below the Adam's apple, the thyroid gland is intimately related to our metabolism and how quickly our bodies utilize energy. It helps us make protein, and it controls our sensitivity to the other hormones our bodies manufacture.

To function properly, your thyroid needs zinc, selenium, iodine, tyrosine, and good fats that contain vitamins A and D . . . all of which are found in egg yolks, butter, ghee, red-palm oil, and cod-liver oil. Coconut oil is excellent because it "warms" and "fuels" the thyroid. It also helps speed up metabolism, and can help you lose weight.

The Pituitary and Human Growth Hormone

There's been a lot of talk lately about human growth hormone (HGH), the most abundant hormone produced by the pituitary gland and the one responsible for the growth of nearly every cell and tissue of the body. HGH affects protein formation, cell differentiation, and cell growth. What most people don't realize is that the pituitary never stops producing growth hormone—even as we age. It simply stops *releasing* it.

Do It Yourself

*I*f you have more time in your schedule, you can make a wonderful, mineral-rich soup by slow-cooking organic vegetables and sea vegetables in water for several hours. Discard the vegetables, and you have a mineral-rich water that you can sip throughout the day. Use this over the course of a few days, or make more and freeze it for later use.

Although the impact of this hormone is most profound in the first 15 to 18 years of life, it will continue to influence the deposition of new bone on old bone throughout our lives. For adults, restoring HGH to its optimal youthful level is one of the most powerful of anti-aging therapies, as it causes our cells to regenerate, repair, and replicate.⁶

HGH increases the rate of protein synthesis and the mobilization of fat from fat cells in the body. It also decreases the rate of glucose use. As we age, we release less and less HGH, and by the time we are 60, we only have about 20 percent in our bodies. Diminishing HGH is called *somatopause*, and it contributes to many of those telltale signs of aging—lower energy and stamina, increased body fat, risk of osteoporosis, decreased sexual function, weight gain, and a greater tendency toward depression and anxiety.

HGH is also essential for hydration. In fact, you cannot correct dehydration in your body if you have low levels of HGH. As it slowly begins to decline, you become more dehydrated and wrinkled. HGH levels also affect your hair color. As the hormone wanes, there is also a gradual dying off of stem cells called *melanocytes* that provide a reservoir for the renewal of pigment-manufacturing cells. Without these pigment-manufacturing cells, your hair becomes gray and loses its shine.

Many people have started taking hormone-replacement therapy injections, which have some unpleasant side effects, including swelling of the arms and legs, water retention, high blood pressure, joint pain, and raised insulin levels.⁷ These injections are also quite expensive. Ideally, we would begin to generate our own HGH through diet, lifestyle, and important supplements. The high-intensity, short-duration exercise program mentioned later in this chapter increases HGH.

A safer way to increase HGH is to take a secretagogue formula. As its name implies, a *secretagogue* is a substance that causes another substance to be secreted. Amino acids (like arginine, ornithine, lysine, glutamine, glycine, and GABA) and glandulars (usually the hypothalamus and anterior pituitary) are “stacked” or combined because together they work more efficiently to stimulate the release of your own naturally occurring HGH.

***Bottom line . . .
it is essential to
evaluate, nourish and
rejuvenate your entire
endocrine team—
your hypothalamus,
pituitary, thyroid,
adrenals and ovaries
or testes.***

Secretagogues have been on the market for at least a decade. Unfortunately, some of the more effective formulas come in a sachet packet and contain sugar or an artificial sweetener. If you use one of these, be sure to put the ingredients into three to four ounces of young coconut kefir or a probiotic liquid before drinking it. Adding a teaspoon of apple-cider vinegar to this mixture is also wise because HGH naturally depletes potassium and apple-cider vinegar is an excellent source of this mineral. These tips will help offset some of the negative issues associated with this type of secretagogue.

You can also purchase secretagogue formulas in capsule form and as a homeopathic liquid. These last two do not contain artificial sweeteners or sugar. Because of the recent popularity of secretagogues, more than 75 companies sell them, and there are inferior formulations offered at a low price, so buyers beware.

The anti-aging benefits of taking a secretagogue are all over the Internet. They appear to be true for many and include: increased energy and exercise endurance; weight loss; an improvement in skin texture and a reduction of wrinkles; darker, thicker hair; and stronger immunity. Most also report increase in sexual energy, better sleep, and a decrease in frequent nighttime urination.

Secretagogues are not recommended for children, teenagers, or pregnant or lactating women. It is not advisable for diabetics or borderline diabetics to use a secretagogue without the

supervision of a physician, preferably one who specializes in anti-aging medicine, because HGH opposes the action of insulin. L-arginine and L-ornithine may improve or worsen diabetic conditions. There are no known side effects from taking a *homeopathic* version of HGH.

Hormone Therapy

Many people today reach for the quick fix of hormone-replacement therapy, but when they do, they are not addressing the *real* problem. Typical of our tendency toward narrow thinking, many endocrinologists are prescribing estrogen, progesterone, and perhaps testosterone and DHEA; however, your pituitary and hypothalamus glands are also part of your hormone-producing team. They need your focus and support as well. And of course, don't forget your liver. It *processes* your hormones, so the healthier it is, the healthier your entire endocrine system will be.

If your hormones have started to decline and you are seeing signs of a hormone imbalance, you must be asking yourself these questions: "Why have I become deficient in these youthening sexual hormones? How can I rejuvenate the organs that produce these hormones so that they'll begin to manufacture them once again?"

Bottom line . . . it is essential to evaluate, nourish, and rejuvenate your entire endocrine team—your hypothalamus, pituitary, thyroid, adrenals, and ovaries or testes in order to restimulate the production of HGH.

Women

Perimenopause can be a very difficult time for a woman today. When her hormones are out of balance, she'll feel quite unhinged until she finds her way to a savvy endocrinologist experienced in *bioidentical* hormone-replacement therapy. Most women believe that a decline in estrogen and progesterone is an inevitable part of menopause. But with proper diet and supplementation, it is possible to have healthy ovaries and adrenals (the two organs that produce most of your estrogen and progesterone) even if you have entered perimenopause or menopause.

Although a woman may benefit from testing and individualized hormone supplementation, the fact is that our

hormones are always fluctuating throughout the day. Even bioidentical hormones, while a dramatic improvement over synthetic hormones, can never exactly mimic the fluctuations and rhythms of our own naturally produced hormones.

Testing your hormones at least twice a year is wise. However, you might consider postponing your next set of tests until *after* you've been on the Baby Boomer program for several months. Many women find that their hormones balance out significantly and that they no longer require hormone treatments, or they only need minimal amounts.

As a woman, you should know that when your estrogen levels drop, you will most likely suffer from low levels of two important, feel-good brain chemicals—serotonin and dopamine. These brain chemicals are very much related to mood and happiness.

Because low serotonin causes both depression and low self-esteem, you can see how this might negatively affect your relationships. Bad relationships seriously drain a woman's energy. Both stress and a diet of excessive animal protein are especially harmful for a woman, because they lower serotonin. A woman needs to feel calm and needs to eat much less animal protein than a man. Seasonal affective disorder (SAD), or a lack of exposure to sunlight, especially in the winter, also depresses serotonin levels.

With low serotonin levels you will find yourself craving carbohydrate-rich foods. You may have all the willpower in the world, but there is a true biological reason for your cravings for chocolate. Your brain is always trying to achieve balance and when stressed, wants to feel calm again. It's no surprise that chocolate is a woman's favorite food, as it increases endorphins and temporarily elevates both dopamine and serotonin.

Drugs that increase serotonin levels are not the answer. Low serotonin levels cause constipation, and while these "serotonin reuptake inhibitors" may temporarily relieve you of constipation, they soon *cause* it again as serotonin levels increase and then become too high. Healthier choices are the supplements 5HTP and tryptophan, an amino acid. Either can be taken in the morning or at bedtime to increase serotonin levels naturally.

While women have less dopamine in their brains than men do, you won't feel contented or at peace with life when

your levels of this neurotransmitter are low. Declining levels of dopamine can lead to restless legs syndrome, fibromyalgia, or Parkinson-like symptoms. In midlife, this combination of declining estrogen and dopamine may create mood swings, severe hot flashes, night sweats, or sleep disturbances.

Fortunately, the amino-acid supplement tyrosine can help normalize dopamine levels in your brain. If you have cancer, do not take tyrosine, because certain types of cancer use amino acids to fuel their growth. If you are on an antidepressant medication, you should only take tyrosine under your doctor's supervision. Tyrosine affects mood, and you may need to adjust your dosage. Take tyrosine in the mornings as it can keep you up at night if you take it close to bedtime.

Mucuna pruriens, an ancient herb from India, also increases dopamine levels in the brain and can be taken at any time of the day. PEA (phenylalanine), the chemical found in chocolate and cocoa, increases dopamine as well. Klamath Lake blue-green algae is rich in PEA.

Clearly, because of the close connection between your hormones and your brain chemicals, it would be wise to have your doctor test your amino-acid levels to see what brain chemicals you may be deficient in.

Relationship expert John Gray, Ph.D., has written a fascinating book about our brain chemicals. It is a must-read for both men and women who want to better understand their emotions and behaviors and those of others. Dr. Gray's new book is called *Venus on Fire, Mars on Ice: Hormonal Balance—the Key to Life, Love, and Energy*.

Men

We sometimes forget that men also have their hormone challenges. Men should have their HGH, DHEA, and testosterone levels checked twice a year. In men, the hormone decline can be subtle and incremental. They may find that they aren't as self-confident or as motivated as they used to be, or may even struggle with depression or sadness. One day they wake up and find they're in the throes of the "grumpy old man" syndrome.

Acupuncture is an excellent therapy for balancing hormones in men, and Chinese tonic herbs mentioned earlier in this chapter help restore energy to the adrenal/kidney meridian in

the body. Walking or other daily exercising is a must to keep levels of hormone like DHEA and HGH high, but even with exercise, it may be necessary to use a small amount of all three of these natural, *bioidentical* hormones.

Don't underestimate the importance of testosterone. It isn't just for sex drive and sperm count. It also helps maintain bone density, muscle mass, and red-blood-cell production. For most Baby Boomer men, a more noticeable decline in testosterone starts in the mid-40s, and so does this common yet unnecessary symptom of aging: a decrease in muscle mass with an increase in body fat. Unfortunately, reduced physical energy and endurance, gradually decreasing libido, loss of bone density, and an increase in cholesterol accompany this decline in testosterone. A deficiency of testosterone has even been cited as a precursor to cancer.

Dopamine is a brain chemical that is vital for a man's happiness, and it, too, decreases with age. Lower levels intensify the negative effects of low testosterone that are mentioned above. Anxiety, depression, cravings, or addictions all can be traced to low levels of dopamine. This neurotransmitter helps keep us alert, active, and motivated. Sexual desire and feelings of excitement and pleasure decline as dopamine declines. General symptoms of aging such as poor sleep; fatigue; depression; decreased muscle tone; and loss of cognitive functions, like memory, alertness, concentration, and decision making can become issues. A man with low dopamine levels loses his ability to make executive decisions.

Dopamine has a positive effect on heart and circulation. It keeps a man's metabolic rate high. As his metabolic rate declines he puts on weight. Dopamine is essential for control of movement. Numerous research studies have identified low levels of dopamine as a cause of Parkinson's disease. As mentioned previously, tyrosine, mucuna pruriens, and PEA from Klamath Lake blue-green algae help increase dopamine.

While today's Baby Boomer has the luxury of bioidentical hormones and natural supplements that increase neurotransmitters such as dopamine and serotonin, bioidentical hormones will soon be seen as merely a temporary bridge to something even better. With new inroads in stem-cell therapy, we will soon be able to produce these hormones again on our own.

Stem-Cell Therapy

There are few areas of medical science that are more fascinating and have as much potential for transforming how we think about healing, longevity, and quality of life than stem-cell research.

Whether used preventively or as an active intervention, stem cells are the latest anti-aging miracle. Found in almost all multicellular organisms, they are unique in that they not only have the capacity to renew themselves, but they are also able to *differentiate*—to develop into specialized cells that make up a variety of our organs and other tissues. They can literally transform themselves into any other type of cell in the body, which is why they have been called the “building blocks of nature,” with potential to treat numerous diseases and traumatic injuries, as well as to regenerate entire organs.

You may not be aware of this, but you’ve been using stem cells your entire life. Think of them as the body’s MASH unit—they see trauma and quickly mobilize to fix it. When you cut your finger or get a sunburn, it is stem cells that receive the alarm signal and rush in to repair the damage.

There are two basic kinds of stem cells—those found in most adult tissues and those found in the cells of three- to five-day-old embryos. Adult stem cells, found in brain, bone marrow, muscle, skin, blood, liver tissues, and especially adipose (fat) tissue, can change into most cell types.

The stem cells found in three- to five-day-old embryos (embryonic stem cells), on the other hand, are pluripotent—that is, they have the unique ability to develop into any of the 220 cell types in the human body.⁸ But it’s not just embryonic stem cells that have this ability—umbilical-cord and placental stem cells are also pluripotent. In fact, researchers have found strikingly similar characteristics between cells taken from the outer membranes of the amniotic sac and embryonic stem cells.

Bone-marrow transplants, a stem-cell therapy that has been used for many years as a treatment for leukemia and other types of cancer, is well known today. But as mentioned above, stem cells can also be derived from peripheral blood, umbilical-cord blood, the placenta, the Wharton’s jelly in the lining of the umbilical cord, and even from menstrual blood.

But what does all this have to do with aging?

Boomers on the Cutting Edge

TA-65 Therapy

Startling Advances in the Science of Human Rejuvenation

Do you remember Leonard Hayflick from the chapter on the causes of aging? Well, he is intimately linked with a cutting-edge new anti-aging therapy that has had some amazing preliminary results. Hayflick was the pioneering scientist who believed that cells had a built-in obsolescence. He noted that even a healthy lifestyle could not ultimately stave off the slowing down and eventual cessation of cell division, which leads to death.

Some 35 years later, Elizabeth Blackburn and Jack Szostak discovered *telomeres* and the indispensable role they play in cellular protection. A few years later, in 1985, Carol Greider and Dr. Blackburn discovered the enzyme *telomerase* in the protozoa *tetrahymena*. They knew that telomerase synthesized in this organism, but they didn't know it was so intimately involved in human aging. Greider, Blackburn, and Szostak would go on to win the Nobel Prize in Medicine in 2009 for their explosive research.ⁱ

So what, in simple terms, do telomeres do? Some people have likened telomeres to the piece of plastic at the end of our shoelace that protects it from fraying. Over time that plastic wears down. Our cellular chromosomes are the same. They have a protective casing around them, like the skin around a grape. These protective end pieces are called telomeres, and they hold our chromosomes together and help them to replicate. In short, they are essential for maintaining the integrity or structure of our DNA.ⁱⁱ

As you know, our cells divide over and over again throughout our lifetime; and each time they do, these telomeres get a little shorter, and our chromosomes weaken. These shortened telomeres cause cell senescence (aging), which in turn leads to what used to be considered the “inevitable” signs of growing old, such as diminished sex drive, loss of energy, wrinkles . . . and eventually death. By the time we hit our 80s, our telomeres are quite short, and shorter still if we've neglected ourselves through bad food, lack of exercise, drug abuse, and so forth.

The only cells that have telomerase turned on permanently are reproductive cells. This makes sense, because without it, babies would not be born as babies. They would have telomeres as short as their aging parents. These shortened telomeres are also directly linked to some of the major illnesses we associate with aging, such as degenerative and rheumatoid arthritis, Alzheimer's and dementia, various cancers, myocardial infarction, and congestive heart failure.

So, what if there was a substance that could actually lengthen our telomeres? Well, there is! It's a Chinese herb called *astragalus*. Used in traditional Chinese medicine for thousands of years, astragalus actually *lengthens* these chromosomal end pieces.

A biopharmaceutical company named Geron Corporation set out to create an anti-aging therapy derived from astragalus. They called it TA-65®, and it is the first and only safe telomerase activator on the market today.

TA-65 is only available through a health-care professional who has been approved by T.A. Sciences, the company licensed to sell it. In other words, TA-65 is not an FDA-approved drug, but a nutritional supplement. However, a significant amount of clinical research backs up the early claims made for TA-65. It has been shown to lengthen the shortest telomeres (those most likely to put a cell into crisis), and improve immune function and bone mass. In double-blind, placebo-controlled studies, it was discovered that those who took the therapy saw improvements in eyesight, their immune systems, and their sexual performance. Their skin was restored to its former elasticity and youthfulness.ⁱⁱⁱ

So far, TA-65 is considered safe. There have been no reports of toxicity, and no one has discontinued the drug because of adverse reactions.

For some years, TA-65 was prohibitively expensive and out of the reach of most people. Recently, this price has dropped considerably, and its anti-aging benefits are well worth the cost (approximately \$600 per month).

Not only do I love the science behind TA-65, but it also helps me enjoy a deeper night's sleep and gives me that extra energy I need each day. I was so sold on its value—not only for Baby Boomers, but also for those who are nearing midlife and may have prematurely shortened their telomeres through poor lifestyle choices—that I became a licensed practitioner. Expect more

products to come on the market that are targeted at lengthening our telomeres. Again, we live in an amazing time!

ⁱT.A. Sciences Team, "T.A. Sciences Cell Rejuvenation through Telomerase Activation," *T.A. Sciences Educational Manual*, December 9, 2010: 4.

ⁱⁱNatural Health Dossier Research Team, "Cracking the Genetic Code to Youth: The Chinese Herb That Can Turn Back Your Biological Clock 10–20 Years," www.naturalhealthdossier.com (accessed 6/9/11).

ⁱⁱⁱT.A. Sciences Team, "T.A. Sciences Cell Rejuvenation through Telomerase Activation," *T.A. Sciences Educational Manual*, December 9, 2010: 13–15.

Stem-Cell Therapeutics and Aging

The first implication for aging should be obvious. When organs fail or wear out over time, stem cells may have the capacity to bring them back to life again. In this sense, stem cells might be used to restore our prenatal energy, to grow new teeth, replace exhausted livers and kidneys, and repair damaged limbs. Imagine if our adrenals and glands such as the hypothalamus, pituitary, and pineal thyroid could be reenergized with stem cells? Phase III trials in the U.S. are revealing how stem-cell products might address a range of indications, including osteoarthritis, Alzheimer's, heart disease, Crohn's, and Parkinson's, particularly when treated in the early stages. Furthermore, in Panama there have been several cases in which spinal-cord injuries were reversed; and numerous cases of multiple sclerosis, rheumatoid arthritis, and autism markedly improving using both allogenic (donor) umbilical-cord cells and autologous (native) bone marrow, and adipose-derived stem cells.

And there are cosmetic impacts as well—for example, *mesenchymal* stem cells, which are particularly effective at rebuilding tissue, bolstering immunity, and combatting inflammation, have been used as anti-aging treatments, offering patients noted improvements in restoring hair to its original color, creating a smoother complexion, and reducing age-related pigmentation marks.⁹

Scientists have recently found a type of stem cell in hair follicles that is capable of making epidermis, sebaceous tissue, and more hair follicles—in short, new skin and hair. Paul Sanberg, professor of neurosurgery and director of the

University of South Florida Center of Excellence for Aging and Brain Repair, points out the profound implications this could have for cosmetic skin repair and grafting, and perhaps even for hair replacement.¹⁰

But there's a second, possibly more important thing to understand about stem cells. Research and early clinical studies have proven that stem cells can release nutritional or "trophic" factors that can be of great benefit. At the University of Buffalo in New York, mesenchymal stem cells (MSCs) were injected into hamster-leg skeletal muscles. Not only did the MSCs not migrate away from the target area, but they also released trophic factors that traveled to and repaired the severely damaged heart.

What's more, just injecting the trophic factors without the cells into leg skeletal muscle had about the same benefit as the cells did! This has huge clinical implications . . . think how wonderful it would be to treat heart disease and many other conditions with either intramuscular shots of MSCs or even just the trophic factors. For those interested in learning more, please see the free online article entitled "Heart failure therapy mediated by the trophic activities of bone-marrow mesenchymal stem cells: a noninvasive therapeutic regimen" (available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC2716100).

As we get older, our stem-cell reserves decline, we aren't able to produce new ones, and the ones that we have become less robust. But scientists are discovering that the environment in which these cells exist also matters. If that environment is inflamed, it can impede the functionality of stem cells—they can no longer do what they are intended to do.

A study conducted at the University of South Florida has found that the injection of human umbilical-cord cells can assist an aging brain. When umbilical-cord blood cells (UCBCs) were injected into aged laboratory animals, improvements were found in the microenvironment of the hippocampus (an area of the brain that plays an important role in long-term memory and spatial navigation), and there was also a measurable rejuvenation of the neural stem/progenitor cells. "Brain cell neurogenesis (new cell development) decreases dramatically with increasing age, mostly because of a growing impoverishment in the brain's microenvironment," says study co-author Alison Willing, Ph.D., of the Center of Excellence for Aging and Brain Repair.

According to researchers, the decrease in neurogenesis that accompanies aging is a result of a decrease in proliferation of new stem cells, not the loss of existing cells. However, the improvements they saw did not come from direct replacement of cells but by changing the microenvironment of the brain in which the cells reside. Willing added: “The increase in neurogenesis we saw after injecting UCBCs seemed to be due to a decrease in inflammation.”¹¹

Once again we see the enormous role that inflammation plays in aging. Do you remember the factors that cause inflammation? (See Chapter 3.) Food with pesticides, environmental pollutants, mercury in the air we breathe, overuse of cell phones and computers, excess body fat, poor diet, lack of exercise, and even genetic predisposition can contribute to inflammation in the body. As we age and become more inflamed, our brains shrink, and the stem cells that might be on the ready to repair them just aren’t functioning as well anymore.

In fact, any of the above can contribute to neurotoxicity, and can lead to disabling genetic defects in the neural stem cells. Research in rats has shown a 2-month-old rat will have about twice as many neural stem cells as a 24-month-old rat. This loss in brain stem cells is likely tied to most all neurodegeneration that occurs with advanced aging, or even earlier if there is enough neurotoxicity present.¹²

The implications of this should be obvious. People who live a healthy lifestyle have lower inflammatory markers, which prevent healthy stem cells from being released. Lifestyle can turn down the “hot-water faucets” of inflammation inside us and create the kind of healthy environment we need to get those stem cells activated.

If you eat well, sleep deeply, exercise regularly, are well hydrated, and have high/normal vitamin D levels, many more stem cells will be released from your bone marrow and you will age slowly. With this new understanding of stem cells, medical textbooks will now have to be rewritten to say that in many ways, death and aging are a sign of insufficient stem-cell production in your bone marrow. Viruses and toxins from heavy metals, pesticides, and chemicals cause mitochondrial failure in your bone-marrow cells so that they cannot produce healthy stem cells.

Exercise Mobilizes Stem Cells

It's especially important to note that exercise is one of the primary ways we can create new stem cells. When we exercise, there are six to eight times more stem cells present in our peripheral blood. Here's an example of what exercise can do for one area of the body in which we often see signs of aging—our brains.

As we age, our cortisol levels increase, and the hippocampus decreases in size. The hippocampus, as noted before, is related to memory and plays a big role in dementia. Exercise can help the hippocampus to regenerate. A stem cell will re-create the cell that is needed, in this case a neural cell, and at the same time it will replicate itself. Working with aged mice, researchers in Florida have demonstrated that a single injection of human umbilical cord blood mononuclear cells (HUCBMCs) can rejuvenate a mouse's hippocampus and supply of neural stem-cell progenitors. The aged mouse brains also began producing new nerves. And this type of therapy doesn't have to be invasive. It can be introduced into the peripheral veins (injected in the arm) rather than directly into the brain.¹³

So, basically we've added a new theory of aging—the *stem-cell theory*. We age because we stop releasing adequate numbers of stem cells. What we eat, how we think, the people we surround ourselves with, and how many toxins we are storing in our bodies all impede the activation of these cells. Rejuvenation begins with the reactivation of weaker, dying cells first, followed by the restoration of new stem cells that have been lost.

Other studies have shown that the optimal conditions for stem-cell release are related to being properly rested—this means that sleeping regularly and restoratively, managing our stress, and finding balance in our lives can affect the maximal release of stem cells. Paul S. Frenette, M.D., professor in the Department of Medicine at Mount Sinai School of Medicine, writes: "We don't know why stem cells circulate in the blood but the maximal release of stem cells in the circulation occurs when the animal is resting. This argues for a role in regeneration."¹⁴

One of the most exciting uses of stem cells has been the regeneration of tissues. Anthony Atala, M.D., the head of the regeneration program at Wake Forest University, stated that his researchers have grown nearly two dozen different types of body parts, including muscle, bone, and a working heart

valve. He went on to say: “I think if we start combining things like better prevention, better care, doing things better for our body, and just with regenerative medicine, we may push [our life spans] up to 120, 130 years.”¹⁵

New Discoveries on the Stem-Cell Frontier

Dr. Leonard Smith, medical advisor for this book, is a volunteer on the surgical staff at the University of Miami, and medical advisor for the University of Miami Department of Integrative Medicine. He is also a consultant for the Institute for Cellular Medicine, which specializes in research and clinical stem-cell therapy, and publishes articles on stem cells in peer-reviewed journals. Located in Panama City, Panama, the Institute has treated more than a thousand patients.

When researchers at the Institute began their work five years ago, they worked solely with umbilical-cord stem cells. Today, they also use bone-marrow cells and fat-derived stem cells from liposuction, with good results, especially in the area of autoimmune diseases. Promising outcomes have also been seen for autistic children and people suffering from multiple sclerosis, renal and heart failure, rheumatoid arthritis, and osteoarthritis. In addition, they have treated several paraplegics with spinal-cord injuries who are now recovering nicely, including walking again.

Now affiliated with several universities, the work done at the Institute may be on the cutting edge of stem-cell advances. (For more information on the Institute for Cellular Medicine, go to: **www.cellmedicine.com**.) There are increasing numbers of stem-cell clinical trials now taking place in the U.S., mostly at universities. There are, however, some publicly traded companies doing stem-cell trials. One such company, Osiris, is conducting ongoing clinical trials on type 1 autoimmune diabetes and graft-versus-host disease. As these trials continue, it will become obvious how stem-cell therapy has the potential to benefit humankind in many ways.

Classic Cell Therapy

Stem-cell therapy has marvelous potential for the treatment of our most feared illnesses, but it is primarily aimed at a single disease process or traumatic injury. There is another kind of

cell therapy that offers anti-aging benefits. It complements stem-cell therapy because it doesn't just treat a single organ or gland, but reaches into *all* organs, endocrine glands, and connective tissues. We call this more comprehensive kind of cell rejuvenation "classic cell therapy" to differentiate it from stem-cell therapy.

Classic cell therapy was introduced by Dr. Paul Niehans of Montreux, Switzerland, in 1931, when he injected calf parathyroid into a patient whose parathyroid glands had been damaged during thyroid surgery. The patient survived and went on to live a healthy life into her 90s. Variations of this method have been practiced in the 80 years since then, and during his lifetime, Dr. Niehans went on to treat many heads of state and movie stars of the World War II era and beyond.

The goal of classic cell therapy is to slow, and even reverse, biological aging. The focus is on the immune and endocrine systems, as well as connective tissue. Breakdown in these areas is the cause of aging and is responsible for most chronic disease.

The cells used in classic cell therapy are slightly more mature than stem cells, resulting in an organ-specific cellular serum. The tremendous advantage to this is that the cellular serum can be administered intramuscularly and will migrate to the target organ—that is, heart to heart, lung to lung, and so forth. This has been demonstrated by radioisotope tracing studies.

Further studies at the Pathological Institute of Munich University have shown that protein biosynthesis in the targeted organ will increase by up to 100 percent compared to untreated organs, resulting in renewed vitality and function, commensurate with a younger biological age.

My good friend Judi Smith, with the International Clinic of Biological Regeneration, has developed a protocol reflecting more than 30 years of experience in the field and major pharmaceutical advancements. This protocol is designed to treat the body as a whole, and then to target specific organs/glands relating to immune and endocrine function, the connective tissue, and skin, as well as the pituitary, hypothalamus, and adrenal glands, to support immune function and reduce inflammation. Other serum preparations can be customized to address the specific concerns of the individual patient. This combination, particularly when administered periodically, can have significant positive impact on both appearance and vitality.

The idea is to look and feel as great as you can, as long as you can, and to have the vital energy to pursue your interests and passions. While classic cell therapy can't prevent aging entirely, it can slow it down considerably. And now, of course, you hold a "bible" in your hands that provides you with all you must do to actually reverse the "hands of time."

Our knowledge of stem-cell, trophic, and gene therapy is evolving at a tremendous speed. With new insights being reported every day, this is an exciting time to be alive—for Boomers and every generation.

Healthy Sexuality—Doing It Without Drugs

For many people "life after 40" includes more satisfying and meaningful sexual relationships. The urgent hormonal drives we experienced when we were younger will have abated a bit, and most of us are no longer focused on conception and starting a family. But these changes in lifestyle and drive don't mean we no longer want, or can't have, fulfilling intimate relationships. In fact, with more of us single today than at any other time, we Boomers are more willing to enjoy our sexuality and meet each other in nontraditional ways, such as online social-media sites. And because women of this generation tend to be more educated, career-oriented, and affluent, they aren't necessarily dating in order to "settle down" and get married. They view their sexual relationships as just one more aspect of a fulfilling life.

It should be noted, however, that many Boomers, who came of age before the HIV epidemic, don't have a sense of the dangers of sex that younger generations do. Women over 50 are at risk of developing HIV from heterosexual sex because their thinner vaginal walls are more susceptible to cuts and tears. The number of new HIV infections among older women is rising, and AIDS cases among women 50 and older nearly doubled between 1988 and 2000.¹⁶

And what about sexual-performance issues, particularly in men, whose problems with erectile dysfunction dramatically increase with age? Too often, Boomers have a "quick fix" approach to sexual problems or waning sexual energy. If something isn't working, or isn't working as it did when we were 18, we reach for a pill. But magic pills like Viagra and Levitra

don't address the underlying conditions that may be producing sexual dysfunction, and for many, they simply don't work at all.

Al Sears, a Fort Lauderdale physician, has developed a 12-minute exercise program called PACE, which advocates shorter bursts of intense exertion as a healthier means of losing weight and staying fit. It has the added benefit of improving one's sexual performance. Short bursts of vigorous exercise cause an increase in blood flow and boost the supply of nitric oxide in the body. Being able to release nitric oxide is critical to erection of the male penis and female clitoris for sexual responsiveness. Our supply of nitric oxide declines as we age, and this is one reason why older men and women often report declining performance in the bedroom.

High-intensity workouts are a great way of improving nitric-oxide production, but as we grow older this can be more challenging, as we have less stamina during rigorous exercise. Sears recommends a more incrementally intensive program that allows exercisers to control and manage their own progression.

Sears's PACE program increases endorphins—those feel-good chemicals in the body—as well as brain chemicals, like serotonin and dopamine, which make us feel content yet excited about life. Peri- and postmenopausal women, in particular, can be quite low in endorphins and brain chemicals because these decline as estrogen declines. HGH and testosterone levels also increase dramatically when we exercise.

The PACE program is a form of interval training that uses running as the mode of exercise. This is fine, but for many people over age 40, running may be too stressful on the joints, ligaments, and tendons. Rapid walking may be more appropriate and is just as effective. Interval training with swimming, with elliptical cross-training machines, and even with weights can be done. *The key is to exercise at maximum or near maximum intensity for 10 to 60 seconds and then rest or go slower for 30 seconds to two minutes, and then go fast again.* Interval training increases the release of HGH, insulin-like growth factor one (IGF-1), and testosterone; and helps lower blood sugar and sensitize insulin receptors. All of these are critical for optimal sexual performance for both men and women.

In addition, this program increases the intake of oxygen by increasing the capacity of our lungs and preventing them from shrinking with age. This in turn ensures that our energy levels rise; excess fat is burned; and the anti-aging process is

Boomers on the Cutting Edge

Tantric Sex

*M*any people have misguided notions about tantric sex, assuming it must involve never-before-discovered erogenous zones, techniques, and positions. Basically, tantric sex is “What’s the hurry?” sex. For most people, the typical sexual experience lasts approximately 15 minutes, yet most women take at least 20 minutes to climax. What’s wrong with this picture? Tantric sex is *sensual sex*, intimacy that focuses on extending the sexual experience and satisfying your partner on a spiritual and emotional level, as well as on a physical one.

activated by the dynamic regeneration of cells and tissues inside the body, including increasing the number and function of mitochondria, our energy producers.

Like most exercise, interval training will also decrease total body inflammation as long as you don’t overdo it. Remember to start slowly, then gradually increase the intensity and decrease the amount of time in between each exercise.

Here is a PACE outdoor-running workout proposed by Dr. Sears.¹⁷

1. **Warm up.** Warm up for about one or two minutes.
2. **Start.** Once you’re warmed up, start at low to moderate intensity, and increase the level of intensity after each set. Start first by running (or walking rapidly) for two minutes.
3. **Recover.** Now relax. Notice your heartbeat, and keep track of how long it takes to get back to normal.
4. **Repeat.** Then run for 90 seconds, followed by rest. Repeat this; and decrease the exertion period each time from 90 seconds to 45 to 30 and then to 20 seconds for a total of six sets. This shouldn’t take more than eight to ten minutes.

Whole-Body Vibration

A Way to Enjoy the Benefits of Exercise

When you hear the words *vibration machine*, you might get a mental image of an overweight woman wearing a wildly vibrating belt that shakes and bounces the cellulite from her hips. Fortunately, we've come a long way from those funny contraptions of the 1950s! In fact, vibration technology is said to be the medicine of the future and the ideal anti-aging tool. I own a machine and love it.

The first generation of whole-body vibration machines appeared on the market in the '70s, and today there are more than 30 different companies making them, ranging in price from \$700 to \$15,000. They can be found in the homes of professional athletes, dancers, entertainers, physical therapists, doctors, and authors. However, it pays to do your homework before purchasing one.

How Whole-Body Vibration Works

With most whole-body vibration machines, you stand on a platform that vibrates rapidly with a motor that creates either a vertical, a vertical and horizontal, or a seesaw movement. On the motor-driven machines, you stand on a platform and do workout sessions and resistance-training exercises. This produces very effective results in a shorter time than without the machine. While motor-driven machines are mostly for exercise, they do cleanse your lymph system and stimulate circulation. A professional trainer will give you the best results and customize workouts for your unique body type, changing them as needed. All machines come with educational materials that demonstrate how to use the equipment in your home.

Motor vs. Sound-Wave Vibration

The safest and most medicinal whole-body vibration machines use sound waves under the platform to create a vertical vibration that can be adjusted, offering a wider range of vibrational frequencies and medicinal benefits. You can stand or sit on these machines and can practice qigong or meditate. If you have a weaker constitution or an injury, or are struggling with osteoporosis, this is the vibration machine for you. The motor-driven ones can be injurious to hips and knees, while the sound-vibration ones are softer and gentler—perfect if you have physical limitations. And if you just won't

exercise because you lack the time or desire, sound-vibration machines provide the benefits of exercising without the exercising.

My own sound-wave-vibration machine—the TurboSonic X5—stands proudly in my home (www.turbosonicusa.com).

The Benefits of Whole-Body Sound Vibration

In addition to feeling and looking vibrant when you step off of a sound-vibration machine, you will immediately notice improvements in balance, a common problem as we age. The gentle vibration stimulates the middle ear so your sense of equilibrium improves; while you also build muscle, tendon, and ligament strength. But there are many other benefits:

- Cleanses the lymph system and stimulates circulation
- Improves blood pressure, digestion, sleep, stress, and overall mood
- Stimulates healthier, more resilient cells
- Creates stronger, better-defined muscles
- Lowers cortisol and naturally increases bone density, testosterone, and growth hormone
- Promotes cellular waste removal, increasing your ability to detoxify

Exercise is just one way to bolster healthy sexuality. Dr. Ridwan Shabsigh, a certified urologist specializing in sexual health, encourages people to see their sex lives in the context of better overall health. He points to the conditions that can contribute to sexual dysfunction—from diabetes and obesity; to cardiovascular disease, depression, and drug and alcohol abuse. Dr. Shabsigh's holistic approach looks at overall lifestyle choices—diet, exercise, supplements, stress reduction, avoidance of self-destructive behaviors, and commitment to a partner—and how these issues can positively or negatively affect sexual function.¹⁸

There's no reason why sex can't be "sensational" as we age, argues Shabsigh, and for many, sexual intimacy is better than ever before because we've learned and grown wiser from past relationships. We are much more in tune with our bodies now, and we are, in turn, more attuned and attentive to the needs of our partners.

As the years come and go, you may no longer have the sexual motivation you used to have. You may be resigned to this and feel that your desire for sex has become a lesser priority than other things, like self-discovery, grandchildren, friendship, and travel. Perhaps you've been told that as you age your sexual energy will become directed outward to more spiritual and service-oriented activities.

True, this has been the norm for previous generations, because they did not have the resources to stop the decline in hormones, endorphins, and brain chemicals that keep us looking and feeling sexy. But healthy levels of sexual hormones, equal to those present when we were in our 20s, give us a love for life that can still be directed into both service-oriented activities *and* an active sex life.

Indeed, sexual energy *is* spiritual energy. Sexual energy is the sacred energy of creation. As members of an extraordinary generation that has brought about so much change, we certainly can and should enjoy healthy sexuality throughout our lives.