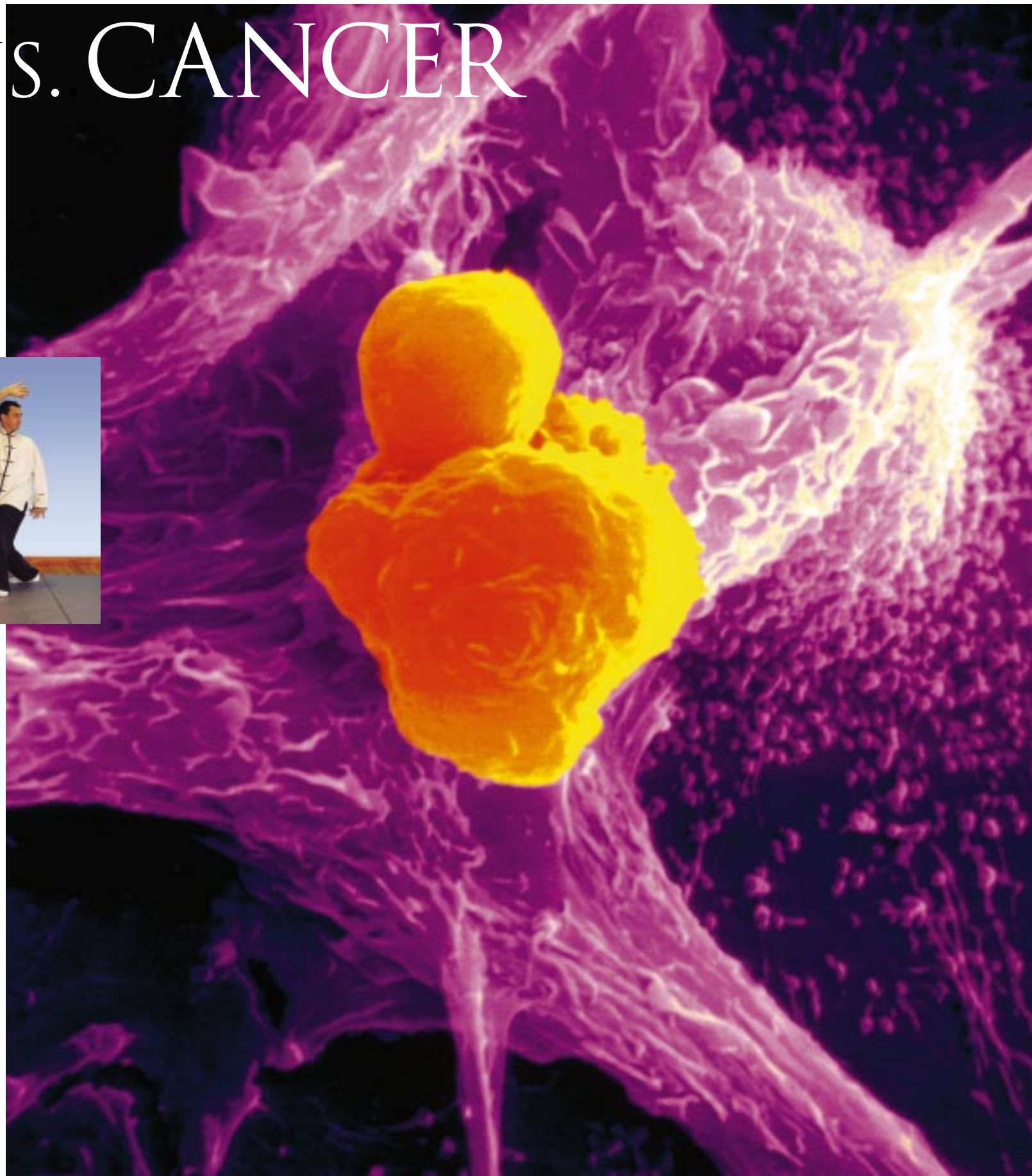


# QI vs. CANCER

By Cathy Kerr

*Across two millennia, Chinese sages and physicians have described the function of qi (“chee”), or vital energy, that courses through the body and the spirit, and have pointed to blockages in the body’s hidden qi channels as the source of physical ailments and disease. Qi skeptics counter that the energy channels described in ancient Chinese texts and drawings do not correspond to any real structures in the body, and that the concept of qi is both elusive and impossible to verify scientifically. Lost in these abstract debates are the questions that real people facing health crises might ask.*



In early 1996, my friend John Bianco and I both began intensive qigong practices in the face of cancer. John, a 33-year-old patent attorney, had non-Hodgkin’s lymphoma. Twice before, his doctors at the Massachusetts General Hospital had helped him drive the disease away, once with chemotherapy and once with a bone marrow transplant. But each time it had come back. Now there was no more medical treatment to be done. He was in great pain and had no stamina. But his daughter, Maeve, was six-weeks old, and maybe it was the drive to see her grow up that pushed John to reach beyond the medical establishment for help.

My situation was different. I was 31, beginning a stint as a history lecturer at Harvard, when a random lab test revealed multiple myeloma, a rare bone marrow cancer considered incurable. I had no symptoms. The specialist I consulted at the Dana-Farber Cancer Institute in Boston said there was nothing to be done until symptoms appeared. I would have perhaps six months of watchful waiting before I began to suffer from such things as anemia and bone dissolution. Then my best option would be a bone marrow transplant to infuse my body with my sister’s immune system. The specialist explained that nearly one-quarter of myeloma patients who received this toxic experimental procedure would die in the first year. Those who survived would have their best shot at a cure. As I sat with my husband, friends, and family, listening to his detailed and bleak presentation, I realized that my decisions had life or death consequences. I needed more than watchful waiting.

That spring, John and I both turned to Ramel (“Rami”) Rones, a tai chi and qigong teacher and martial artist from Israel now practicing in Boston, who works with cancer patients and the seriously ill. Rami’s approach to the bitter qi debates is simple, instructive, and in its way brilliant. He is above all a pragmatist. A champion martial artist, he has used the traditional martial qi cultivation practices to good effect. But these practices (Iron Shirt qigong, for example) were part of a larger martial training that was neither esoteric nor mystical. Using generations-old methods of stretching, strength training, and working with joints and the breath, Rami had learned that humble exercises, which may not seem magical, can cultivate qi or vitality. Don’t worry about qi, he would tell us. Don’t sit around speculating or engaging in magical thinking. Do the exercise and let the qi take care of itself. ▶▶▶

Ramel “Rami” Rones (far left) says to concentrate on the exercises, not magical thinking. Meanwhile, qigong does seem to help white blood cells (purple) beat cancer cells (yellow).

FAR LEFT: COURTESY RAMI RONES; LEFT: MICROWORKS/PHOTOTAKE

## Don't you get it? It's not about any one exercise . . .



### John's Story

**Rami never promised John the exercises would affect the cancer. But he did promise small improvements in John's daily functioning. They started with stretches of the fingers, wrists, and forearms — small wave-like exercises Rami calls "oiling the joints."**

Finally, for whole-body strength and concentration, for 45 minutes a day he did a Taoist exercise called Embrace the Tree, in which the practitioner stands with slightly bent knees, tucked tailbone and arms reaching out to form a great circle, as if hugging a tree. Though seemingly simple, Embrace the Tree made John sweat so much that he had to bring a bag of T-shirts. Two of Rami's cardinal rules for cancer patients are "Never get chilled" and "Never stay in damp or sweaty clothing."

John was at the end of the line when he showed up at Rami's door. He couldn't drive, because his muscles were in spasm. He could barely walk the two flights to Rami's apartment. He was too weak to hold his infant daughter. And the cyclical steroids that kept him going caused agony on the days of the month when he had to taper off.

Rami never promised John that the exercises would affect the cancer, bluntly telling him, "It may be that what I can help you with is dying." But he did promise small improvements in John's daily functioning. They started with stretches of the fingers, wrists, and forearms — small wave-like exercises Rami calls "oiling the joints," based on old martial arts flexibility exercises. John began to work on his leg strength and balance with slow martial walking exercises, and did three-part breathing and breath-holding exercises several times a day. He worked on his trunk flexibility with long, relaxed forward bends, splits, and other yoga stretches.

After four weeks of finger and hand exercises, 20–30 minutes a day, John's forearms had unclenched enough that he could drive to his medical appointments. This small success made him feel more independent and took pressure off his wife, Grace, who was caring for Maeve and John and working full-time.

About a month later, John had his first experience of qi. It was in a seminar that we both took from Rami's own teacher, Yang-Jwing Ming, a noted author on Chinese tai chi, qigong, and martial arts, in the Jamaica Plain section of Boston. Dr. Yang had us partner up. One person would hold his hands a few inches away from the other's body and then scan up and down, while the partner stood with eyes closed, trying to sense where the hands were. While John had embraced his qi practice wholeheartedly, he was trained as an electrical engineer, and he was skeptical of mystical energies. John partnered with Rami, and he vividly remembers standing with eyes shut and becoming angry, sure that Rami was cheating, and actually pressing him quite hard. John yelled and opened his eyes. He saw that Rami's hands were several inches away from John's chest.

Another time, as he was deeply engaged with Embrace the Tree, John remembers feeling a hand or force pushing him hard into the ground, as though he were involuntarily rocked down and bounced up like a spring.

Perhaps more interesting than the experience of qi were the physiological changes John experienced that spring and summer. At his low point in January when he first started working with Rami, John's marrow had been densely packed with cancer. A bone marrow biopsy found that his cells were 96 percent cancerous. He needed regular transfusions of red blood cells and platelets just to stay alive. In June, after five months of qigong, John was able to stop the transfusions. By September John's blood counts had improved so much that his oncologist allowed him to join a recreational soccer team. John's bone marrow had come back to life. Had the cancer receded? This is impossible to know because John's doctors decided not to take a second bone marrow biopsy. They were afraid John might become demoralized and his efforts might collapse if they found that the marrow was still brimming

## It's about balancing all of them . . .

### My Story



**At my first visit to Rami, I expected him to give me exercises to relax and check out, perhaps by visualizing myself in a pleasant scene. Instead, he prescribed a set of exercises to increase my body awareness.**

with cancer. But although they could not quantify it, it was clear to John's doctors and caregivers that something had changed. Although he was still anemic and was still at increased risk of infection, he had tremendous energy and sense of well-being — and he didn't seem to be dying.

By the following spring John was strong enough to undertake renovations at his house. He began to assist in Rami's qigong classes for the elderly in nursing homes. And he started to do more serious martial kung fu training, just for fun. That second summer, we often met at Dr. Yang's martial arts school to do qigong belly massages. Rami, a believer in the healing energy of both nature and other people, organized groups from the school to do qigong walking exercises with us in the Arnold Arboretum in Jamaica Plain. Rami also taught John "crying qigong," in which John focused on a crying sensation to release his frozen feelings of sadness and fear.

That autumn, though, almost two years after he was sent home to die, John developed pneumonia that he had trouble shaking off. Then he started bleeding from his orifices. His doctors managed to stop the infections and the hemorrhages, but it became clear that John was failing. His platelets and red blood cells had become dangerously low, and he needed more frequent transfusions.

But those two years had seen progress in lymphoma treatment. John's oncologist referred him to Mass General, where Thomas Spitzer, M.D., was testing a new treatment called chimeric transplantation. John was the eleventh patient to try it. After treatment with his sister's bone marrow, he was found to be free of cancer.

That was more than four years ago. He has since returned to work as a patent attorney. He and his wife had a second child in June 2002.



**Four years after John was supposedly beyond help, the Biancos were blessed with a second child.**

During the same time, I was undergoing an intense transformation, but the trajectory of my practice was different from John's. At my first visit to Rami, I was lost in the shock and panic of receiving the myeloma diagnosis, and I expected him to give me exercises to relax and check out, perhaps by visualizing myself in a pleasant scene. Instead, he prescribed a set of exercises — sitting meditation, Embrace the Tree, standing meditation, moving qigong, martial walking exercises, yoga stretches, and breathing exercises — to increase my body awareness. I was told to meditate to feel the inside of the body and to stretch to create internal space so the organs are not squished together in the abdomen. He told me I wouldn't always feel the benefit of an exercise right away and at these moments I should have faith in the process. Sensing my headstrong and somewhat mercurial nature, he stressed the importance of a balanced program, pursuing the exercises in tandem and not focusing on any single exercise or effect.

In May 1996, several months after my diagnosis, I had an experience that became a kind of touchstone. I was in a qigong workshop with Master Liang Shou-Yu, a friend of Rami's teacher, Dr. Yang. For the final exercise, Humans Unite with Heaven and Earth, Master Liang had us stand in a posture similar to Embrace the Tree: relaxed but not collapsed, knees slightly bent, tailbone tucked in, spine nice

## It's about deciding to do the exercises every day even when you don't want to . . .

and straight. But instead of holding the arms in a circle, we held them with the hands turned upward and out, slightly above the forehead. He told us to shut our eyes and to visualize energy entering the forehead and traveling down through the head, neck, torso, belly, and groin, down through the legs and feet, into the ground. We were to imagine the stale or used parts of us flowing away into the floor, just as the stream that flows into us from the sky confers vitality.

The exercise sounded odd, but I was fully engaged in it when, after some 20 minutes, I suddenly felt as though someone had turned on a spigot in the middle of my body, and a shower of water was cascading down through my center, into the ground. I was riveted but scared and I wondered if anyone else felt the same. I stopped before the others because it was so unsettling. But the next day I noticed that my lips, which were always parched with peeling skin, were supple and smooth. My nail beds, always dull, dry and bordered with flaky skin, were smooth, shiny and moist. And the soles of my feet, normally leathery, dried out and white, were moist and bright red.

Elated by the changes, I started doing the exercise twice a day for about 40 minutes each time. That month, my IGG protein, the main indicator of my disease, dropped by about 15 percent, the first time it had done so — and the first time it had improved on its own, without medical treatment. My doctors called it a random fluctuation. Nevertheless, I continued. I had one goal: to keep the disease from progressing to the point of needing treatment. The Dana-Farber doctors had promised me that I would need it within four years. I was very pleased, a year after diagnosis, to be no closer to that point.

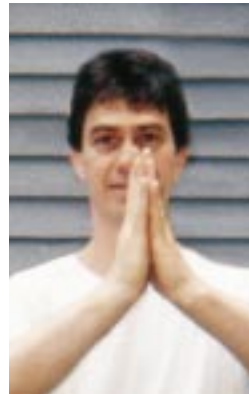
This exercise seemed to have a psychic side effect: I was sad and weary all the time. At first, transfixed by the strong qi feelings, I saw the stirred emotions merely as a nuisance. Then I began to worry. When diagnosed with myeloma, I was emerging from a major depression that had come on as I was finishing my dissertation at Johns Hopkins. I wasn't sure that an exercise that made me feel so bad could be good for me. I let up on the intensity of the practice and felt better, but my

Rami works on his smile to cultivate equanimity during a difficult posture.

IGG reversed course, slowly climbing to its pre-Humans Unite with Heaven and Earth level four or five months later. Again I did the exercise intently, and again it dropped below the level marked at diagnosis.

Four times over the next two years, my IGG protein would rise and threaten to require treatment. I would pour on the Humans Unite with Heaven and Earth and the level would drop. One month, it dropped by 20 percent, from 5 to 4 g/dl. The world-renowned myeloma specialist at the Cedars-Sinai Hospital in Los Angeles, Brian Durie, M.D., thought that something in my life, perhaps something I was doing, had caused it. I believed that it resulted from the intense application of this one exercise.

Meanwhile, Rami was happy that the cancer seemed to be arrested in its climb. With the new sense of application that came over me after I finished Master Liang's seminar, I was now practicing five to six hours a day. But he warned me that my practice was unbalanced: I was too riveted by one exercise, which I didn't understand, and pursuing qigong as an occult art instead of a practice with straightforward principles. The package of exercises, he explained, if done with focus and persistence, would draw on the same principles and, presumably, elicit the same reactions as the mysterious Humans Unite with Heaven and Earth, but in a more balanced and more gradual way. I didn't listen. I pursued the entirety of my practice but I boosted the time I spent on Master Liang's exercise and unleashed a special energy. Yet every time that I poured



**In 1998, Rami was chosen by the Dana-Farber Cancer Institute to lead a study to look at whether qigong or low-impact aerobics strengthened the immune system to resist relapses of cancer.**

## It's about cultivating stillness inside while you do them . . .

it on, I would lose my emotional resilience, becoming thin-skinned, easily saddened, and tired.

In retrospect I see that I was not focused on the experience but chasing a result, trying to lower the protein level. I saw myself as a qigong pioneer. I would control the disease only through qi exercises. I was still searching for a magic bullet in the form of a biomedical explanation for what had happened to me in Master Liang's seminar — the physiological changes I had experienced, including the drop in my IGG protein. I began to realize that I was not alone in my mistake.

### *Toward a New Career*

In 1998, Rami was chosen by the Dana-Farber Cancer Institute to lead a study to look at whether qigong or low-impact aerobics strengthened the immune system to resist relapses of cancer. Donna Neuberger, the very smart biostatistician at Dana-Farber who designed the study, told me she saw qigong as exercise plus mindful relaxation, which might convey the benefits of both. This study was a step forward, but it also became a source of frustration to me. According to Neuberger's hypothesis, any relaxed or fluid, rhythmic type of walking should work as well as qigong.

The problem, it seemed to me, is that researchers at Dana-Farber and elsewhere were looking only for "hard" changes in physiology: measurable changes in natural killer cell activity or in the ratios of various components of the immune system, ignoring the experience of qigong. It misses what I saw in my friend John. For instance, it does not capture the practical ways in which the exercises helped him feel strength and vitality during a very difficult time — a time when he was supposed to be dying.

Researchers have not asked people about the texture of their experience. How do they feel when they engage in a therapy, such as taking a pill or practicing qigong or meditation? How does it change their understanding of themselves and their condition? How does it change their experience of the disease?

I have taken these questions as my own challenge. With

the help of Professor Byron Good, a medical anthropologist at Harvard, I studied the qualitative methods and theoretical concerns of medical anthropology, and I have brought these concerns to a new working group at Harvard Medical School chaired by Ted Kaptchuk, a doctor of Oriental medicine and assistant professor. I became an investigator in a randomized controlled trial of acupuncture for repetitive strain injury. An article of mine on the Dana-Farber trial was accepted by a well-regarded journal. And I became a coauthor of a paper by Harvard's Placebo Group addressing some major controversies in the field. By this time, I had been working with Rami for more than five years. I practiced meditation and qigong about three hours a day.

### *Turning to Treatment*

Last year, as I was growing ever more excited, even agitated, about my new research, I had to face the limitations of the qi practices and my own ability to control the disease. After five years of watchful waiting, my disease began to stir, and for four days every month I began taking high doses of a steroid called decadron, which attacks the myeloma cells in the bone marrow. When the protein wasn't falling fast enough, my oncologist and I decided to add thalidomide, and the two medications now work synergistically to drive down the myeloma protein level.

Such treatment can have serious side effects. Steroids prevent sleep; they can cause outbursts of rage, even psychosis. In my limited experience with patients, oncologists, and psychiatrists, psychological disturbances resulting from steroid treatment are surprisingly common. For me, the qigong exercises have helped tremendously. Although on the days I am treated with steroids I can feel a roaring in my ears, as if I were next to a rushing brook, I have used Embrace the Tree and other exercises to stay connected to myself — to feel my feelings, control my appetite, and let me sleep. I have had very few problems with the steroid therapy.

I learned, first as I avoided treatment and then as I dealt

## It's about creating an internal context that lets your entire system function better.



Beyond lab science: Cathy in the mountains near Salt Lake City combining qigong with the healing power of nature.

**He told us to shut our eyes and to visualize energy entering the forehead and traveling down through the head, neck, torso, belly, and groin, down through the legs and feet, into the ground.**

My own answer to the question is more elaborate. When I started qigong, I was emerging from a major depression, bursting with a lifetime's grief over hiding my daily sadness and fear from myself. Although I could keep the sadness under wraps for much of my day, even simple exercises — letting the arms

with its effects, that emotions and physical sensations move in concert and that practices such as qigong affect both. This should not have surprised me — the local PBS station broadcasts testimonials to the mind-body connection every week. But reading or hearing that mind and body are connected is not the same as visceral experience.

On a biting cold day last winter, over coffee, I asked John, the engineer turned patent attorney, how the practice helped him. His answer was simple: "Whatever exercise Rami told me to do, I focused on 100 percent. I did every exercise, including the little finger and wrist rolls, as though it were the most important exercise in the world. I was completely mindful and tuned in to each exercise, no matter how small and unimportant it seemed." I envisioned John going through his routine, checking off each finished exercise, with a focused mind, but without much interest in the underlying principles.

float up and down rhythmically — could leave me in tears. Indeed, just gently bringing my awareness to my throat or my heart regularly produces almost unbearable waves of feeling. Master Liang's Humans Unite with Heaven and Earth tapped most deeply into this mind-body-emotion channel. I still don't understand the drops in the protein level this practice seemed to elicit. I have no proof of the link and haven't been able to replicate the declines. These changes, which helped me delay treatment for so long, are a lingering mystery: gifts of grace, providence, the Tao. It is difficult to say more than this.

Rami likes to think of John and me as temperamental opposites: John simply did the exercises that Rami told him to do; I created my routine daily based on my assessment of that day's needs. Making my decisions has created inconsistency, jumping from one exercise to another, trying to replicate what I felt long ago in my seminar with Master Liang. I have only now come to see the importance of the qi exercises that cultivated stillness and quiet awareness. In my standing meditation, I am more focused, and in all the exercises, I direct my awareness to the center of my body, what Chinese tai chi masters call the *dantien*, the place from which all action is said to originate.

Recently, after some unexpectedly good test results, Rami asked whether I had done anything differently with the practice that might have contributed to the result. I described a change in my arm position during a particular standing exercise. Exasperated, he cut me off, "Don't you get it? It's not about any one exercise. It's about balancing all of them. It's about deciding to do the exercises every day even when you don't want to. It's about cultivating stillness inside while you do them. It's about creating an internal context that lets your entire system function better."

I do get it, most of the time. As a researcher I remain interested in the how and why. But as one who has finally begun to learn to live in her body, I no longer need a scientific study to help me interpret what I feel in my bones. ❖

Cathy Kerr practices qigong in Watertown, Massachusetts. She is also an instructor at Harvard Medical School, where she investigates somatosensory responses to therapies such as acupuncture and qigong. You can reach the author at [catherine\\_kerr@hms.harvard.edu](mailto:catherine_kerr@hms.harvard.edu).

## Brain Imagery and Qi: Tracing the Body's Emotional Wiring

The obvious, external aspects of a qigong practice — stretching, breathing and strengthening — have all shown measurable health benefits. For instance, Herbert Benson and his colleagues at Harvard Medical School have studied how meditative techniques such as those used in qigong help to relax patients and lower their stress levels. But these studies don't explain why John and I were taught to focus on areas such as the hands or belly.

Another line of attack comes from recent studies of acupuncture's effects on the brain. Traditional Chinese sages thought acupuncture and qigong worked on the same energetic system. Indeed, critical acupoints, including the top of the head, the base of the perineum, the hands, and the feet, are also vital to qigong practice, and are referred to as energy "gates." Many qigong exercises, such as Embrace the Tree, involve focusing on the same spots that acupuncturists poke with needles.

This potential overlap suggests that studies of acupuncture may tell us what happens in the body and brain during qigong practice. One promising recent investigation of acupuncture was published by Wu Ming-Tu in *Neuroimage* (August 2002). Wu and colleagues in Taiwan performed brain scans on 15 subjects. They compared brain activations elicited by needling an acupoint with brain activations elicited by needling a sham point. What they found was fascinating: Needling the active point produced significant changes in activation in several regions in the brain, including the primary somatosensory cortex, the hypothalamus, and a portion of the anterior cingulate cortex.

Finding differences in these three regions is intriguing. First, consider the primary somatosensory cortex, which responds to touch, or tactile activation of the skin. Wu found that the brain-body connection appears to be wired together more strongly at acupoints than elsewhere. Next, consider the hypothalamus, an important mediator of stress and physical emotional response. Needling at an acupoint appears to affect the limbic and stress response systems more strongly than needling a non-acupoint. Finally, consider the anterior cingulate cortex, involved in emotional responses to stimuli such as pain. Needling at an acupoint there causes a significant deactivation.

Wu's study suggests that specific qigong exercises and directing attention to specific sites in the body might affect both the stress response system and the emotions we associate with certain bodily areas.

Wu's study fits into the groundbreaking framework proposed by the neuroscientist Antonio Damasio, in his works *Descartes' Error* and *The Feeling of What Happens*. Damasio's "somatic marker" hypothesis suggests that emotions are experienced in both the brain and the body rather than in the brain alone, as previously thought. Wu's study supports this idea, because it seems to demonstrate that some areas of the body, such as acupoints, are more "emotionally wired" than others. If so, then qigong exercises focusing on "opening up" and stretching these "emotionally wired" areas may have a host of other physiological effects. Wu's study, however, is preliminary. More studies are desperately needed.

—C.K.

## Looking for a Qigong Teacher?

If you are generally healthy and are looking for a qigong teacher, you might ask a local tai chi teacher to recommend someone teaching qigong for health. You might also check *Tai Chi* magazine or *Qi* magazine (both are national publications). If you have a chronic health condition, make sure any teacher you work with has experience with beginners and those with health problems.

If you feel drained or tired after a practice, tell your teacher. If he or she does not help you modify the practice, consider finding a new teacher. Finally, if you are in a cancer crisis, and considering intense qigong practice, you will need extra help and guidance. Both John and I took private lessons with our teacher, Ramel Rones ([www.ramelrones.com](http://www.ramelrones.com)), which supported our practices — we did the exercises for over three hours a day. You will need to find a teacher who has logged

extensive practice time with sitting, standing, and moving meditations. Ask some well-known teachers and authors on qigong, such as B. K. Frantzis ([www.energyarts.com](http://www.energyarts.com)), Michael Winn ([www.healingtaousa.com](http://www.healingtaousa.com)), or Kenneth Cohen ([www.qigonghealing.com](http://www.qigonghealing.com)) whether they have a senior student in your area who might be willing to help you.

Consider joining a qigong-healing practice group such as Chi Lel ([www.chilel-qigong.com](http://www.chilel-qigong.com)), which was started in China but has members all over this country. A number of cancer patients report good results working with such groups.

Whether you are in crisis or simply want to improve your sense of well-being, bear in mind the "70 percent rule": Never strain yourself to your maximum. If you finish an exercise exhausted, seek help from a teacher and modify the exercise. Your mantra should be "pain = no gain."

—C.K.