DSPA RX

Spinal tip

GRANTED, POSTURE AND ALIGNMENT THERAPIES ARE UNSEXY, BUT THEY'RE INDISPENSABLE TO AGING WELL AND STAYING ACTIVE BY AIMEE LEE BALL

WHO WANTS TO BET THAT ANY GALLUP SAMPLING WOULD SHOW THE BIG INCENTIVE of a spa visit to be weight loss? Many people consider the stay a letdown unless they come home to a lower number on the scale and compliments from friends.

At a select group of spas, there's an opportunity to do much more for your body, to shed not excess avoirdupois but pain and disability, the cause of which is often years of poor posture and alignment come home to roost. Most spas offer classes in one or more movement or alignment techniques (see "The Posture Improvement Menu" on page 110), but for serious, personalized biomechanical evaluations, you'll have to visit a facility like the four I report on here. (See the boxes on the next seven pages.) Body mechanics is an underused area of spa expertise—unsexy, invisible, and ignorable because we're not trained to notice—but it's the tip of an iceberg, coming into view. As the baby boomer generation ages and ingrained habits start to catch up, attention to posture is coming to prominence.

The posture improvement menu

Alexander Technique
Developed by Frederick Matthias Alexander (1869–1955), an Australian actor, as a way of correcting his own tense, downward-head posture with a more efficient way of moving and speaking. The work is done in a chair, lying on a table, and standing, with three goals: released neck (easy balancing of the neck muscles), forward head (buoyant and free movement of the head), and lengthened back (restoring natural curves to the spine and widening the upper back to allow for good breathing).
www.alexandertechnique.com

Cranio-Sacral Therapy
Developed by John Upledger (1932–present), an American osteopath whose namesake institute is in Palm Beach Gardens, Florida. Uses very gentle manipulation to enhance the functioning of the cranio-sacral system, which comprises the membranes and cerebrospinal fluid that surround and protect the brain and spinal cord.
www.upledger.com

Gyrokinesis or Gyrotonic
Developed by Juliu Horvath (1942–present), a Hungarian dancer. Uses circular, fluid movements (with names such as "butterfly" and "chopping wood") that incorporate principles of gymnastics, swimming, ballet, and yoga. The movements are designed to work the major muscle groups both independently and in an integrated manner. Emphasizes articulation of joints without compression and synchronized with breathing. It also develops coordination. Gyrokinesis is done on a chair or mat; Gyrotonic uses a pulley tower combination unit called a Transformer.
www.gyrotonic.com

Feldenkrais
Developed by Moshe Feldenkrais (1904–1984), a Ukrainian physicist and mechanical and electrical engineer, who conceived the technique to treat his own knee problems. Includes two parts: "awareness through movement," verbally directed sequences that direct the subject's attention to parts of the self that are out of awareness and uninvolved in functional actions, and "functional integration," gentle touching, usually done on a table and sometimes incorporating props.
www.feldenkrais.com

Hanna Somatics
Developed by Texan philosopher Thomas Hanna (1928–1990), who coined the phrase "sensory-motor amnesia" to describe the "forgetting" of proper alignment that occurs with age. Emphasizes muscle control through gentle physical movements and manipulation to fine-tune the nervous system. Retrains three habitual reflexes dubbed Red Light (the body is crouched and tight), Green Light (back, neck, and shoulder muscles are tensed to push forward), and Trauma (the pelvis, trunk, shoulders, or head is tilted or twisted into a protective posture).
www.hannasomatics.com

McKenzie Method
Developed by Robin McKenzie (1931–present), a New Zealand physiotherapist. The method is a comprehensive system of assessment, diagnosis, and treatment. The goal is to find the particular spinal movement or position that causes symptoms to shift. Uses gentle exercises that emphasize flexion (forward bending) and extension (backward bending) and may include passive exercise on a hinged Repex table.
www.mckenziemdt.org

Pilates
Developed by Joseph Pilates (1880–1967), a German boxer who acquired a following among New York dancers—and now legions of gym-goers. Originally called Contrology, or "the science and art of coordinated mind-body-spirit development through natural movements under strict control of the will." Includes mat work and two machines, the Reformer, a sliding bench on springs for resistance, and the Cadillac, a tower with resistance springs, to strengthen the "powerhouse": the abdomen, pelvic floor, lower back, and buttocks.
www.pilatesmethodalliance.com

Trager Approach
Developed by Milton Trager (1908–1997), a Chicago physician. Based on "psychophysical integration," or getting a sense of how to feel better in one's body. Uses gentle rhythmic shaking and traction-like movements to release deep-seated physical and mental patterns. Includes passive table work and a series of exercises called Mentastics that involve opening up spaces in the body.
www.trager.com

"It's probably for more sophisticated spa-goers," says Deborah Kern, Ph.D., the executive director of lifestyle enrichment at Lake Austin Spa Resort in Texas, where about ten people every week sign up for biomechanical evaluation. "There's a level of spa guests using their visit for health maintenance, not just fluff and buff or a quick fix. Many people start to do an activity, and their posture limits their ability, and they're awakened to it." In terms of impact on health, a few extra pounds are nothing compared to a lifetime of bad posture, and more spas will get into this area of treatment, according to Ramona Durrer, the director of health and healing at Canyon Ranch in Tucson. "Many people think going to a spa is about losing five or ten pounds and looking great, but we have so many other things to offer," she says. "Sometimes weight becomes a secondary issue to how they can feel better. It's important for the spa industry. Alignment may not be a sexy service, but if we can figure out where guests are on their continuum toward wellness or prevention, it helps us design a program."

> In terms of impact on health, a few extra pounds are nothing compared to a lifetime of bad posture.

Posture may have an even more dramatic effect on appearance than those extra pounds. "What makes us look old is the way we hold ourselves, the way we move or don't move," says Paul D'Arezzo, M.D., a retired emergency physician in Colorado Springs. He saw so many patients coming into the ER with chronic muscle and joint problems—what he calls an epidemic of carpal tunnel syndrome, backaches, torn rotator cuffs, and knee replacements—that he wrote a book called *Posture Alignment—The Missing Link in Health and Fitness* (Marcellina Mountain; www.posturealignment.com). Seemingly small distortions in alignment can lead to dramatic alterations in function, says Dr. D'Arezzo. "One of the key issues is people exercising without correct placement—standing with one foot flared out to the side, riding a bike or lifting weights in the gym with their shoulders hunched forward—or slouching in a chair," he explains. "As posture deteriorates, it sneaks up on us. Our knees or our back go out of alignment and we start hurting, so we stop doing stuff. Our world becomes smaller by degrees, and we don't understand it's posture that limits us."

It's customary to blame weakness, aching joints, and limited mobility on the "natural" and unavoidable process of getting older. "But the declines in aging are far more related to unenlightened choices than to the ticking of a clock," says Gregory Petersburg, D.O., who is developing programs for Miraval in Tucson and who calls his osteopathic office Renascence. (He treats only one person a day, doing a comprehensive assessment that includes body mechanics.) "If you're truly interested in transforming your life—the reason most of us go to a spa or a trainer—that means being mindful of not just what you eat but also posture and breathing, plus other things like learning to use stress in conscious, growthful ways. I take a long-

Over 40? Here's the plan

1. If weight training is part of your workout, use lighter weights and more reps to tone without overstressing joints.
2. Work on tightening abs and buttocks but elongating hamstrings—this is the triumvirate of muscles for lower-back stability.
3. Start doing yoga to stretch and tone muscles, increase endurance, and improve flexibility.
4. Try Pilates or Gyrotonic to augment or replace weight lifting—both can be resistance exercise.
5. Do balance training—tai chi, qigong, stability disks—to prevent falls.
6. Incorporate eye-movement exercises into your workout to improve balance.
7. Avoid one-sided sports—tennis, golf, racketball—unless you develop a routine to bring symmetry back into your musculature.
8. Add water workouts to reduce wear and tear on joints.
9. Take stretch breaks during the day to keep muscles and joints limber.
10. Don't exercise to the point of total fatigue, and increase time between workouts: With age, muscle recovery takes longer, and connective tissue loses much of its viscoelasticity.
11. Use arch supports or orthotics to minimize strain on your ankles, knees, hips, and lower back.
12. If you run, be alert to signs of overuse injuries (persistent pain in your feet, legs, or joints). If you're just starting, build up time and mileage slowly, and alternate running with walking. The cardio system conditions first, then the muscles, and last the bones.

HEALTHBRIDGE MEDICAL CENTER

Fancy footwork

Hewitt Steinberg is a chiropractor, not a magician, but he performs a kind of legerdemain at the HealthBridge Medical Center in Manhasset, New York, a no-frills, clinical setting on a busy suburban boulevard about 15 miles from midtown Manhattan. "We address comprehensive biomechanical issues," says David Edelson, M.D., the medical director of the center, which also houses the Elysium Day Spa. "We're not just diagnostic but trying to intervene with management techniques—just changing someone's chair or bed can be highly effective. We can identify problems at inception, like leg-length discrepancy: Even a quarter- or half-inch difference can be critical in spinal alignment. We can get people out of pain, but we believe in a chronic-care approach as opposed to only acute intervention. It's almost like having a coach. Agassi has a team for everything he does—not just tennis technique but eating, stress, sports psychology. We have a team, too."

> "We're a kinetic chain. When there's an injury, the body will do something to compensate."

Team member Steinberg begins by asking me to resist his attempts to push my arms down. I am visibly weaker on one side, which he immediately attributes to a common imbalance in the navicular bone that holds the arch of the foot in place. "It has nothing to do with the shape of the foot," he says. "You can have an arch like the Lincoln Tunnel, but it's the stability that counts." Now comes the magic part: He takes a small metal instrument called an activator that chiropractors can use to change the position of a bone. After a painless adjustment to my arch, he tapes my foot in the new position and—hey!—I can now resist his pressure with that weak arm.

A very high percentage of postural problems originate in the feet, according to Steinberg. Pedal imbalances can cause the hips to rotate, the pelvis to tilt, or the back to arch. "It's that old song 'Dry Bones'—the foot bone's connected to the hip bone...," he says. "Say you have a problem with your wrist—it might be referred up to your elbow, or a problem with your shoulder might be referred down to your elbow. But a foot problem can only go one way: up. It could go to your ankle, knee, hip, or back, and it will probably settle at a point where there is weakness from a genetic predisposition or an injury. Over time, you favor the weakness. It's like having a pebble in your shoe; you lean on the other side to compensate."

Among the tricks in Steinberg's bag are acupressure, reflexology, sacro-occipital blocks that gently realign the pelvis, and, my favorite, a bilateral scale that reveals whether you favor one side of your body. It turns out I am exerting 30 pounds more—a full quarter of my weight—on the left, which certainly throws off my balance. But the weirdest tool is a simple wall chart of flower essences, each of which is supposed to be linked to a particular emotional condition: Pine is related to guilt, honeysuckle to living in the past, olive to mental or physical exhaustion. "The principle is that we're surrounded by an energy field that has innate intelligence," Steinberg explains. "It knows what your conscious mind does not know, and we can test it through muscle localization." He asks me to touch different points on the chart, each time checking the strength of resistance in my arms. The test is comically inaccurate for me—it shows me reacting to "apathy" (extremely not my problem), but does not expose my real issue: "over-concern for the welfare of loved ones."

Another member of the team might have you doing lunges, one-legged hops, and all manner of stepping and swaying. Physical therapist Sharon Freundlich evaluates the musculoskeletal system's strength and flexibility with a variety of tests, including the Tonetti score for balance, which gives a grade based on the timing and quality of more than 40 movements. "Postural issues definitely affect both static balance (maintaining a position) and dynamic balance (when you're in motion)," she explains. "I might not see a problem if a person is walking, but if he steps on an uneven surface...."

Freundlich is not concerned with how fast someone walks—"everyone has his own cadence," she says—but with the two parts of a stride. "The goal of the leg is to pronate and supernate—accelerate and decelerate. If you were constantly accelerating, you'd go flying." Freundlich's version of "Dry Bones" connects just about every function or malfunction of the body to posture. "Alignment issues can affect headaches, constipation, circulation, general malaise," she says. "If the suboccipital muscles at the base of the head go into spasm because of forward-head posture, you can get migraines. If there's not enough oxygen going to the brain, you're a very tired individual. We're a kinetic chain. When there's an injury, the body will do something to compensate. But you start guarding and protecting one area and other areas start screaming."

Initial biomechanical evaluation: $100. 1165 Northern Boulevard, Manhasset, NY 11030, 516-627-0303, www.healthbridgeinfo.com

range view of life that emphasizes avoiding, delaying, or minimizing the declines that we typically think of as part of the aging process. The role of posture and alignment in someone's long-term health is a key piece."

The field of osteopathy, which uses manipulation to correct physical abnormalities, began in the late 19th century through the work of Andrew Taylor Still, a medical doctor who treated Union Army soldiers in the Civil War and who recognized how much structural balance impacts other elements of health—digestion, metabolism, and circulation. "People with postural problems usually do pretty well until about age 30," observes Tyler Cymet, D.O., the head of family medicine at Sinai Hospital in Baltimore and an assistant professor of medicine at Johns Hopkins University. "That's when the volume of fluid versus tissue in your body changes and your center of gravity changes because fat is deposited in different areas. When you're standing normally, you're supporting your weight about one inch in front of the arch of your foot, and you're comfortable. As men get older, they may develop a belly and need to sway back a little; women may gain weight in the hips or chest and need to twist themselves to displace the force. So we change how we stand."

The normal process of walking upright requires a certain spinal silhouette, referred to as the primary and secondary curves, Cymet explains. "We're born with the muscles tightened up and curled in a fetal position, the spine in a U shape," he says. "That's the primary curve, and when we stand, we act somewhat against those muscles. We learn to lift the head, crawl, and walk by age one, and with each of these activities, we start to bend the spine and use it differently. That's the secondary curve, and it's nec-

LAKE AUSTIN SPA RESORT

Ms. alignment detective

"Do you sigh a lot?" I've been asked a lot of personal questions at spas, but this query from Laura Cisneros, a trainer at Lake Austin Spa Resort is unexpected, as is the follow-up: "Have you ever considered yourself to be large breasted?" Cisneros is a detective of misalignment. She's found that enduring emotional states can be expressed in characteristic posture and that perceived physical imperfections can lead to a compensatory carriage. Sighing sometimes correlates with hunching over in a stance that conveys carrying a heavy load (yes, that's me, but I hope temporarily), and self-consciousness or actual discomfort from a too ample bosom (not my problem) can lead to a forward tilt.

According to Cisneros, most of us don't know how to walk. "Movement should come from the pelvis," she explains, "but we tend to move from the head and chest. When you lead with the chest, your back automatically goes into extension." The effects of such misalignment are pervasive. "Posture can energize the system or suck energy from it," says Cisneros. "The reason the spine stacks the way it does is to promote movement without costing the neuromuscular system any energy. When posture is out of alignment, the skeleton isn't doing its job, and the muscles and ligaments have to bear the brunt. The spine isn't carrying your 15-pound head; the muscles in the back of your neck are."

One of the first steps to reducing pain and limitations is to understand load principles—how the body carries its weight. "There are special cells—receptors—in the muscles and connective tissues like ligaments that help stabilize the joints," explains Cisneros. "They have a sense of position. With injury, they lose this 'position sense' and don't communicate properly with the brain. But you can work to activate new members of this class of cells.

Cisneros sends me home with a detailed set of exercises and recommendations, including the use of a stability disk with a padded, domed surface. "I love balance as a metaphor for life," she says. "It's the ability to maintain equanimity under pressure. It's like watching Jackie Chan—exactly the amount of force you need to wobble and regain balance. Balance leads to stability, which leads to good posture."

Lake Austin also has an "executive director of lifestyle enrichment," a rather flowery title for the unflowery Deborah Kern, a former nurse with a Ph.D. in health sciences. Kern uses a method called Phoenix Rising, a combination of assisted yoga poses and breath awareness to help work through inner conflicts and held emotions that may make the body tight and painful. "The body has opinions," explains Kern. "We carry our issues in our tissues. This is a therapeutic mode to access body wisdom. It bypasses analysis and goes straight to what the body has to say."

Kern gently pulls, pushes, and stretches me, often using her own body as ballast, continually asking for feedback and then repeating my words to me. It is not the kind of experience I sometimes have in a good yoga class, where I've been known to burst into tears (a fairly common reaction), but I can understand that Phoenix Rising might provide that kind of release. It certainly provides heightened body awareness, making strictures and flexibilities obvious. By the time I go out to pedal a hydrobike on the lake, my shoulders are decidedly less Nixonian.

Three-night spa packages start at $1,280 per person, double occupancy; $1,515, single occupancy. Personal posture session: $50 for 25 minutes, $85 for 50 minutes; Phoenix Rising, $185. 1705 S. Quinlan Park Road, Austin, TX 78732, 800-847-5637, www.lakeaustin.com

essary for being bipedal. But a lot of people will straighten out, lose the secondary curve."

Much of what happens to us is self-induced—hunching for hours over a computer or steering wheel; carrying babies, briefcases, and backpacks; and, yes, getting buff in the gym. "Trainers are good for my business," says Harlan Selesnick, M.D., the director of the Miami Sports Medicine Fellowship and orthopedist for the Miami Heat basketball team. "So many things could be prevented rather than ending up in my office."

> Much of what happens to us is self-induced—hunching over a computer, carrying babies, and, yes, getting buff in the gym.

Dr. Selesnick estimates that 60 percent of the problems he sees are overuse injuries due to poor body mechanics that are learned and embedded. "Some trainers put everybody on similar programs, not taking into account whether someone is hypermobile, meaning their joints hyperextend, or tight-jointed. Those exercises may not be right for that individual. Rather than strength training, maybe someone should be doing Pilates." With modern equipment come modern troubles, whether from a PC or a tennis racket. "New racket technology leads to different injuries now—the string tensions are different, so we don't get as many tennis elbows, but we see more shoulder and wrist problems," says Dr. Selesnick. "Shoe wear is another issue. If you wait to see them wear out on the bottom, you've lost shock absorption about 50 percent of the time."

When the body is out of alignment, it's because of a kind of musculoskeletal memory loss, according to Pete Egoscue, a former marine who was wounded in Vietnam and developed the Egoscue method of postural therapy for his own rehabilitation. (His stretches and exercises are taught at his San Diego headquarters and in clinics around the world; www.egoscue.com) "We're not fragile by design, and we're not complex," he asserts. "The human design is so complete that it allows our function to be unbelievably simple. It's based on the law of vertical load: In order for the body to be upright and to have range of motion, you have to be vertically aligned—shoulder, hip, knee, and ankle. When you're there, you're balanced, and you're designed to be symmetrical. But we're often off-balance. The computer isn't the villain—it's the posture you adopt when you sit at the computer. You can ergonomically engineer your workplace, but it won't solve the problem. After a while, fixing the keyboard and the mouse and the height of the chair and all that stuff eventually lets you down. Your musculoskeletal system misplaces the memory of the vertical load, of its ability to hold you there. It's a matter of retraining yourself to hold the muscle memory."

Your psychological state is also reflected in how you stand. "A lot of bodywork therapies suggest that there is a connection between the way we hold ourselves and emotions," says Dr. D'Arezzo. "We tighten up different areas and store emotions there. There's a correlation with rolled-forward shoulders and depression. When we're more upright, we feel more purposeful, and we're perceived as more effective. Are people who are tighter more inflexible in their ideas? Are people who are open less rigid in their ideas? There's something to that theory, at least for flexibility: If we're looser, we're telling ourselves that it's safe."

Several of the experts I interviewed

A BETTER MOUSETRAP

As a fitness instructor in Tucson, Mary Ann Santander often found herself rolling up towels and placing them under clients to support their back, relax their rib cage, allow their shoulder blades to release, and bring their bodies into overall alignment. Although foam rollers were available commercially—"I can't tell you how many I lay on," she says—Santander, like Goldilocks, found them all too hard, too soft, or too soon lumpy. So she worked with exercise physiologists to develop a roller with a diameter, length, and density that were just right. The result is the BodyRoll, contructed and cut to her specs out of a very durable polyurethane that can support up to 250 pounds. And, says Santander proudly, "They're made in the good old USA." Santander, who now designs fitness centers, sells the BodyRoll for $50, and Canyon Ranch is among her customers. *520-325-9665 or thebodyrollinc@msn.com.*

CANYON RANCH

Decoding body language

Five-foot-ten redhead Rebecca Gorrell is a force majeure. She has a dancer's grace and a tomboy's athleticism, but growing up she wanted to be delicate and petite, so she spent her childhood schlumping—a technical term many of us recognize from Mom sticking her finger in our back and barking, "Stand up straight." Having seen the light, Gorrell now does "movement therapy" at Canyon Ranch in Tucson, incorporating bits of wisdom and exercises from disciplines including yoga, Pilates, the Alexander Technique, and Hanna Somatics. (See "The Posture Improvement Menu" on page 110.)

She starts with the shocking disclosure that our muscles hold up our bones, not the other way around, so it is retraining and strengthening our musculature that brings the body back into alignment. "The way you sit, stand, and walk is more important for your body than any workout you do," she says. "Postural imbalances occur because some muscles are firing too much, working too hard, and some muscles are not working hard enough." Muscles work in pairs—quads and hamstrings, abs and lower-back extensors. These twosomes are called agonists and antagonists, with one flexing while the other relaxes. If one is overused, the other is underused. If one is weak and flabby, the other will be stretched and tight.

Pain and chronic injury are not the only upshots of poor posture. "Body language is a kinesthetic information exchange," says Gorrell. "It evokes an emotional response—that's why people love to watch ballet—and it affects the way others perceive us. If your posture is collapsed—shoulders rounded, stomach out, butt slung under—people form a different impression." And posture is better than Atkins at making you look thinner. "Those 'before' shots in magazines are almost always taken with the person somewhat hunched over," she says. "In the 'after' shots, the person is erect, the hips look narrower, and the shoulders look wider. It can take ten pounds off."

Gorrell says two things change posture: awareness and corrective exercise. For the latter, she has me lie on a dense foam roller made locally (see "A Better Mousetrap," left) to open up my pecs with movements she's dubbed "toy soldier," "puppet arms," "hug a tree," and "angels in the snow." The roller initiates a motor-sensory feedback loop involving the proprioceptors—receptors in muscles, tendons, and joints that automatically respond to stimuli, like pulling back your hand when you touch a hot stove. It's not a cognitive process: My lower to middle brain is telling me I don't want to fall off, so my muscles are shifting to keep me balanced. After practicing on the roller, I lie on the floor and can actually feel my entire back—not just my spine but my shoulder blades, too—flatten out.

Next Gorrell trains me in the principles of proper gait, having me walk while holding up my neck like a puppet master, so I get the feeling of a perfect plumb line from ears to shoulders to hips to wrists to ankles. And she sends me home with a mantra: String, string, swing. I am to think of my scalp as being suspended by an invisible string, with another string pulling my chest forward (she points out that I tend to lean back, the way models navigate a runway), and I must swing my arms as I walk, or else my shoulders will lock.

Canyon Ranch has possibly the most extensive and inclusive menu of therapies to address body mechanics that I've ever encountered—something for everyone—and I put myself literally in the hands of neuromuscular therapist Jack Howe. He assesses the intermittent pain on the left side of my neck and shoulder as muscles in spasm—vestiges of a passenger-side air bag exploding on me last year. "Blood supply to the muscle is reduced so there's not enough oxygen," he says. "The muscle stays in contraction and compresses the sensory nerves. The nerves tell the brain that it hurts so maybe you'll stop doing what you're doing." Massage can't release the muscle, says Howe. Instead, he applies deep pressure with his fingers (madly uncomfortable at first) to stretch the muscle fiber and increase blood flow. "The combination relaxes the muscle so it lengthens out and takes the compression off the sensory nerve." I'm not convinced—the pain has come back—but perhaps I need more treatments.

Also on the menu is an appointment with "shoe guy" Rob Tenny, who evaluates workout footwear. Everyone I met who used his services seemed to have the same experience: He asks about your fitness routine, watches you stand and walk, and, after looking at your shoes, gives them a thumbs-up or thumbs-down, suggesting a better model in the latter case. (When provoked, he also offers a little diatribe on orthotics, which he considers a crutch for weak muscles perpetrated by podiatrists, who prescribe them, and pedurthists, who make them.) The analysis is free and takes only 15 minutes, and while I found it perfunctory, the editor in chief of this magazine thinks it was the best 15 minutes he ever spent at Canyon Ranch.

Four-night spa packages start at $2,870 per person, double occupancy; $3,530, single occupancy. Postural analysis: $110; neuromuscular therapy: $200. 8600 East Rockcliff Road, Tucson, AZ, 800-742-9000, www.canyonranch.com

PRITIKIN LONGEVITY CENTER AND SPA

Tag team

When it comes to muscle and bone, you don't want to be an interesting case, says Frank Musumeci, the physical therapist who does "biomechanical muscular evaluation" at the Pritikin Longevity Center and Spa in Aventura, Florida. "Interesting" means that Musumeci is finding postural anomalies, asymmetries, hypo- or hypermobile joints, or crepitus—an ominous-sounding word that refers to crunching or crackling when the joints move. (If this corporeal music accompanies pain, inflammation, or loss of motion, it's usually a sign of abnormal mechanics.)

Unfortunately, there are a lot of interesting characters out there. "As a baby boomer myself, I see so many of this generation aging and developing similar pathologies," says Musumeci. "There's an anatomical position called 'pelvic neutral' that we strive for—it's the foundation for the normal curve of the spine and spaces between the vertebrae. The pelvis, which is made of three large bones, can get out of alignment pretty easily—often because of improper training—and that will change many things biomechanically, such as the whole base of support for the lumbar spine. It's what we call an iatrogenic problem, meaning the treatment causes the problem: People are exercising the wrong way.

"I see people constantly getting injured by weight lifting—it's what I call the 'mirror muscle' syndrome: They train looking in the mirror. When was the last time you heard people talk about strengthening their rhomboids? They want to do their pecs and abs. We're exercising as we did in our 20s, but these exercises are fostering poor posture and causing more cervical dysfunction. We're getting kyphotic—that's a rounded-shoulder appearance, and it's one of the most common reasons for people in their 40s and 50s to develop upper back and neck pain."

The Pritikin evaluation starts with a PMH—past medical history—because Musumeci knows from personal experience (a serious motorcycle accident and many subsequent surgeries) that at a certain point in life, we are the sum of our wear and tear. Working with partner Tom Fletcher and speaking in what sounds like the private language of twins, Musumeci examines shoulders, elbows, wrists, hips, knees, ankles, and feet, measuring extension, flexion, rotation, abduction, gait, tracking, mobility, and balance. I don't learn until after the hour-long session that it's very good to hear the acronym WNL—within normal limits. "We see what we can find by being methodical," he says. "Is the problem ergonomic, genetic, a past injury, an exercise routine? We're trying the get the mosaic, we're hunting and looking, and where there's smoke, there's fire."

After the evaluation, clients receive take-home diagrams of "prescription exercises"—customized preventive and corrective routines that employ "impingement-free angles," meaning the movement doesn't restrict or constrict the joints. The exercises are designed to avoid re-inflaming sensitive areas and to slow degenerative effects.

"By the time we're in the 40-to-60 age bracket, we all should have different goals," says Musumeci. "If you're hypermobile—what used to be called double-jointed—should you work on stretching? Probably not. If you're a skier, you need to strengthen the hamstrings, which are going to provide secondary strength for your joints. Joints have both static stabilizers (meaning the joint capsule and cartilage) and secondary stabilizers (meaning the muscles around the joint). We can't strengthen the static stabilizers, but working on the secondary stabilizers can decrease the possibility for injury."

The biomechanical musculoskeletal evaluation ($285), one of the most illuminating spa experiences I've ever had, is an optional part of the weeklong Pritikin Program ($3,000–$7,600, single occupancy; $5,000–$9,200, double occupancy). See the September-October 2004 Spa Rx for a detailed explanation. 19735 Turnberry Way, Aventura, FL 33180, 800-327-4914, www.pritikin.com

even pointed to studies showing that people who appear off-balance are more likely to be victims of crime. "Nature's predators are very efficient—they don't want to work too hard—and so are human predators," says Egoscue. "If a woman's posture conveys to a thug, mugger, or rapist that she is not confident, and the woman behind her conveys capability, the predator is going to be efficient every single time."

But fending off a mugger is hardly the best reason for improving body mechanics. Dr. D'Arezzo mentions a 43-year-old patient with one shoulder higher than the other who was relieved of her back pain after several months of exercising to restore alignment, a 50-year-old man with a backward-tilting pelvis who regained the pleasure of walking, and a 45-year-old woman whose friends asked if she had done "something with her hair" after postural work helped her become more upright.

However slouched, slumped, collapsed, crooked, rounded, or generally out of whack you are, you'll be rewarded by diligent remedial effort, and this payoff is much bigger than weight loss. Correcting your body mechanics may be a different sort of body sculpting than you're accustomed to, and you won't get that seductive instant gratification. Posture is a lifetime commitment—that's part of its un-allure—but it's worth every effort in the long run. Helping you go straight might be the best thing a spa could offer.

AIMEE LEE BALL *is the co-author, with Liz Tilberis, of* No Time to Die *(Little, Brown), a memoir of the former* Harper's Bazaar *editor's life in fashion and battle with ovarian cancer.*