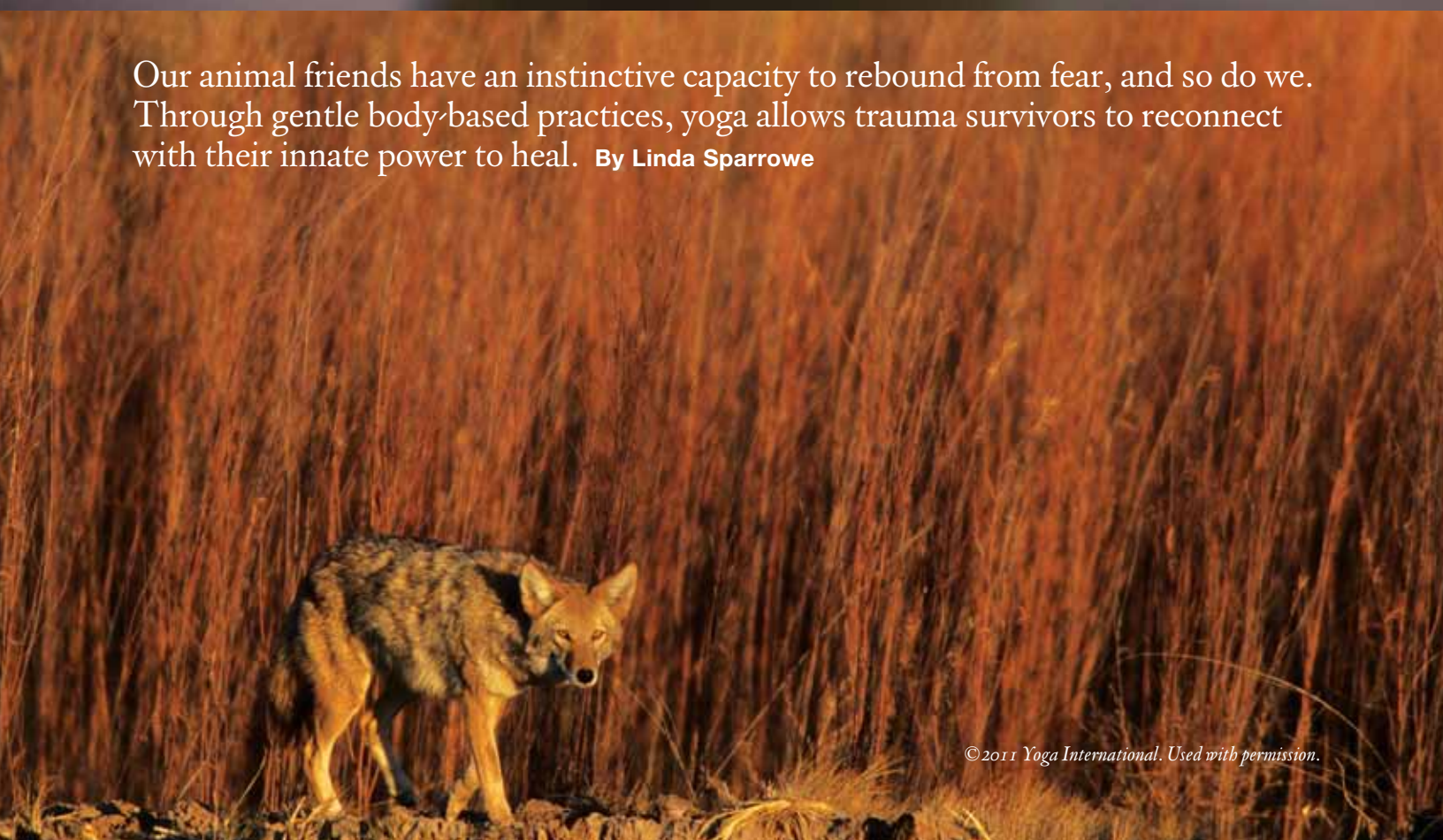
Transcending Trauma

Our animal friends have an instinctive capacity to rebound from fear, and so do we. Through gentle body-based practices, yoga allows trauma survivors to reconnect with their innate power to heal. **By Linda Sparrowe**



Elaine breathes slowly, in and out, for a few rounds of simple pranayama before she has to stop. Images too scary for her to describe race in and overwhelm her. After a few moments, with Jocelyn Jenkins, her therapist, sitting next to her, Elaine tries again. Several sessions later they move on to very basic, very slow sun salutations; she becomes aware of her muscles, noticing any resistance in her body, stopping when she gets too agitated.

Although these postures and breathing exercises sound easy and soothing for most of us, they represent enormous progress for Elaine (not her real name), who cut herself off from any connection with her body or her emotions years ago. Jenkins remembers the first time she met her. Elaine was very agitated, in a constant state of hyper-arousal, "alert to every movement in the room, every sound, even the rise of my eyebrow," Jenkins says. But when it came to talking about her emotions, Elaine shut down.

Here's why. As a young girl, Elaine was brutally raped. Unbelievably, no one in her family noticed—not even when she came to the dinner table covered from head to toe in bruises.

Without anyone to guide her or help her make sense of what had happened, Elaine tried to rid herself of any residual sensations she felt—she binged and purged, used laxatives, and finally severely restricted her calories in an attempt to numb the pain, be invisible, and "yet at the same time," Jenkins told me, "get someone to notice." But no one did. Elaine felt alone and abandoned by the people she thought would protect her. By the time she checked into the Eating Recovery Center outside of Denver, Colorado, where Jenkins met (and noticed) her, she had a history of unsavory relationships with men, self-destructive behaviors, and no idea how to move forward.

Elaine is a survivor of childhood trauma, and her inability to control her emotions, trust her body, or form meaningful and loving relationships is a common cluster of side effects associated with complex post-traumatic stress disorder (complex PTSD), according to Judith Herman, professor of clinical psychiatry at Harvard and author of *Trauma and Recovery*,

who coined the term. This particularly insidious form of PTSD affects those who suffer from chronic childhood abuse. While we often think of PTSD as the intense and unexplained symptoms military men and women experience coming home from battle, this anxiety disorder can take many forms and touch a much wider population. Being raped, getting hit by a car, witnessing a violent crime, being in a war zone, losing your best friend to cancer, or even being scared of the *possibility* of something bad happening can all contribute to PTSD. How you deal with how you feel in the aftermath of such events determines the level of trauma that gets lodged in your cells.

Yoga can make a big difference for trauma survivors like Elaine, and we are beginning to see more research that backs up her experience. A three-year NIH–funded yoga and trauma study conducted at the Trauma Center at Justice Resource Institute in Brookline, Massachusetts, with women who have treatment-resistant complex PTSD, has shown promising results. Bessel van der Kolk, MD, the study's principal investigator, and his colleagues presented preliminary findings at the 2010 International Society for Traumatic Stress Studies conference in Montreal last November. Initial study results revealed that participation in trauma-informed gentle yoga leads to a significant reduction (over 30 percent) in symptoms of post-traumatic stress, including fewer intrusive thoughts and less dissociation from the body. By the end of the study (after only 10 weeks of yoga) several women in the yoga group no longer met diagnostic criteria for PTSD. Other smaller studies show yoga increases heart rate variability (HRV), a measure of how robust the brain's arousal systems are. It appears that traumatized people have unusually low HRV, says van der Kolk—who is also founder and medical director of the Trauma Center—which could explain why they are "so reactive to minor stresses and so prone to develop a variety of physical illnesses." Yoga's ability to touch us on every level of our being—physical, mental, emotional, and spiritual—makes it a powerful and effective means for trauma victims to reinhabit their bodies safely, calm their minds, experience emotions directly, and begin to feel a sense of strength and control.

All Talked Out

Most experts agree that trauma's effects live in the body—and that's why yoga works. Evidence suggests that people like Elaine respond best to body-based therapies, coupled with psychotherapy, because traditional "talk" therapy alone can dredge up old memories and reignite the pain all over again. And, while the mind may spend countless hours reliving the event and retelling the tale, it cannot undo the *effects* of what happened—the terror, rage, helplessness, and depression that then manifest in the body. According to van der Kolk, trauma is not *the story* we tell about the violence we endured or the horrible accident we witnessed; it's not even the event itself. Instead it's the stuff we can't let go of—what van der Kolk calls the "residue of imprints" (and yogis call *samskaras*) that gets left behind in our neurophysiology (our sensory and hormonal systems). Van der Kolk, the author of numerous articles and studies on how trauma affects the brain, says that traumatized people are "terrified of the sensations in their own bodies," so it's imperative that they get some sort of body-based therapy to feel safe again, he says, and learn to care for themselves.

Unresolved "issues in our tissues" manifest physically as migraines, nervous tics, clenched muscles in the neck, shoulders, and jaw, a sunken chest, or a heavy heart. Left unresolved, they can exact an even heavier toll in the form of heart disease, diabetes, panic attacks, ADHD in children, fibromyalgia, irritable bowel syndrome, and a host of autoimmune disorders.

On a Physical Plane

Before a trauma survivor like Elaine can let go of any residue or feel any physical sensations, she needs to spend time getting to know her body—a little bit at a time. Dana Moore, a Santa Fe–based psychotherapist and Kripalu Yoga teacher who specializes in trauma therapy, told me adults who were neglected or abused as children "probably had no healthy way of learning about their bodies." Most of them have neither a strong sense of self nor a keen sense of the con-

Previous spread: Left top: DonSmith / Alamy; Left bottom: Bill Coster WF / Alamy; Right: John Terence Turner / Alamy; This spread: Jeff Feverston / Getty Images

nection between the internal and the external. In his sessions, Moore likes to invite students to pendulate between movement and rest, between interoception (sensations in the body) and exteroception (stimuli outside the body). For example, he might guide trauma victims through an exploration of the left hand, noticing every muscle and movement, and then ask them to stop, rest, and feel. And then ask them to bring their attention to their ears, noticing any sounds they hear. An exercise like this reminds them that they can feel something deeply and shift the focus, coming out of discomfort, anytime they want.

Moving from one asana to another, slowly and deliberately, encourages students to stay with sensation and notice what's happening in their bodies, and to approach each movement with a sense of curiosity. The simplest of poses (standing or sitting in a chair) can produce profound results. Just feeling his feet on the floor for the very first time gave one agitated survivor a sense of balance, stability, and safety. For Elaine, who dissociated from her body and felt numb, doing gentle supported backbends began to wake up her body and get the blood flowing. Building a strong, capable body goes a long way toward developing a strong, centered mind.

No matter what poses survivors choose to do—or how much they experiment with the breathing exercises—they benefit from knowing that each exercise comes to an end, that they won't get stuck in emotional overwhelm. A pose might feel uncomfortable, a round of pranayama might bring up feelings they would much rather stuff back down, but the sensations are temporary, only around until the next posture or the next exhalation. >>

Teaching Yoga to Trauma Survivors

David Emerson, co-author of Overcoming Trauma through Yoga, *says to be a successful trauma-sensitive yoga teacher, you should be willing to examine your prior yoga training with an open mind in light of current understanding of trauma and PTSD; take feedback from students; and avoid physical assists. It is important to be highly competent in order to create a sense of safety for students, while not acting as the "expert," so that students can find their own way within safe parameters.*

Teacher Trainings

1. Trauma-Sensitive Yoga
The Trauma Center at Justice Resource Institute; David Emerson, director. Forty-hour training offered in the fall and a weekend training offered in the spring at Kripalu Yoga Center, Lenox, Massachusetts. traumacenter.org

2. Integrative Restoration Institute
Richard Miller, PhD, director. Three levels of iRest yoga nidra training offered throughout the year at various locations. irest.us/programs/trainings

3. Warriors at Ease
Robin D. Carnes, director. Advanced trainings and certification for teaching yoga in military settings; three levels, including one teleconference series, offered throughout the year. warriorsatease.com

4. Integrated Movement Therapy
Molly Lannon Kenny, director. Trainings and certification program combining yoga and conventional neurophysiology offered throughout the year at the Samarya Center in Seattle, Washington. samaryacenter.org

5. Breath-Body-Mind Training for Trauma
Richard P. Brown, MD, and Patricia L. Gerbarg, MD, co-directors. Five-day trainings in meditation and breathing practices. haveahealthymind.com

Three-day weekend trainings also available through Street Yoga, Portland, Oregon (streetyoga.org); Embodyoga's Veteran's Yoga Project, Newington, Connecticut (newingtonyogacenter.com); Teaching Yoga to At-Risk Youth and Adults, YogaWorks, New York (halakhouri.com). —*L.S.*

Many therapists and experts on yoga for trauma use body scans to help survivors find a degree of safety in their bodies—moving up through the body one muscle or body part at a time. Karen Soltes runs a program at the Washington, DC, VA Medical Center teaching iRest—a more accessible form of *yoga nidra*, developed by Richard Miller, PhD, director of the Integrative Restoration Institute—to veterans with PTSD. She says body scans can give trauma survivors "safe passage into the body, where hopefully they'll find some degree of peace and relaxation." Peter A. Levine, PhD, author of *In an Unspoken Voice*, calls this going "underneath overwhelming emotions" and tapping into physical sensation. Many survivors report that they are much more able to tolerate intense emotions without being swept away by them when they focus on the underlying sensation in their legs, bellies, chest, or shoulders. As with all yoga practices, survivors are encouraged to stay with the sensation for as long as they choose, and stop when they start to get agitated or frightened.

According to van der Kolk, Western medicine doesn't give us many tools to "master our own physiology," so too many times trauma survivors end up self-medicating with drugs and alcohol as well as prescription drugs. Pranayama can have an energizing or calming effect on the nervous system, he says, and quiet the brain. Soltes adds that the breath can keep survivors *in* the body. Gentle pranayama that emphasizes the exhalation, she says, works well for those who chronically hold their breath or feel agitated. Alternately, focusing on the inhalation can help those collapsed in depression or dissociation, especially when paired with movements like modified sun salutations.

Your Brain on Trauma

So how exactly do yoga asanas and pranayama quell agitation or energize a collapsed spirit? Before we talk more specifics, a little neurophysiology lesson is in order. Under normal conditions, the body is hardwired to protect us from danger or stressful situations; trouble ensues when its process is interrupted.

The best way to understand the human response is to look at animals in the wild. Sounds a bit far-fetched, perhaps, but Levine contends that our nervous system has a lot more in common with our four-hoofed brethren than we might think. A group of deer grazing in a meadow, for example, may appear happy-go-lucky, but they are continually on the lookout for predators lurking in the forest nearby. The very first thing the deer do when they perceive danger is to stop, stay very still, and listen. This hyper-vigilant stage of **arrest** activates the sympathetic nervous system (in charge of the fight-or-flight response to danger) and serves two purposes. One, it allows them to figure out what the threat might be and where it's coming from (a smell in the air or a rustle in the bushes), and two, it helps them be more invisible to a predator.

The moment the deer feel a predator's presence, they take **flight**, running to safety as fast as they can. If one falters and the coyote catches up to her, her first instinct is to rise up and **fight** back. If that fails, and she gets caught, she **freezes,** her muscles stiffening against the assault, and then **folds,** going limp and numb—helpless to protect herself. The fold or collapse state of hypo-arousal activates the parasympathetic nervous system, shutting down the body's defenses, allowing her to dissociate from the event, and preventing her from feeling too much pain. If she's able to fool her predator and race to safety, she'll **tremble,** literally shaking off the event, and return to the meadow in time for the next meal. While her brain registers the event and files away a "do not go near those bushes on the right" message, her ordeal is over and done with.

The human nervous system works much the same way. When we perceive

Healing Meditation Practice

The following mantra meditation, as taught by master teacher Sri Dharma Mittra, gives the mind an anchor to return to when sensations or memories surface.

Preparation

Sit in a comfortable cross-legged position (or on a chair with your feet flat on the floor) and your hands resting comfortably on your thighs, with palms facing up.

Coordination

Synchronize the breath with the following syllables and *mudras* (hand gestures). Inhale to the count of four as you slowly and gently close your fingers in toward your palms, keeping thumbs soft, while silently saying the first syllable. Exhale to the count of four as you slowly and gently open your palms while silently intoning the second syllable, and so on.

HUM (inhale)…SA (exhale)…SO (inhale)…HUM (exhale)
SO (inhale)…HUM (exhale)…HUM (inhale)…SA (exhale)
SO (inhale)…HUM (exhale)…HUM (inhale)…SA (exhale)
HUM (inhale)….SA (exhale)…SO (inhale)…HUM (exhale)

Repeat the pattern for several rounds. —*L.S.*

For more on Sri Dharma Mittra, visit dharmayogacenter.com.

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danger, the sympathetic nervous system and the hypothalamic-pituitary-adrenal (HPA) axis mobilize the body's fight-or-flight resources. Stress hormones pour into the bloodstream so we can react appropriately. They increase our heart rate, divert blood into our large muscle groups (arms and legs), and speed up reaction time. An increase in cortisol releases sugar as fuel into the bloodstream so we can think and move faster. In the meantime, the HPA axis communicates with the rest of the body, instructing the digestive, reproductive, and immune systems to slow down and wait out the danger. All this activity creates a state of hyper-arousal and fuels the emotions and actions we need to first gain sensory information and then either fight an aggressor (anger) or, if need be, flee the scene to safety (anxiety and fear). Just like our animal friends, humans can also experience complete collapse, or hypo-arousal—when the parasympathetic nervous system activates to help us survive horrific acts of violence. Both the alert and the fold states are designed to be short-lived, functioning to keep us alive and safe from harm.

As we can see, our autonomic nervous system was designed to be on the lookout for danger and keep us safe. Problems arise when the pain and traumatic residue, or samskara, remains in the body long after the event is over and the brain cannot discriminate between what is in the past and what is a real, present threat. The body's posture (rigid or collapsed) continues to signal danger, so the nervous system goes in search of the perpetrator, assigning blame wherever it can. Levine says, "If frightening sensations are not given the time and attention they need to move through the body and resolve or dissolve, the individual will continue to be gripped by fear."

According to David Emerson, co-author of *Overcoming Trauma through Yoga* and director of the Trauma Center's yoga program, people who have experienced chronic or repeated trauma "find themselves alternating between being highly sensitized and easily triggered, and feeling numb or disconnected from themselves and other people."

Calming the Waters

In addition to the recently concluded NIH study, other studies and plenty of anecdotal evidence support the claim that yoga mitigates the fight-or-flight response through a combination of active asanas, pranayama (with particular emphasis on the exhalation), and deep relaxation. It does this by decreasing the sympathetic nervous system's reactive response and increasing the parasympathetic relaxation response. Jay P., an Air Force vet from the Boston area, who experienced a brutal assault when he was stationed overseas in the early '80s—too horrible for him even to describe—shares a story that perfectly demonstrates yoga's calming effect.

One manifestation of Jay's trauma is acute anxiety, which gets triggered when he's in a crowd of people. After a particularly difficult therapy session, he says, "I was feeling a lot worse than when I came in." He got to the metro station in Boston, right in the middle of rush hour. His anxiety built as the crowd grew bigger; at one point, he says, "I felt like, 'I don't think I can do this.'" Feeling quite agitated, he turned around to leave, and then he saw a woman standing nearby holding a little child. "I put my hand on my belly and started to breathe—really focusing and paying attention to my breathing as I looked at the little kid and her mom." Suddenly the crowd *and* Jay's anxiety seemed to dissipate—everything felt more manageable. "I had put myself into a shavasana-type pose with a sweet little kid in front of me," he says, and it worked.

Re-energizing the Body

Less well known is yoga's ability to put the brakes on an overly active parasympathetic nervous system (PNS). Recognized for its role in the relaxation response, the PNS can also get stuck on unhealthy overdrive. As our animal friends demonstrated, the freeze-and-fold response involves shutting down the body's responses and lowering blood pressure and heart rate, all of which allows a victim to dissociate from the traumatic event, and prevents him from feeling too much pain. Unfortunately for trauma survivors, long after the event has passed, they may still feel numb and depressed, constantly tired, and completely dissociated from their feelings. Levine says chronic immobility paralyzes a trauma victim, and fear of unleashing her feelings deepens her sense of paralysis. It's important, he says, for survivors to learn to disentangle the fear and helplessness from their immobility. Elizabeth Hopper, PhD, co-author of *Overcoming Trauma through Yoga*, tells the story of Seleni to illustrate how yoga can help.

Seleni (again a pseudonym), who grew up in an African country that has experienced a great deal of violence, was trafficked into domestic servitude in the United States. Scooped up into the arms of Project Reach, a program that serves survivors of human trafficking, Seleni learned that she would be required to repeatedly tell (and hence relive) her story—to prosecutors, lawyers, judges, and therapists—in hopes of identifying and eventually prosecuting her abusers. Hopper, program director of Project Reach, says she sat with Seleni, watching and listening as she (continues on page 89)

(continued from page 53)

recounted the horrific details of her plight. At one point, Hopper noticed that Seleni's body began to sag forward, growing heavier and weaker until it gave way, and her head and upper body collapsed on the desk in front of her. She told Hopper that she shuts down this way when she has to talk about her ordeal; and when that happens, she knows she won't be able sleep that night.

Instead of continuing with the story, Hopper asked Seleni to stand up. They breathed together—emphasizing the inhalation—gently energizing Seleni's body and activating her sympathetic nervous system. In a slow, rhythmic way, Hopper led Seleni through a dynamic mountain pose, encouraging her to move between a posture in which she collapses (shoulders hunched forward, neck and head bowed) and one in which she lifts her chest, elongates her spine, and raises her head up. Seleni's inhalation deepened and she began to coordinate arm movements with the rise and fall of her breath. When she returned to her chair, Seleni sat up straighter and her face brightened. She even shared a few spiritual songs from her tradition that always made her feel better.

Engaging the Mind

Meditation can also help trauma victims to bring their nervous system back into balance. But sitting in silent meditation, with just their thoughts to keep them company, can be terrifying, according to van der Kolk. He says trauma-sensitive people "have their sense of time thrown off and think something will last forever." So he suggests those with PTSD get more comfortable with postures and breath work and learn relaxation techniques *before* moving on to meditation. Mantra meditation and yoga nidra provide two alternatives to following one's thoughts in silence. Using a mantra (see "Healing Meditation Practice" on page 52) gives the mind an anchor, a companion on the journey inward, something to return to as memories and sensations surface and dissolve. Yoga nidra or Richard Miller's iRest practice helps them stay present to what's going on—feeling the energy of the body, and exploring sensations without judgment or attachment.

While no one I spoke with believes yoga alone has the power to heal the pain trauma survivors endure, every single survivor, teacher, and expert wholeheartedly believes yoga provides a powerful ally on the journey home, and allows survivors—many for the very first time—to create a loving and nurturing relationship with their bodies. We can't predict or control what the future holds, nor can we change what the past has dealt, but we can learn to care deeply about ourselves and to embrace the present.

Contributing editor Linda Sparrowe is the author of several books, including A Woman's Book of Yoga and Health *with Patricia Walden. She co-leads yoga and meditation retreats for women with cancer at Shambhala Mountain Center and Kripalu Center for Yoga and Health.*