

Imagine yourself as a starfish reaching out from your navel or as a fish wriggling your spine through space. You now have

A BLUEPRINT FOR OPTIMAL MOVEMENT

By Donna Farhi

I've always been in awe of the beauty of human movement. I love watching amazing athletes captured in slow-motion replays and dancers gracefully defying gravity as they leap and spin. And, like many an earthbound yoga student envying a friend's easy, acrobatic handstands, I once thought such prowess came from superior strength, flexibility, or simply God-given talent. While such conclusions made it easy for me to explain other people's success in movement, they didn't help me understand why I couldn't hop up into a handstand with both legs together, or why after three years of building up my arm strength I still couldn't lower myself into Chaturanga Dandasana (the yogi's version of a push-up).

Then I discovered the concept of human developmental movement patterns. Programmed into our bodies before birth, these biologically innate patterns permit us to move with maximum ease and power. Once I awakened these patterns within myself, I could do things I'd never been able to do before. Yoga postures that once seemed like impossible puzzles I could only piece together detail by excruciating detail suddenly began to fall into place effortlessly

ILLUSTRATIONS BY JENNIFER JESSEE



as I saw and felt the whole “picture” of the movement.

Even more exciting, I discovered that as a yoga teacher I could use these patterns to simplify the learning process for my students. Over many years of experimentation, I’ve noticed that integrating the developmental movement patterns frees yoga students from depending on teachers to spell out the details of every asana; instead, they learn to trust their inner perceptions to show them the proper alignment of any pose.

A Passion for Pattern

Before I knew about developmental movement, I was already exploring the patterns in an entirely unconscious way. When I looked at a student with her head

turned at an awkward angle, I knew, for instance, that this wasn’t an isolated misalignment, but part of a larger pattern that needed addressing. I knew what an integrated body should look like, and I recognized that rigidly gripping the muscles to achieve asanas was counterproductive, resulting in a fragmented body and blocked breathing. But I didn’t always know how to convey this to my students, so I began experimenting with my own practice.

About that time, I encountered the ideas of Bonnie Bainbridge Cohen, director of the School for Body-Mind Centering. Before opening her school, Bainbridge Cohen trained for years as a dancer, studied occupational therapy in college, and spent more than a decade working with clients and immersing herself in a wide

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array of movement disciplines and body-centered healing techniques (including yoga, aikido, the Ideokinesis work of Andre Bernard and Barbara Clark, Laban movement analysis, Karl and Bertha Bobath's neurodevelopmental therapy, and Harunchika Noguchi's katsugen undo method for retraining the involuntary nervous system). Drawing on all these practices, Bainbridge Cohen embarked on a daily odyssey into her own body. Eventually, her explorations resulted in Body-Mind Centering, a comprehensive theory of human development, optimal health, and hands-on healing—or, as her husband Leonard Cohen puts it, “a series of maps of what it is to be an embodied human being.” Over the last 25 years, Bainbridge Cohen has continued to expand and refine her concepts and techniques, and her ideas have exerted a profound, steadily growing influence on dancers, bodyworkers, and others who work experientially and intuitively with the human body. When I originally discovered her ideas, they gave me a vocabulary to describe what I had been seeing all along, even though my exploration of the body through yoga was (and has continued to be) very different from the

material Bainbridge Cohen presents through her school and her writing.

Bainbridge Cohen's comprehensive categorization of these basic patterns of human movement is based on her observation that the key to understanding them is identifying where in our bodies we initiate a movement and how it sequences through the body. She combines this insight with the idea that each human being, as we develop from embryo to adult, mirrors the evolutionary history of life on Earth. Her major movement patterns, like the animals that symbolize them, fall into two major groups—the prevertebral and the vertebral. Just as the water-dwelling prevertebrates arrived on Earth before land-dwelling vertebrates, the prevertebral patterns come first in each person's development. You might imagine the progression from prevertebral to vertebral movement as going from “watery,” amorphous, boneless fluidity into an increasingly “earthy,” specific, directed, bony form. In the “watery” patterns, our focus is on our inner world—on the part of the nervous system connected to organs, glands, and the fluid systems of blood and lymph. In the “earthy,” vertebral patterns we focus on the parts of our nervous system that direct our awareness toward our outer environment and that move our bones and muscles through that environment.

Whether a student investigating movement subscribes to these ideas or not, the real value of the analogy between individual development and evolutionary history lies in the wealth of images it provides for experimentation. If you can imagine yourself as a starfish reaching out from your navel, as a frog pushing off with both legs, or as fish wriggling your spine through space, you have a concrete, familiar model to use as you try to engage the optimal ways of organizing movement in your body.

The Grammar of Movement

The developmental movement patterns can be thought of as the basic language of human movement. In the way that grammar weaves the words of English into a comprehensible language, these patterns knit the human body together, providing an organic logic that relates each part of the body to each other part and to the whole. Just as some linguists have proposed that

humans have a basic, inborn template for language, developmental movement experts believe we are born with internal templates for movement—inherent patterns that are as natural as the invisible forces that shape the spiral of an ocean wave or the organic symmetry of a pine tree's branches.

Some of these patterns arise as if by an internal time clock just as we might expect a baby to begin speaking by a certain month. Others appear through our desire to explore the world; the first push from a leg or reach of a fingertip taking us towards a beckoning father or colorful toy. When we are infants the patterns unfold in a process of unconscious exploration, but as adults we can go back and reawaken these movement patterns through our conscious intent.

What is the value of exploring these patterns as adults? As a yoga teacher I've observed that most adults attending asana classes have poor movement awareness. Trying to learn complex yoga postures without having the strong foundation of integrated movement patterns is rather like trying to read an essay without knowing the alphabet. The analogy continues: Imagine how frustrating it would be if you really didn't know the alphabet. You'd have to go back to the dictionary over and over again to figure out each and every word. While it's possible to slowly learn yoga postures through a Simon-Says process of mechanical mimicry, you can still end up 20 years later without having ever mastered and internalized the alphabet of movement. Once awakened, this language of movement allows us to do normally difficult things with fluidic ease, just as a writer with an extensive vocabulary can give voice to her full capacity for expression. What I've also discovered is that a person's inability to do a posture is rarely contingent on just a lack of strength or flexibility, but rather stems from incomplete expression of one or more of the developmental patterns.

Pitfalls on the Developmental Path

Even though we all carry these basic patterns as part of our human heritage, we don't all move with equal grace, power, and efficiency. If the patterns are truly innate, why don't we all grow up to be Mikhail Barishnikovs or Michael Jordans?

Part of our differences are certainly genetic. But these natural differences are only one part of the picture. Since each of us can only develop the basic movement patterns through interactions with the world around us, our early environment and our early opportunities for exploring movement have a huge impact. Child-rearing practices (such as bottle feeding, or the pressure to walk before the body is neurologically ready to do so) have long-reaching effects on our ability to move later on. Birth traumas, premature birth, childhood injuries—even simple situations like always being carried on one side of the mother's body—may cause a child to favor certain patterns more than others. Whatever the individual reasons, most of us grow up without fully exploring and developing all the inherent movement patterns, and we compensate by learning to move in less optimal ways.

Through exploring the human developmental movement patterns you may discover, as I have, that this compensation has psychological as well as physical consequences. Each of the basic movement patterns can be seen not just as a way of physically organizing the body, but also as the basis for a particular psychological state or state of consciousness. Thus, weakly developed movement patterns limit not only our movements, but also our freedom to think and feel in certain ways. For instance, someone with a brittle, abbreviated way of moving may discover that her movement is a metaphor for the way she relates to other people. As her movements become more fluid, chances are that she'll find she feels more open and can communicate more easily as well.

I've certainly experienced such breakthroughs in my own work with developmental movement patterns. One of my most frustrating problems, both as a dancer and as a yogini, was a tendency to overarch my back. Because the core of

my body was so hypermobile, I rarely knew where I was in space. I also felt a constant sense of emotional vulnerability that I protected with a strong, vigilant defensiveness. As I started to reawaken the very early developmental patterns that provide tone and substance for the inner body, I experienced a welcome improvement in my problems with my back—and I also began to have a clearer sense of healthy boundaries in my interactions with other people, allowing me to drop some of my defensive armor.

Developmental Movement Patterns and Yoga

When our movement is integrated, the soft fluidity of the early, prevertebral patterns suffuses the later vertebral patterns. As a yoga teacher, however, I've observed that many yogis have suppressed these fluid patterns by hyper-developing the "earthy" patterns involved in moving from a focus on the bones and muscles. While such patterns can help us control and direct our bodies, and support psychological traits like strength of will, confidence, and certainty, when they overwhelm the earlier "watery" patterns the physical qualities of grace and ease are sacrificed, and movement can become hard, dry, and mechanical.

Since many yogis are already skilled at the vertebral patterns, I'll focus the practice section of this article on the four earliest fluidic patterns. As I've discovered for myself and observed in my students, we all have the capacity to improve our movement—and gain access to previously less available parts of our psyches—if we're given the right tools. But because many of the patterns, like the movement of breathing, are normally below the level of consciousness, reawakening them involves using a different part of our mind than many of us are accustomed to engaging. Unfortunately, most of us have been taught movement in an overly intellectual, one-step-at-a-time way. If you've ever tried to talk yourself up into a handstand by placing your hips, and your shoulders, and your wrists, and your head—and so on—in exactly the right place, you know how frustrating this can

be. Rather than this piecemeal approach, learning optimal movement is a matter of engaging a coherent, whole-body gestalt—a matter of finding the underlying pattern that supports the desired action. Accessing these patterns requires a less analytical and more sensate, more experiential, more metaphoric way of learning. We must become curious, child-like, and innocent so we can let the body reveal to us the knowledge it was born with.

In this article, I've briefly outlined the contributions the first four developmental movement patterns can make to your yoga practice. Experimentation with just these four can continue to strengthen your practice for years—and that's not even considering the other major patterns we haven't discussed here! If you'd like to investigate developmental movement patterns further, you can refer to the asana column, beginning with the next issue, where I'll continue to explore this theme throughout the year.

The Four Fluid Patterns

For each of the four patterns, I'll first describe the pattern and then give you a physical inquiry to help you contact it within yourself. For the last three patterns, I'll also provide instruction so you can explore changing your experience of familiar asanas by engaging the pattern. As you refer to the photographs of the asanas, the most important thing is not to get stuck focusing on the details, but rather to invite your whole body into feeling as if it were the one in the photograph.

2 ARDHA CHANDRASANA WITH NAVEL RADIATION. As you move into the pose, keep the core of your body open and mobile, undulating with each breath. Let your head, tail, arms, and legs radiate out from your center.



CELLULAR RESPIRATION: The Foundation of All Movement

We begin life in the womb suspended in the amniotic fluid of our mother. Long before we begin the external movements of breathing at birth, we "breathe" internally. Oxygen is transferred from the blood capillaries of our mother into our own at the placenta, and then our growing cells, with their insatiable and constant desire for oxygen. Every cell in the body alternately expands, condenses, and rests in an ongoing rhythm, taking in nutrients and releasing metabolic wastes. This cellular res-

piration forms the template from which all other movement patterns arise. Indeed, the cells form the ground matrix from which all other states, both physical and psychological, evolve. When we bring our awareness into the global nature of cellular respiration we enter an undifferentiated state of being, very much like the state we may enter in meditation.

To engage your consciousness with this pattern, lie on your belly on a firm, well-padded surface, allowing your head to turn to one side and your limbs to rest in any configuration you find comfortable. If turning your head feels awkward,

support your torso from the top of your breastbone to your pubic bone with a bolster, pillows, or a stack of folded blankets so your chest is slightly higher than your forehead, which rests on the ground. Release your weight completely, feeling the tremendous comfort of embracing the Earth with your soft front body. Bring your awareness to your breathing, first feeling the larger movement of your lungs, diaphragm, and belly. Then go deeper. Imagine the oxygen in your blood arriving at every cell in your body, each cell expanding, condensing, and resting in its own shimmering rhythm. Allow yourself to become the expanding, condensing motion, feeling your entire body at rest and deeply nourished (Figure 1).

Stay in this restful position for as long as you like. Discover your own personal experience of merging with the pulse of cellular respiration.

When you are ready to move on, roll

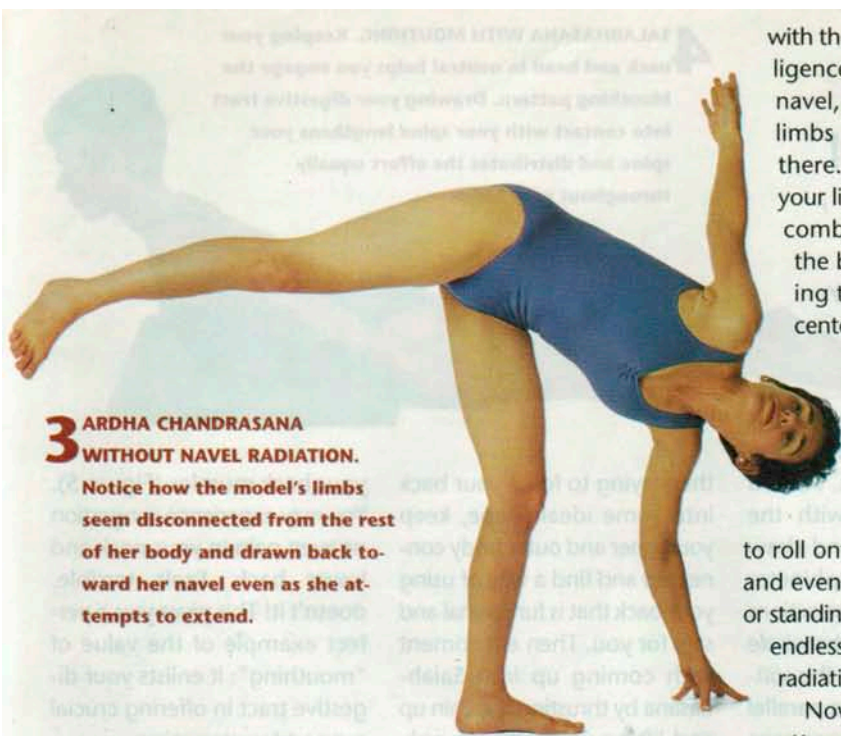
onto your side—but don't leave behind this awareness of the physical matrix of your being. Carry the experience with you as you come into a simple sitting position. I notice that as long as I can sustain awareness of the breathing matrix of my body, my mind will stay grounded in the present moment. Rather than anticipating, analyzing, or directing, I feel truly "open-minded," quiet and receptive.

Although cellular respiration undergirds and can be a focus in all asanas, restorative and supported postures especially support getting in touch with this pattern. Along with the prone **Savasana** just described, Supta Baddha Konasana, Viparita Karani, Supta Virasana, and any forward bend in which the head is supported by a prop all work well, as do the simple sitting positions and Savasana. As you become more able to maintain your awareness of this pattern, you can challenge yourself to notice it even in the midst of more active and difficult asanas.

1 CELLULAR RESPIRATION IN PRONE

SAVASANA. Release your weight into the Earth. Bring attention to your breath, and then go deeper: Imagine each cell expanding to take in nutrients and contracting to expel wastes.





3 ARDHA CHANDRASANA WITHOUT NAVEL RADIATION.

Notice how the model's limbs seem disconnected from the rest of her body and drawn back toward her navel even as she attempts to extend.

NAVEL RADIATION: The Human Starfish

This pattern harkens back to our time in the womb, when we are centered on the umbilical cord, the source of all our nourishment. In navel radiation, our movement flows in undulatory waves from the center to the periphery and back again, amplifying the original movement of breathing. Like the starfish that radiates outward, its sensitive extremities extending away from and drawing back into its center, we can initiate movement from our navel, moving out through our six limbs (head, tailbone, arms, and legs) or pulling them back into our core.

To explore this pattern, lie on your belly as you did for exploring cellular respiration. Again take the time to let yourself settle into the Earth and connect with your breathing. Most important, don't try to make anything happen. Instead, feel

how your breath expands and condenses, with the movement originating in your abdomen. As you place your attention there, notice the impulses that begin in the belly, and follow them through your body. You may feel a wave move from deep in the belly up the spine into the head, down the spine into your tail, or out through a hip and leg or through a shoulder and arm. Allow yourself to participate in the movement, rather than directing it.

I find that in navel radiation, my consciousness takes on a wonderfully sensual and pleasurable quality and I lose track of time. As you explore this pattern, let the separation between doer and movement disappear, and trust your breath and inner impulses to move you in the way that is just right for you. Continue to engage an image of yourself as a human starfish,

with the center of your intelligence at the level of your navel, and your sensitive limbs radiating out from there. Explore expanding your limbs, separately or in combination, away from the belly, as well as feeding them back into your center. Allow your belly to

initiate the movement, as if your limbs are pulled and released by invisible strings at your core. Feel free to roll onto your back or side, and even to come to all fours or standing as you play with the endless possibilities of navel radiation.

Now let's see how this pattern can support your asana practice. We'll explore navel radiation through **Ardha Chandrasana**, although any standing posture as well as the prone back bending postures are excellent for investigating this pattern. First come into Trikonasana. Rather than trying to align yourself by using an image of a perfect pose or your technical ideas about how to position various parts of your body, simply focus on your breath. Allow it to move through your body, keeping your core soft and mobile. If you let your core move, your entire spinal column and all the internal organs will undulate freely with each breath. If you constrict your core in an attempt to balance or to create stability for extending further, you probably won't feel any connection between your core and limbs.

When you're ready, begin to come up to balance in Ardha Chandrasana, keeping an awareness of your mobile core. Extend this awareness out through your six limbs, keeping a harmonious, connected relationship between your core and

periphery. Because each of us has a unique body, there is no position that is correct for everyone, but if you maintain clear pathways between your core and limbs, your breath will move out from your center unimpeded and bring all the parts of your body into play as a unified whole.

Continue to sustain the pose as a "soft intention" rather than as a destination or static idea. Keep the pathways from your core to your limbs open, and feel as if you are standing equally on each foot, each hand, and your head. Allow yourself to be moved and changed by each breath, because the moment you grasp hold of a certain form of the pose you lose the inner life of the movement. Allow the asana to live through you as it expresses itself anew with each breath.

As you can see in the photograph (Figure 2), coming into the asana in this way opens the body from the center. The limbs expand out from this center in an integrated way, and there is a sense that intelligence is distributed throughout the body. On the other hand, if you come into the asana without initiating the movement from your center, it's easy to fragment the body, disconnecting the limbs from the core (Figure 3). In this photograph, I'm attempting to open my chest by thrusting my upper arm behind me. But I'm maintaining my balance by contracting my lower arm back into my shoulder, and by contracting in my center. I'm also so focused on the opening in the chest that my head, tail, and extended leg are forgotten and hanging limply, and even my supporting leg is moving back into my center. This pose may seem like a caricature, but I can assure you I've seen many students produce something quite similar.

MOUTHING: Providing Internal Support for the Spinal Column

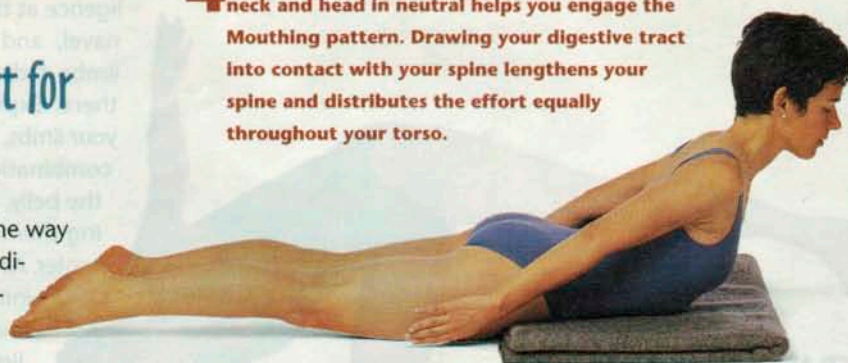
Even in the womb we suck our thumb, and as soon as we're born our focus shifts from our center toward our head as we seek our mother's breast. Because the nerves to the mouth are among the first to develop, the mouth is one of the first areas of the body we can control. In a sense, our mouth is our first way of engaging the world; we use it to reach, withdraw, grasp, release, and refuse. Our mouth is the opening that connects us to our first soft vertical axis—the digestive tract. As we suck and swallow we exercise the soft palate, the pharynx, and the entire digestive tract. Supported by the movements of the anus at the other end of the digestive tract, these mouthing actions tone our soft inner core, establishing crucial support for the later movements of our bony spinal column. A natural model for this movement pattern is the Tunicate, a simple saclike sea creature whose mouth guides it into movement. Since the Tunicate is an unfamiliar creature for most of us, you can imagine this motion of the inner body to be like an inchworm, lifting and drawing the body along.

To explore this pattern, once again lie on your belly. Close your eyes, connect with your breath, and slowly let your attention shift to your mouth. Imagine that this is your only way of exploring the world. Brush the blanket with your lips, investigate the inside of your mouth with your tongue, taste and suck your fingers and thumb. Swallow and sense the

movement all the way down into your digestive tract, visualizing the long, convoluted coils of your intestines, ending in your anus. As you suck and swallow with the mouth, also reach and draw back with the anal sphincter muscles. Feel how these actions continue on through the whole digestive tract, toning this softer inner body that lies parallel to the spine. When you engage and release the digestive tract in this way, you can feel a series of undulations which alternately condense the body into the floor and then release it upward, much as a caterpillar inches its way along. These undulations come up from underneath the spine, causing a wave to move through your back. Imagine yourself as a caterpillar or an inchworm, and investigate how this activity moves through your body.

We'll use **Salabhasana** (Locust Pose) to incorporate this pattern into our yoga practice. Still resting on your belly and without using your arms, feel your soft front body drawing in and up along your spinal column, and allow this support to lift your torso up off the floor. Don't come up very far at first, but concentrate instead on moving in a way that feels gentle for your back. Maintain awareness of the entire digestive tract and the way it nestles in under the spinal column. This focus will draw the whole body into the action, and will keep the asana soft (Figure 4). Rather

4 SALABHASANA WITH MOUTHING. Keeping your neck and head in neutral helps you engage the Mouthing pattern. Drawing your digestive tract into contact with your spine lengthens your spine and distributes the effort equally throughout your torso.



than trying to force your back into some ideal shape, keep your inner and outer body connected and find a way of using your back that is functional and safe for you. Then experiment with coming up into Salabhasana by thrusting the chin up and lifting yourself with only

your back muscles (Figure 5). You may experience congestion or even pain in your neck and lower back. Feels terrible, doesn't it! This gives you a perfect example of the value of "mouthing": It enlists your digestive tract in offering crucial support for your spine.

PRESPINAL MOVEMENT: The Transition from Being to Doing

As infants, we eventually become more aware of life around and above us, and the desire to explore and participate in this life stimulates us to push away from the ground. We develop the prespinal pattern of movement as we make this transition from focusing on our inner perceptions to focusing on our perceptions of the outer world; from releasing into the Earth to pushing up away from it.

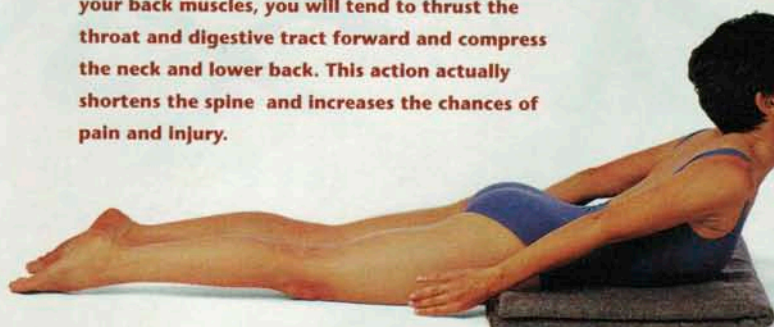
Prespinal movement can be symbolized by the *lancelet amphioxus*, a fishlike water creature similar to a lamprey that has many vertebrate characteristics (segmented body, mouth, tail, digestive tract, and central nerve cord) but doesn't have a bony spinal column. Instead it has a flexible rodlike structure called a notochord. (A similar structure is present early in human fetal develop-

ment, but it eventually differentiates into the vertebrae and the jellylike material of the spinal discs.)

Prespinal movement is initiated from a focus on the whole digestive tract and the soft spinal cord. This movement has a sustained, soft fluidity and lightness, and a serpentine, "squirmy" quality, but it also for the first time fully organizes the body around a vertical axis. In fact, our ability to allow the forces exerted by our muscles to sequence freely through the spine depends on this movement pattern.

Along with the physical transition from surrendering to gravity to moving away from it, prespinal movement represents a major psychological transition. We are leaving the comfort of simply being for the challenge and excitement of doing. My

5 SALABHASANA WITHOUT THE SUPPORT OF MOUTHING. If you initiate the lift by using only your back muscles, you will tend to thrust the throat and digestive tract forward and compress the neck and lower back. This action actually shortens the spine and increases the chances of pain and injury.



own first adult exploration of this pattern was fraught with mixed emotions and a recognition that this transition was not a smooth one in my own childhood. Having facilitated and observed many others, I've found this can be a tremendously difficult pattern for many people.

We have conflicted feelings because we're often uncomfortable with allowing doing to simply arise from being. Frequently our desire to do is motivated not by an authentic impulse but by the conditioned belief that nothing fruitful happens unless we direct or manipulate an action. We're taught from an early age that

fallow time is at best nonproductive, or at worst self-indulgent. When I see people caught in confusion between being and doing, I usually encourage them to settle back into being. This is usually the less honored and less familiar state—and the one that has the most to offer us, because only from this silent, primordial state can authentic impulses arise.

To explore this pattern, again begin face down on the floor. Begin to sense along the length of your spinal cord (not your spine, but the soft nerve column inside it), feeling the clear cerebrospinal fluid that surrounds and cushions the brain and the delicate spinal cord. (If

this sounds impossible to you, don't worry; instead, imagine what it would feel like if you were able to directly sense your spinal cord.) Pretend that your spinal cord still retains the soft, snaky quality it had before you developed a bony spine. Also sense into the soft centers within the spongy discs that separate and cushion your vertebrae. At the same time, sense into your digestive tract, from your mouth all the way to the anus. Keeping this sensate focus, allow yourself to move in a serpentine fashion, fluidly undulating through your soft spine without lifting yourself away from the ground.

Now imagine that you're a baby, stimulated by a sound in the air above you. Leading with your ears, let your head and torso be lifted off the ground by your interest. I like to envision a thousand butterflies gently drawing me up off the Earth. Feel how lightly and effortlessly you can float here, hovering like a bird looking for prey. Keep your gaze low so you don't

strain your neck, and return gently to the ground when you are ready.

Since the prespinal pattern allows muscular action to transfer unimpeded through and along the spine, it brings lightness, smoothness, and continuity to our yoga practice. It aids enormously in the transitions between asanas, as well as in all the postures that require us to move against the pull of gravity (such as Salabhasana, Virabhadrasana III, and Dhanurasana).

To engage the pattern in **Dhanurasana**, you can come into the pose exactly as you lifted yourself off the ground in the exploratory inquiry you've just completed. Then, allowing the soft, lithe lightness of your spine and inner body to extend down through your legs, bend your knees and catch your ankles with your hands. Again, let your whole back body be drawn lightly upward as if by butterflies, and feel your internal organs (especially your heart and lungs) supporting your spine like buoyant balloons (Figure 6). For contrast, you can try the asana without the prespinal pattern, pulling the body up by using only your back muscles (Figure 7). You'll probably find yourself scrunching up your neck and lower back, and you also probably won't be able to lift nearly as high.

6 DHANURASANA WITH THE PRESPINAL PATTERN. Leading with your ears, let your head and torso be drawn upward. Keep your gaze soft and level, and support the movement with both the front and back of your body.



7 DHANURASANA WITHOUT THE PRESPINAL PATTERN. Notice that the model's back is compressed and she can't lift very high. As she leads with her gaze she shortens her neck and back.

