

# ULTIMATE GUIDE TO YOGA FOR HEALING



Head and Neck

Hands and Wrists



Digestion  
and Irritable  
Bowel

Shoulders



Hips & Pelvis

Back Pain



Knee Pain

Feet and  
Ankles



YOGA  
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## Resolving Neck Tension

DOUG KELLER

*Pulling ourselves up by our “neckstraps” is an unconscious, painful habit. The solution is surprisingly simple.*

When we carry ourselves with the head thrust forward, we create neck pain, shoulder tension, even disc herniation and lower back problems. A reliable cue to remind ourselves how to shift the head back into a more stress-free position would do wonders for resolving these problems, but first we have to know what we're up against.

When it comes to keeping our head in the right place, posturally speaking, the neck is at something of a disadvantage. There are a number of forces at work that can easily pull the neck into misalignment, but only a few forces that maintain the delicate alignment of the head on the spine, allowing all the supporting muscles to work in harmony.



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The problem begins with the large muscles that converge at the back of the neck and attach to the base of the skull. These include the muscles of the spine as well as those running from the top of the breastbone along the sides of the neck (the sternocleidomastoids) to the base of the head. The concentration of muscles at the back of the neck helps to maintain an upright posture while freeing the front of the neck for breathing, speaking, and eating. The problem with this configuration is that it stacks the cards against good posture, since the upper chest is largely supported by the neck muscles that originate at the base of the head. If your head shifts forward, the weight of your front body drops down, pulling the base of your head down with it, shortening your neck and increasing its burden.

If you're not already suffering from this imbalance, it is easy enough to have a taste of it: simply shift your head forward, away from its natural center on top of the spine. This shortens the back of your neck, which immediately begins to grip, while the muscles at the sides and front of your neck slacken. The result is that your chest drops and begins to feel cramped and heavy, while your shoulders round forward and your shoulder blades slide away from your spine. Thus with a simple forward shift of your head, the weight of your front body is hanging from your neck as if on the yoke of an oxcart!

Many people who suffer from this postural imbalance go about “fixing” it the wrong way—pulling their head and shoulders back to “straighten up.” This only serves to tighten the upper back by overworking the rhomboids (the muscles that draw the shoulder blades toward the spine and up toward the neck), which shortens the neck even more since most of us tip our head back when trying to bring it more in line with the spine. Another strategy is to try to bring the head back by pulling the chin in, but this only flattens the neck and adds more tension.

The problem with both of these corrections lies in where we are moving from—either the head or the chin. In both cases we are attempting to move from the outside in, usually according to an external reference point (e.g., “bring your ears more in line with your shoulders”). This attempt to force ourselves into a posture according to an outer standard of correctness usually leads to more tension. True realignment moves from the inside out, which is why a better reference point is internal, and closer to the center of our posture.



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We find this inner reference point in the hyoid, located at the top of the throat just beneath the jaw.

The hyoid is a small horseshoe-shaped bone that “floats” at the top of the throat, surrounding the esophagus. It is not connected to the skeleton through joints or ligaments, but is suspended at the center of a subtle and sensitive network of deep “infrahyoid” muscles. This “net” of muscles extends to both the back and front body, connecting to the larynx, shoulder blades, and sternum, thus joining the inside of the rib cage to the front of the throat. There are also “suprahyoid” muscles connecting to the tongue, jaw, and base of the skull. From its place at the center of this network, the hyoid moves up and down as you swallow and speak.

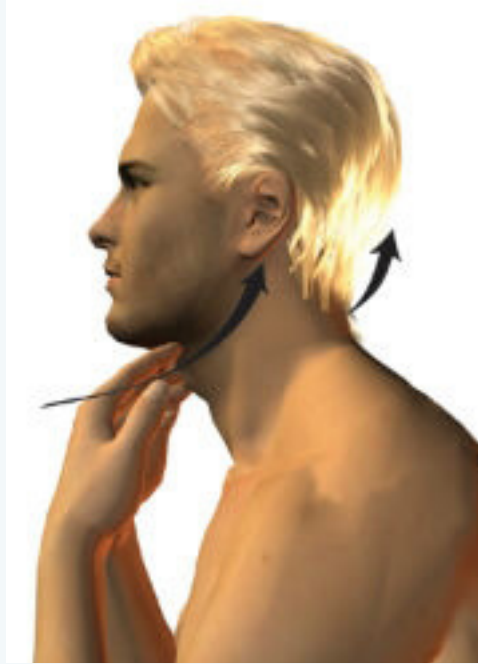
The reach of this network extends farther than you might think. The tone of the muscles surrounding the hyoid influences the tone and state of your digestive system. When you swallow, the hyoid bone lifts, subtly stimulating your digestive tract; your abdominal muscles also respond by slightly toning, drawing in and up at the lower abdominals. Indeed, it feels natural to pull your lower belly in when you swallow. (If you doubt it, just try swallowing while pushing your lower belly out!)

But while the influence of the hyoid is deep, movement of the hyoid is not a cause of good posture, but a cue. The tone of the muscles surrounding the hyoid influences the tone of the muscles supporting our posture. When the hyoid is in the right place, the neck and head are in the right place—and there is harmony in the tone of the muscles. A signal is sent especially to the muscles at the back of the neck that they can let go of their grip and relax.

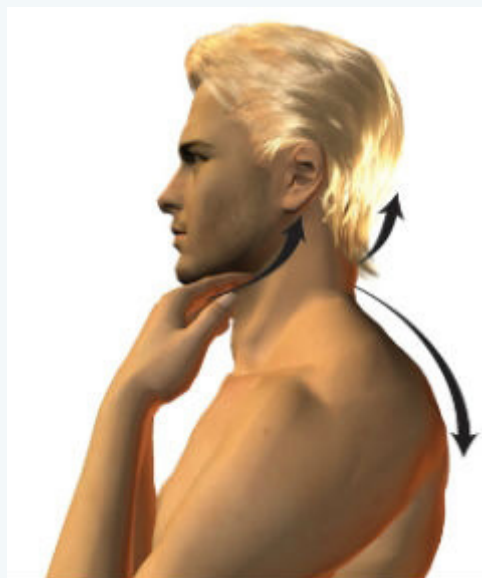
You can guide the placement of the hyoid by gently drawing the top of your throat back and up, so you feel as if it is “smiling” from ear to ear. A “smile” is better than a “correction,” because the subtle release that comes with a smile feels more like an “undoing” of stress than a “doing” or an imposition of alignment. The shift takes place as you soften and let go of any holding in the muscles at the base of your head. Your first temptation may be to pull your chin back, but the real shift takes place more softly from below the chin. In the beginning, you may want to guide the shift of the hyoid using your fingertips.



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Realigning the head and neck from the hyoid provides the opportunity for extension of the neck, but does not itself cause the neck to extend. Neck extension comes from the action of a deeper, stronger set of core muscles located at the front of the neck bones. These core muscles—the longus capitus and the longus colli—are the only ones capable of counteracting the shortening at the back of the neck, and they need the help of good posture. The longus capitus is located deep in the neck, just at the front of the uppermost vertebrae, and the longus colli extends just in front of the vertebrae through the entire length of the neck and into the upper back.



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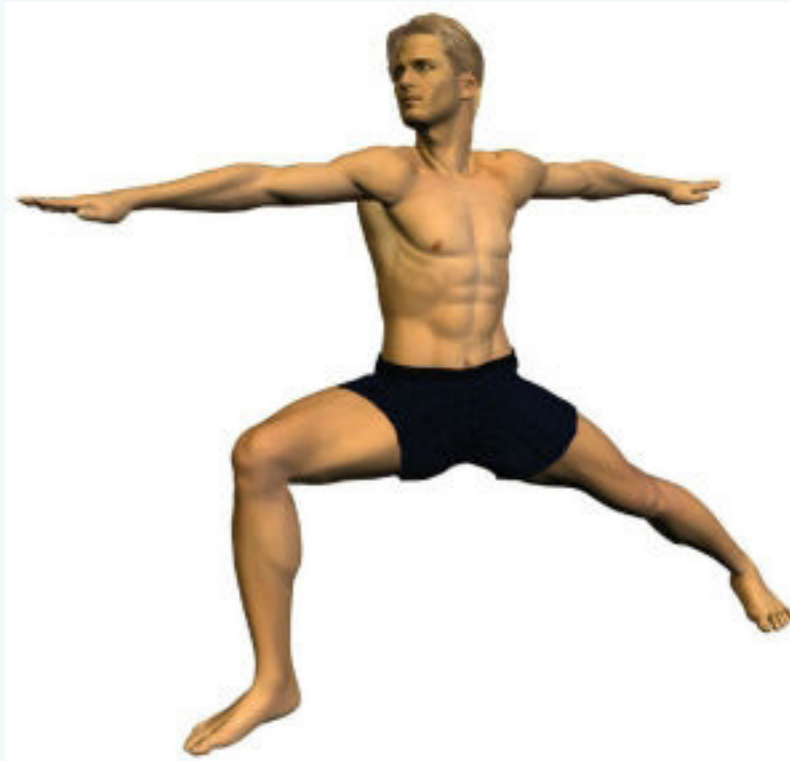
You can feel the action of these core muscles when you lie on the floor and extend through the crown of your head. As they contract, your neck elongates and you will feel the back of your head slide along the floor. In yoga postures we use imaging cues to get the same result. When standing, for example, we might imagine “a string drawing upward at the crown of the head,” and when we do, the longus colli contracts and the neck lengthens.



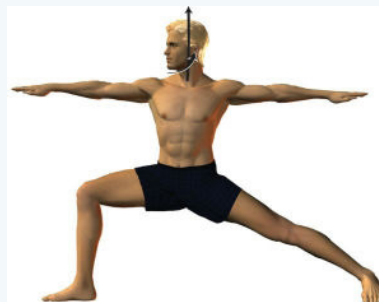
As these muscles become stronger, they can overcome the downward pull of the large muscles at the back of the neck that occurs when the head is misaligned. But this is only possible when we first align the neck from the hyoid, “undoing” the tension that would otherwise make this lengthening impossible.

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## An Opportunity to Practice Realignment



A variety of yoga poses gives us the opportunity to realign and thus release tension in muscles that shorten the back of the neck, while strengthening muscles that lengthen it. These include virabhadrasana II, trikonasana, and the other standing poses. Backbends help us to strengthen the neck as it extends fully; twists help to refine the alignment of the neck; and forward bends stretch the muscles of the spine and neck where tension resides. How we cue ourselves in each of these postures is vital, because if done poorly, they can create more tension in the neck and communicate it to the rest of the body. We see this often in standing poses in which students habitually shorten the back of their neck, hyperextending it as they hunch their shoulders—as if they were using their neck muscles to hold up their arms.





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For example, students frequently hunch their shoulders and tighten the neck in virabhadrasana II (warrior 2). We could correct the shoulder alignment by rotating the arms externally (palms up) to release the shoulder blades down the back, but this adjustment addresses a symptom, not the cause. The real “stuckness” in the pose lies at the base of the head, where the neck muscles are tense. If we draw the top of the throat (at the hyoid) back and up while gently extending upward through the crown of the head, the shoulder blades automatically release down the back and the body opens to the breath, becoming lighter and more expansive.



Backbends present a greater challenge because the neck is taken back into full extension—and often jammed in hyperextension, which translates into pinching in the lower back as well as in the neck. Even the anticipation of moving into a backbend may be enough to tighten the muscles that pull the neck into hyperextension.

This often happens in ustrasana (camel pose). There is a tendency to take the head back too quickly, “tipping” it back from the top and pinching the neck and lower back in the process. As the back of the neck locks up and the hyoid area of the throat shifts forward, we end up jamming the spine rather than truly opening and extending it.



If we allow ustrasana to unfold naturally instead, the pose will teach us proper alignment of the neck and reduce and release tension in the body. (This is one reason why backbends can be so euphoric.) Begin with a lift in your heart as you draw your shoulders back. Then take your head back from the top of the throat, rather than from the top of your head. This is the fundamental movement initiated from the hyoid.



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When practiced this way, the pose strengthens key postural muscles at the core—especially the longus colli muscles at the front of the neck—which are usually overpowered by gravity as well as by other, stronger neck muscles. Doing the posture correctly demands attention to how you move your neck and head. The moment you allow the top of your throat to shift forward or your head to tip back too quickly, your heart will drop and your neck will grip.

If performed with these principles in mind, this and other backbends can give your neck the kind of help it needs to strengthen and rebalance. The fruit of the practice is a steady upright posture which will keep your neck free of tension and distress.

## Chin Lock or Throat Net?

The adjustment to the hyoid calls to mind jalandhara bandha, one of the classic bandhas of hatha yoga. The basic action of jalandhara bandha is to bring the chin toward the chest—and the chest toward the chin—in practices involving pranayama. This relaxes the nervous system, “catching” its wayward fluctuations so as to support meditation. In pranayama, jalandhara bandha opens and positions the dome of the soft palate at the back of the throat, so we can be fully open, relaxed, and responsive to the natural flow of the breath.

We don’t quite know how it got its name, but the roots of the word jalandhar are suggestive. Jala is a “net, web, or snare” used in catching birds; dhara means “bearing or supporting.” Though it is usually described as a “chin lock,” for the moment, let’s entertain the idea that this practice concerns the network surrounding the hyoid rather than what the chin is doing. The strands of this “net” are directly influenced by the position of the hyoid; as the hyoid moves, some are tightened while others slacken.



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## *A Common Misalignment*

Major muscles at both the front and back body come together at the base of the head. When these muscles tighten, they pull the head forward and down. This causes the shoulders to round forward and the chest to drop.

## *The Hyoid*

A network of muscles connects the hyoid bone to the breastbone, throat, jaw, face, temporal lobes, and base of the head.

## *Releasing Tension*

Place your fingers where your jaw and throat meet and guide the hyoid back and up. This movement is a cue for the muscles at the back of the neck to release and for the muscles at the front of the neck to extend the spine upward.

## *The Longus Colli*

These muscles lie along the front of the neck bones. When they contract, the neck lengthens upward through the crown of the head. As the heart lifts, the shoulders naturally draw back into place.

## *Warrior 2*

As they turn the head in this pose, students typically tip it back, shortening the neck and thrusting the chin forward. This causes the shoulders to hunch and creates tension.

The adjustment from the hyoid releases this tension, aligning the neck and allowing the pose to open.



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## *Painful Camel*

Students typically throw the head back too quickly, shortening the neck and thrusting the hyoid forward. The heart drops and the lower back pinches.

## *A Better Backbend*

Slide the top of the throat back, lifting your heart while gently lengthening through the crown of the head. Without tightening at the base of the skull or tipping your head back, let your head extend back gracefully as a natural extension of your spine, until your spine moves into your body in a deep, symmetrical arc.





## Relieving Neck & Shoulder Tension

BY LILIAS FOLAN

I enjoy being a student in other people's yoga classes, especially those taught by master yoga teacher Angela Farmer. I was in one such class when I made a discovery. I was doing a traditional seated forward bend, legs extended, torso folded over thighs. My partner knelt behind me and applied gentle pressure to my lower back to help me lengthen my spine and go farther into the stretch. But I found if I arched my back just a little, pushed my spine into her hands (the opposite direction of the forward bend), held the resistance for a few seconds, relaxed, and then redid the posture, I could comfortably slide even farther and deeper into the pose.

In effect, I had tightened my muscle just before relaxing it for the stretch. I wondered if this concept could be applied to other yoga postures, helping me to get a better stretch. Over the years, I experimented in my own practice and found that these small moves could be effective in many other yoga poses.

Later I came across a technique called PNF, which stands for proprioceptive neuromuscular facilitation. Scientific research supports the PNF phenomenon, but Larry Payne (co-author of Yoga Rx) refers to it as the "yoga miracle." It's miraculous



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because the results are instant, painless, and amazing! It is widely used by athletes and trainers, and different variations exist, but the way I incorporate it into most yoga routines is unique. The basic technique involves alternating isometric muscle contraction and passive stretching. Before stretching a muscle, you tighten it and push against a fixed object—a partner, your own hand, a belt, the floor, or a wall. The subsequent stretch becomes longer, deeper, and far more comfortable than holding the limb in a static stretch.

For some years, I've adapted this way of stretching to my own mid-age body and for those who take classes from me. In the process, I've developed what I call the “three Rs”—Resist, Relax, and Restretch. The three Rs are a creative way to listen to your body and to gently increase your range of motion.

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## Heal Your Neck & Shoulder Pain

BY CAROL KRUCOFF

*Find out how postural awareness and a targeted yoga practice can bring you long-lasting relief from neck and upper back pain.*

Like many yoga teachers, I often begin my classes by asking students if there are particular places in their bodies where they feel tension, tightness, or discomfort that they'd like our session to address. The single most common reply is "neck and shoulders." In fact, neck pain and its associated disorders are much more common than previously believed, according to a task force established by the World Health Organization (WHO). Most people will suffer from neck pain at some point in their lives, the task force reported in the journal *Spine* in 2008, with some evidence indicating that 10 to 20 percent of adults suffer from chronic or persistent neck pain.

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While neck pain sometimes results from trauma—such as an injury from playing sports or whiplash from a car accident—by far the most common cause is stress on muscles and ligaments stemming from poor postural habits, typically related to our computerized, stressful, sedentary lifestyle. One of the most widespread postural problems is forward head posture, a misaligned relationship between the head and the shoulder girdle, where the head protrudes in front of the shoulders and the upper back rounds. This causes the muscles of the neck, shoulders, upper back, and chest to alter their length and efficiency as they struggle to counterbalance the weight of the heavy head against the pull of gravity—with the muscles in the neck and front body becoming tight and short and those in the mid back and the back of

the shoulders becoming weak and overstretched.

Typically the muscles complaining in pain in forward head posture are the overworked posterior muscles of the neck, which serve to extend, rotate, and laterally bend the head. These include the suboccipital muscles at the base of the skull; the deep neck extensors, located alongside the cervical vertebral column; and the upper trapezius, which extends down from the base of the skull and the cervical vertebrae, and also serves to move the scapulae (shoulder blades).

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## 3 Poses for Neck and Shoulder Pain

BY DOUG KELLER

*Neck and shoulder pain is epidemic in our Web-surfing society, and the typical yoga practice may not cure it. Here are three easy poses to keep you pain-free.*

One of the most common problems my yoga students complain about is chronic pain around the shoulder blades and in the upper back and neck. This kind of pain plagues those of us who work with our arms extended in front of us, whether we're typing on the computer, cooking, carrying children, lifting heavy objects, or washing dishes. Let's face it: that includes just about all of us. Because these activities are especially demanding on the arms, shoulders, and upper back, it's not surprising that back pain is so widespread, even among the most dedicated yoga students.

Upper back pain commonly stems from the tendency to slump in the spine and round the shoulders. Slumping causes the shoulder blades to slide away from the spine, chronically overstressing and weakening the muscles around them. Eventually these muscles harden into tough bands to protect themselves from this constant strain. As they tire, these weakened fibrous muscles go into spasm, creating



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hot, persistent pains along the edges of the shoulder blades and the sides of the neck.



Common shoulder stretches reduce the upper back pain only marginally, and some can even make the problem worse. That's because stretching often focuses on the pain without addressing its deeper causes. The cause of the slumping, paradoxically, lies in the front of the body, deep within the shoulder area of the upper chest. Tightness in the upper chest muscles pulls the shoulders forward and down, while rotating the upper arms inward. By releasing the tension in these muscles, we can undo the most persistent cause of chronic upper back pain.

## Challenges in Your Yoga Practice

Tightness in the upper chest makes it difficult—and sometimes even harmful—to perform basic asanas. Tense muscles draw the shoulders forward and rotate the upper arm bones inward, straining the shoulder joints in a number of common poses. For example, if you tend to hunch your shoulders while extending your arms to the sides in poses such as virabhadrasana II (warrior II), the deepest part of the shoulder joint can be harmed where the misaligned bones pinch the rotator cuff muscles. Moreover, hunched shoulders cause the upper back to round and the shoulder blades to “wing out” to the sides, weakening the muscles of the upper back.

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### A Simple Pose to Counter “Tech Neck”

NISHITA MORRIS

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# SHOULDERS



## Understand and Prevent Shoulder Injuries

DOUG KELLER

*Pulling ourselves up by our “neckstraps” is an unconscious, painful habit. The solution is surprisingly simple.*

Each time you lift your arms, your shoulder muscles—both big and small—initiate a dance full of subtle nuances. The complex interaction of those muscles, coupled with the unique structure of the shoulder joint, gives your arms a wide range of motion. In fact, the shoulder is one of the loosest joints in the body. But this freedom of movement comes at a price: shoulders are vulnerable to injury both from sudden falls and from repetitive action such as throwing a baseball. The muscles of the rotator cuff, the most delicate movers of the shoulders, are particularly susceptible. But here’s the good news: a regular, targeted asana practice can help you maintain healthy rotator cuffs by bringing awareness to your alignment, strengthening your shoulder muscles, and opening your chest. And several of the poses



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described in the pages that follow can even encourage the healing of rotator cuffs if you've already injured them.

## The Anatomy of the Shoulder

Let's take a look at the special nature of the shoulder joint and, in particular, its relationship to the shoulder blade. Though it is considered a type of ball-and-socket joint, the shoulder is unusual because the rounded "ball" or head of the humerus (i.e., the arm bone) doesn't have a corresponding socket. Rather, the ends of the collarbone and shoulder blade come together to form a shelf under which the humerus hangs. This shelf is known as the acromion process. Beneath it there is a rounded depression that is part of the shoulder blade. This is as close as the shoulder gets to having a "socket"; the head of the arm bone glides against this surface as it rotates, and the steady contraction of the rotator cuff helps to hold the joint together.

The rotator cuff actually comprises four separate muscles—the supraspinatus, the infraspinatus, the teres minor, and the subscapularis—which wrap over, in front of, and behind the head of the humerus and stabilize the joint. These deeper muscles are layered over by larger, stronger muscles that attach directly to the acromion process. The muscles of the rotator cuff guide the actions of the arm bone itself, while other larger muscles control the actions of the shoulder as a whole, with both arm bone and shoulder blade functioning as a unit.

## How Injuries Occur

The most common rotator cuff injury occurs at the outermost corner of the shoulder, beneath the deltoid (the large muscle you use to lift your arm). The injury is to the supraspinatus, a small muscle that attaches directly to the head of the humerus and assists the deltoid in lifting the arm overhead. The very strength of the deltoid is often the cause of injury to the supraspinatus. When you take your arms overhead, the deltoid is able to raise the arm to about 80 degrees from the body. At this point, the deltoid can't do much more lifting on its own: the arm bone is almost level with the shoulder, and from this angle the deltoid can only pull the arm bone into the joint rather than lift it higher. As the arm continues to rise, the deltoid relaxes somewhat and the supraspinatus jumps in to help: it raises the arm for the next 30 to 40 degrees, after which the deltoid can resume its work.



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It is within this range of 80 to 120 degrees that the supraspinatus can get hurt. The tendon of the supraspinatus, which is about the size of a large rubber band, is the part of the muscle most often injured, though the muscle itself can also tear. This can happen especially in hasty and aggressive *adho mukha shvanasana* (downward-facing dog) poses, as well as in flamboyant versions of the newly popular *vasisthasana* (side plank pose), and in advanced arm balances such as *tittibhasana*.

Simple accidents can also injure the supraspinatus tendon. For example, if you slip in an icy parking lot and use your arm to break the fall, the humerus gets jammed in the socket, pinching the supraspinatus against the acromion process or even tearing the tendon. The simple repetitive action of raising your arm can also be at fault. When you reach for something on a shelf above you, the deltoid can pull the arm bone up too hard, pressing it against the acromion process, thus pinching the supraspinatus. Over time, these little injuries add up to a more serious problem.

The shoulder is built to avoid this pinching, but our patterns of use and everyday life lead to imbalance, pain, or lack of mobility. The problem starts with postural habits: many of us overuse the muscles of the shoulders to support the weight of our arms. The muscles closest to the neck (the rhomboids) and those running from the tops of the shoulder blades up into the neck itself (the levator scapulae) take the brunt of the weight. This is especially problematic during arm-intensive activities such as typing, when your shoulders become set in a perpetual shrug. Chronic tension builds up, pulling the inner corners of your shoulder blades up toward your ears, causing your back to round and your shoulders to hunch. This is the beginning of a vicious cycle: the more your shoulder blades creep up the back from the pull of these muscles, the more your muscles tense and shorten, pulling your shoulder blades up even higher. As a result of this tension and the postural misalignment that ensues, the deltoid is far less likely to relax when it's supposed to. If your shoulders roll forward and the deltoid remains fully engaged as you lift the arm from 80 to 120 degrees, it can cause the humerus to press against the acromion process, pinching the rotator cuff tendon.

There are a variety of yoga poses that can help break the cycle and restore strength and balance to the shoulder muscles—from simple standing poses in which you hold your arms aloft in various positions to those in which your arms directly support the weight of the body. The standing poses described below can



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help you reestablish the healthy mobility of the shoulder blades as you lift your arms; they will also enable you to activate other muscles to ease the burden on the rhomboids and levator scapulae. The inversions, particularly the headstand, strengthen the shoulder muscles, keeping them more open and stress-free.

## Freeing the Shoulder Blades

To begin, extend your arms out to either side in warrior II pose. Make sure your arms are in the same plane as your shoulders or slightly forward of the shoulders. To experience “the shrug,” rotate your hands and arms so your thumbs face downward: feel how the muscles on either side of your neck hunch upward, the deltoids tense, and the shoulders feel blocked.



Tense Warrior II: If your deltoids are tense they will cause your shoulders to hunch.

Now rotate your hands and arms so the palms face up, even reaching your little fingers upward. The hunching dissipates: the upper inner corners of your shoulder blades release down your back, softening the sides of your neck. Feel how the weight of your arms is supported more by your shoulder blades, which are planted firmly on your back, and less by your neck: you’ll especially feel a firming of the muscles at the outer edges of your shoulder blades, as the deltoids soften and the shoulder joints begin to feel more open and free. Do a few small arm circles to feel the support offered by the shoulder blades.



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Relaxed Warrior II: If your shoulders are relaxed, you'll feel the upper inner corners of your shoulder blades release down, as the neck softens.

The same hunching tends to happen in *parshvakonasana* (side angle pose) when you extend the top arm overhead. Many students have trouble straightening the arm: the deltoid is tight, the shoulder is pinched, and the neck feels cramped, making it uncomfortable to turn the head. The problem begins once again with the shoulder blade, which fails to release down the back so that the arm can swing into place in the shoulder joint.



Side Angle Pose: Avoid pinching in the shoulder by bringing your arm slightly forward and sweeping it in a C-shaped arc. Feel the shoulder blade release as the arm swivels into place.

To release the shoulder in the side angle pose, take your top arm slightly in front of your body and, while extending out through the little finger, rotate your arm in a tiny arc, making a C shape with your hand, as if you were dipping your little finger in a bowl of ice cream. The shoulder blade will release down your back and away from your ear, and the humerus will swivel into place next to your ear, making space for your head to turn. It's this simple yet elegant





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movement of the shoulder blade that opens the shoulder, and also, through a subtle downward pull of deeper muscles in the back and shoulders, prevents pinching of the rotator cuff.

## Protecting the Shoulder Joint

Freeing the shoulder blades is just the beginning. Protecting and healing the rotator cuffs—the supraspinatus in particular—involves not just realigning the bones, but activating and strengthening the muscles meant to counteract the upward pull of the deltoid. Straight-arm poses such as downward-facing dog and *adho mukha vrikshasana* (handstand) certainly make use of these muscles, but the shoulder is also at its most mobile and vulnerable in these positions. It's safer to begin with variations on *shirshasana* (headstand), in which the position of the arms and shoulders is more stable. And since the aim of these headstand preparation exercises is to make the arms more weight-bearing, the neck can remain safe: little, if any, weight needs to be placed upon the head.

## Downward Dog on the Wall

This exercise will help you establish correct alignment in your shoulders without putting weight on your arms. Stand facing the wall and place your forearms on the wall in headstand position, with your fingers interlaced and your elbows shoulder-width apart. Keep the palms of your hands separated so that your arms form an upside-down U shape, rather than a V. Walk your feet back as you bend forward from the hips. Maintaining the U shape, let your arms slide down the wall until your body is at more or less a right angle (knees can be bent if necessary), and your head is in line with your upper arms; the top of your head should not touch the wall.



Lightly engage the inner edges of your biceps, drawing energy from your inner elbows toward your armpits. This action stabilizes and protects your shoulders because, when engaged, the biceps draw the arm bones back into the shoulder joints. To keep your shoulders open and prevent pinching in the joints, isometrically squeeze your elbows toward each other while firming the biceps, as if you were squeezing a beach ball between your elbows. Feel how your upper back broadens, much as it did when you turned your little fingers upward in the warrior II exercise.



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Press your forearms into the wall to stretch your upper body through the shoulders and away from the wall. If you are nursing an injury, go only as far as you can without pain or stiffness in your shoulders; your head may only be an inch or two from the wall at first. That's fine. Notice how pressing through your elbows makes your shoulder blades firm into the back, creating more space within the shoulders. For comparison, press more with your wrists and see how your triceps and deltoids activate, making your shoulders tighten and hunch. Pressing through the elbow when the arm is weight-bearing activates the deeper muscles—latissimus dorsi, subscapularis, and teres major—that pull the head of the arm bone down and back, away from the acromion process; this prevents the pinching of the supraspinatus. While extending back as you press through your forearms into the wall, avoid overly rounding your upper back: let your spine descend from between your shoulder blades toward the floor, while keeping your arms active. Hold the stretch for about 30 seconds.

## Headstand with a Chair

In the next variation, the arms bear more weight. This is where a prop becomes helpful. Place a sturdy chair against a wall so that it will not slide. Sit in front of the chair, facing away from it, and extend your legs so that you can measure a leg's distance from the chair. When you go into the pose, you will place your elbows where your heels are.

Now come away from the chair and place your hands and arms in headstand position, with the elbows on the floor at the spot you just measured. With your feet on the floor, toes curled under, lift your hips up as if you were doing downward-facing dog. Lightly engage your inner biceps and push your forearms down and away from you as you lift and stretch your hips back, creating a straight line from your elbows to your hips. Rest the crown of your head on the floor between your hands, pressing through the arms firmly enough so that most of your weight is on your arms, not your head. Hold the stretch for about 30 seconds, keeping the arms engaged.

If you can keep most of your weight on your forearms and do not experience pinching in the shoulder joints, then step first one foot and then the other onto the chair to elevate the hips, bringing more weight into your arms. (To protect your neck and build strength in your shoulders, you may want to practice with your



# SHOULDERS

head entirely off the floor, lifting so that your head comes in line with your upper arms.) Press the whole forearm into the floor, especially through the elbows.



Variations in Headstand: Build strength in your shoulders and protect your neck by pressing the length of the forearms into the floor.

## Headstand Variations

In the next exercise, remove the chair, then measure a leg's distance from the wall. Rest the crown of your head on the floor between your hands, with your fingers interlaced, your hands cupped around the back of your head, and your wrist bones perpendicular to the floor. If you have neck concerns, you'll still want to keep your head off the floor, although it will be rather demanding. Come into the downward dog version first, then step your feet up the wall, so that your body is at a right angle—an upside-down version of the exercise with which we began. This pose is sometimes called *urdhva dandasana*. Press through your arms to take the weight off your neck and to lift your shoulders away from your ears and toward your waist. This engages and strengthens the muscles that pull your arm bones away from the acromion process, keeping the supraspinatus safe and allowing it to heal.



How effective are these exercises for mending rotator cuff injuries? In one study published in the *International Journal of Yoga Therapy* in 2006, 10 people with rotator cuff injuries practiced similar variations of the headstand for 30 seconds daily for six weeks, with follow-up sessions every six weeks, for an average of 4.9 months. Nine out of 10 patients reported improved range of motion in the shoulders and reduced shoulder pain after the initial 30-second session. At the final follow-up, eight patients showed significantly improved range of motion and a 75 percent reduction in pain. None went on to surgery, which is unusual for people with rotator cuff injuries who report a significant amount of pain.

If you already practice the full headstand and are aware of the alignments and precautions, you can include this asana in your shoulder-strengthening-and-healing



# SHOULDERS

routine. While in the pose, your whole forearm should press fully into the floor to distribute your body's weight.



Headstand: Collapsed shoulders cause the body to arch into a banana shape (left), which strains the rotator cuffs. To prevent this from happening, press through the forearms while lifting the shoulders away from the neck (right).

In the headstand, the shoulders have a tendency to hunch toward the ears. As a result, the body takes on a “banana pose.” If you feel compression in your lower back or neck, it’s a sign that you are indeed in a banana shape. Press a bit more through your elbows. At the same time, with your thighs firm and steady, take your hips back slightly to align them more directly over your shoulders, and take your feet forward, reaching up through your inner heels and the mounds of your big toes. Keep your lower belly firm to steady yourself; you should feel your neck lengthen as you extend down through the crown of your head.

As you press your elbows more fully into the floor, you will be able to broaden your shoulders, lifting them away from your ears and toward your waist. Feel how the outer edges of your shoulder blades engage. The muscles you are using are the very muscles which, when awakened and strengthened through practice, create balanced action within your shoulders and protect the rotator cuffs from injury.

Because your shoulders play an important role in so many daily activities—playing musical instruments, typing, driving, not to mention practicing yoga and playing sports—it’s well worth the effort to include inversions and shoulder-strengthening exercises in your daily routine. And in the end, when the burdens of the world prove to be a bit too much for your shoulders, the work of turning upside down can give them some welcome relief. Atlas himself could have used a good headstand.



# SHOULDERS

## Video Classes for Shoulder Support



### 3 Shoulder Exercises to Release Tension

LUKE KETRERHAGEN

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### Pathways to Freedom: Shoulders

JEAN MAZZEI

[WATCH NOW>>](#)



### Release Tension from the Neck and Shoulders

EMILY SMITH

[WATCH NOW>>](#)



### Shoulder Stretch to Combat Computer Posture

NARWEEN OTTO

[WATCH NOW>>](#)



# HANDS & WRISTS



## Wrist Relief: 6 Poses for RSI (Repetitive Stress Injury)

MARLA APT

*If you have carpal tunnel, tendonitis, or other forms of RSI, these poses will stabilize your shoulders and upper back and relieve pain in your wrists.*

Our hands are one of our primary organs of action—we use them for basic survival, recreation, communication, even creative expression. An injury in the hand or wrist can be debilitating and the healing process elusive. Because many of our interactions with modern conveniences involve repetitive movements—such as typing, texting, or mousing—one of the most prevalent types of wrist ailment today is a repetitive strain/stress injury, or RSI. Many common wrist conditions, such as carpal



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tunnel syndrome and tendinitis of the wrist, fall under this category. RSIs stem from excessive and continuous stress on the musculoskeletal system, often brought on by poor postural habits, as well as workplace ergonomics. When the shoulders and upper back don't provide a supportive structural base for arm movements, the burden of the activity may fall on the smaller joints. Furthermore, poor alignment in the shoulders and upper back can constrict nerves in the arms, which can manifest as pain, swelling, and numbness in the wrists.

Yoga helps us engage in our daily activities in a less stressful and harmful manner. First, we address the causes of injury by slowing down and observing ourselves and our habitual patterns. Then we can develop new patterns that are healthier and more conscious. Specifically, yoga can assist with healing RSI in the wrists by working on alignment in the upper body, so that the larger muscles in this region can better support and guide movements of the elbows, wrists, and hands.

## Poses for RSI in Your Wrists

The following asanas will help to develop mobility and strength in the shoulders and upper back to minimize nerve compression and stress on the smaller joints. In all of these poses, the upper trapezius muscles (which attach at the base of the skull and run down the neck to attach at the clavicles) should feel like they are releasing down the back, so that there is no congestion near the base of the neck, and the sides of the neck are free to lengthen. This aids in counteracting the imbalances of the typical slumped forward posture many of us assume in front of the computer, in which the shoulders are pulled forward and down, the tops of the trapezius muscles become hard and creep up toward the skull, and the head projects forward.

We'll begin the sequence with the wrists in a neutral position, and work toward safely bringing the wrists into greater degrees of extension and, eventually, weight-bearing positions. Regular practice of these poses progressively prepares the upper body for asanas that are more challenging to shoulders, elbows, and wrists, such as *chaturanga dandasana* (four-limbed staff pose), or *adho mukha vrikshasana* (handstand).



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## 1. Urdhva Hastasana (Upward Hands Pose)



Stand with your back against a wall in *tadasana*. Separate your feet hip-width apart and parallel to each other, a couple of inches away from the wall. Bring the weight back into the heels of your feet and lengthen the buttocks down the wall so that you don't arch your lower back. Lift the front and sides of your torso and open the chest. Roll the outermost corners of your shoulders back against the wall so that you can feel your chest broaden.

With your arms straight, extend them in front of you, parallel to the floor, with palms facing each other. Pull your shoulders back into the wall to bring the shoulder blades down the back. Then raise your arms overhead; your hands may or may not reach the wall, depending on the range of motion in your shoulders. Keep your arms firm and straight, and as you reach them toward the ceiling, release your shoulders and shoulder blades down the wall. Extend the side ribs up toward the hands without moving your lower back, thighs, and waist away from the wall.

Repeat the pose, this time bringing the arms up from the sides, focusing your attention on the rotation of the upper arms and shoulders. Extend your arms straight out to the sides in line with your shoulders, palms facing down. Extend the inner edges of the arms from the center of your chest until you feel the biceps lengthening toward your wrists. Lift the sides of your chest, rotate your upper arms out from the shoulders, and turn the palms to face the ceiling. This rotation should feel like it is originating from your shoulder blades moving down, in, and forward toward your chest. Raise the arms overhead as you roll the triceps forward away





# HANDS & WRISTS

from the wall and the biceps back toward the wall. Lift the outer edges of your armpits toward your fingers, and, without dropping the arms, release the trapezius muscles away from your ears. Exhale and lower your arms down by your sides into *tadasana*.

## 2. Urdhva Baddhanguliyasana (Upward Bound Fingers Pose)



In the first variation of this pose, we'll focus on how to extend the arms without tightening the trapezius muscles. From *tadasana*, interlock your fingers snugly at the webbing and rest the backs of your hands on top of your head with palms facing up. Release the tops of the trapezius muscles down your back, away from your neck, as you begin to straighten your arms toward the ceiling. The moment you find that the top trapezius muscles tighten (even if only on one side), pause and allow them to soften before proceeding further.

Rather than tightening the shoulders to straighten the arms, see if you can hug the bones of the upper arms with the triceps. Exhale, unclasp the hands, and release the arms down by your sides.

Now repeat the pose, focusing on opening the sides of the chest and stretching the fingers and wrists. Change the interlock of your fingers so that the opposite index finger is on top. (Don't worry if this feels awkward.) Bring the backs of your clasped hands to your chest, and slowly stretch your arms straight out in front of you, parallel to the floor. Push out through the base of the fingers and broad-



# HANDS & WRISTS

en the heels of the hands. Make the outer arms firm, and straighten the arms until you feel the inner arms stretch. Keep the arms completely straight, and raise them overhead. As you lift the wrists higher toward the ceiling, raise the sides of your rib cage and open the armpits, spreading and lifting them toward the hands. Open the palms of the hands wide and try taking your hands further back, so that the arms come beside or even behind your ears. As you bring the arms further back, move your shoulder blades and upper back forward toward your chest without pushing your bottom ribs and lower back forward. Keep your arms straight and firm, and without lowering the palms, release your trapezius muscles down. Exhale, unclasp the hands, and bring the arms forward and down by your sides back into *tadasana*.

## 3. *Ardha Parshva Hastasana* (Half Sideways Hand Pose)



Stand in *tadasana*, one arm's distance away from a wall, with your left side parallel to the wall. Place the palm of your left hand on the wall in line with your shoulder, and turn the hand out so that the middle finger is pointing behind you. (If you find this challenging on your wrist, you can point your fingers up toward the ceiling.) With your left elbow slightly bent, turn the upper arm out (in the same direction as the hand) from the shoulder socket. Press the entire palm of the hand into the wall, including the bases of your fingers and all your finger pads; be especially aware of maintaining pressure through your index finger. Move your left shoulder blade in, drop the left shoulder

back and down away from your ear, and gently straighten your left arm as you turn your chest away from the wall. It should feel as if you are attempting to push the wall away from the center of your chest. Hold the pose for about two minutes, and repeat on the other side.



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## 4. Bhujangasana at the Wall (Cobra Pose Variation)



This standing version of bhujangasana gives you the benefits of the prone backbend—strengthening the upper back, relieving pressure in the shoulders and neck, and counteracting the forward bending of daily activities—without any weight on your wrists.

Stand approximately six inches away from a wall and press your pubic bone against the wall; place your fingertips on the wall at shoulder height. With straight legs, lift your heels high off the floor and draw your tailbone toward the wall. Open your chest, and roll your shoulders back away from the wall and down toward your buttocks. Draw the shoulder blades down and forward into the chest. The bottom edges of the shoulder blades should feel like they are coming closer to each other as you lift the sides of the chest up. Lift your lower abdomen toward the top of your sternum and isometrically drag your fingers toward the floor, as if you're trying to pull the wall down with your fingertips. If your chest is open and your neck feels free, you can look upward. Hold the pose for one minute, or for as long as you feel strong and open; then rest and repeat.

## 5. Bharadvajasana I (Pose of Sage Bharadvaja)



Sit on two folded blankets and bring both feet to the outside of your left hip. Place the top of your left foot on the arch of the right foot, with the left toes pointing straight back and the right toes pointing to the left. Keep both knees pointing forward. If this is challenging for your knees, try sitting up on more support.



# HANDS & WRISTS

Drop the left hip down so that the pelvis is level. Bend your right elbow, take your arm behind your back, and clasp your left upper arm with your right hand. Roll the right shoulder back. As you turn to the right, cross your left hand in front of you and place it as close to the outside edge of your right knee as you can reach. Inhale, and lift the sides of the chest; exhale, and turn your chest to the right. Keep rolling the right shoulder back as if the right arm and shoulder were leading the twist. Keeping the chest broad and level, exhale, and turn your head to look to the right. Hold for 30 seconds; then return to center on an exhale, release your legs, and change sides.

## 6. Hands and Knees Pose



Finally, we'll explore proper shoulder and arm alignment in a pose that places weight on the wrists. It is important to practice weight-bearing asanas on a firm surface (soft surfaces can cause the wrists to overextend) and to distribute the weight throughout the hand, so that you don't collapse onto the wrists.

Come onto your hands and knees with your hands under your shoulders and knees under your hips. Press the whole palm and all of the finger pads flat on the floor and lift the forearms up away from the wrist; it should feel like the skin on the palm of the hand is lengthening away from your wrist toward your fingertips. Straighten your arms, and turn your upper arms out. Roll your shoulders back away from your ears, spread the collarbones, and draw the upper arms up into the shoulder sockets.

If you find that this pose bothers your wrists, you can use a yoga wedge or the folded edge of a mat under the heels of the hands. Both of these modifications will elevate your wrists higher than your fingers, allowing you to distribute the weight throughout the hand, so that there is less pressure on the wrist joint.



# HANDS & WRISTS

If you find that your wrists feel strong here, you can deepen your work with shoulder rotation and wrist mobility by trying the pose with your hands turned out, fingers pointing away from each other. To further stretch the inner arms and increase flexibility in the wrists, repeat the pose with your hands turned all the way out, so that your fingers point toward your knees.

If you don't feel strain in any of these variations, you can apply your newfound awareness of how to integrate the work of the shoulders, arms, and wrists into other weight-bearing asanas that progressively increase the angle of wrist extension and the amount of weight through the arms: for example, *adho mukha shvanasana* (downward-facing dog pose), *chaturanga dandasana*, *bakasana* (crane pose), and *urdhva dhanurasana* (upward bow pose, or wheel).



# HANDS & WRISTS

## Additional Wrist Resources



### Healing (& Preventing) Wrist Injuries

DOUG KELLER

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### Workday Wrist Relief

JEN STOUT

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### Wrist-Friendly Vinyasa

JESSICA STICKLER

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## 5 Yoga Poses for IBS (Irritable Bowel Syndrome)

KELLY MCGONIGAL

*At best an IBS episode can be uncomfortable; at worst it's debilitating and embarrassing. Thankfully, yoga offers some simple solutions.*

When something doesn't feel right in your gut, it's usually a sign that something isn't right in your life. Gut feelings can be a message from the brain as much as from the belly. If you are one of the many people who suffer from irritable bowel syndrome (IBS), this message manifests as more than an occasional discomfort. It is a chronic experience of abdominal pain and digestive distress that reflects the intimate link between the mind and the body. But take heart—yoga can relieve your symptoms by reducing stress and teaching you how to listen to your body.



## Understanding IBS

IBS has the unusual distinction of being both one of the most common health conditions—affecting as many as 45 million people in the United States—and the condition you're least likely to talk about. Who wants to describe the cycles of bloating, gas, constipation, and diarrhea? Or admit to feeling at the mercy of an unpredictable and uncooperative digestive tract? IBS has also long been a bit of a medical mystery. The symptoms suggest a problem in the digestive tract, but people with IBS show no physical damage to their stomach, intestines, or colon.

Instead, the problem seems to lie in how the nervous system communicates with the digestive tract. Your brain and gut are intricately linked—you might even say that the gut is where the mind and the body meet. Your digestive tract contains hundreds of millions of nerve cells that receive a constant barrage of signals about the state of your body, thoughts, and emotions. This makes your gut highly responsive to changes in your well-being, both physical and emotional.

Some experts believe IBS is caused by a disruption of normal brain–gut interactions. For people with IBS, the nerves of the digestive system become oversensitive. The digestive tract overreacts to food, stress, and other demands on your body and mind. Along with these digestive symptoms, people with IBS tend to suffer from high levels of anxiety. It is currently unknown whether the chronic digestive problems create chronic anxiety, or whether heightened levels of stress and worry trigger heightened gut sensitivity. But findings linking the gut and the brain help chart a clearer path to healing. To gain freedom from IBS, you need to reduce stress, get comfortable with discomfort, discover your symptom triggers, and restore normal function of the digestive tract.

Yoga can be an important part of each step. Two clinical studies—one by researchers at the All India Institute of Medical Sciences in New Delhi in 2004, and the other by researchers at the University of British Columbia in 2006—have shown that daily practice of basic yoga postures with mindful breathing can reduce both the emotional and the physical symptoms of IBS. You can create your own healing yoga practice by following a few simple guidelines and trying the following sequence of postures.





## How Yoga Can Help IBS

Stress is one of the most common triggers of IBS symptoms. Yoga can help you shut down stress by calming the nervous system—and, in the process, calm your irritated digestive system. For the best results, choose postures that are accessible, not overly ambitious. You don't want to struggle to squeeze your body into postures that are more painful than peaceful. Make steady, smooth breathing the focus of your practice; if your breathing is strained, it will reinforce your stress and symptoms. Finally, be sure to include a relaxation pose at the end of your practice, and even consider starting your practice with relaxation. This can send a clear signal to your body and mind that it is time to slow down, let go, and shift toward a healing state.

Yoga can also help you tolerate uncomfortable sensations. If you have IBS, you have probably learned to recognize the first signs of an episode. You may be vigilant for any change in sensation in your belly and gut—the pressure of bloating or the first twinge of cramping that warns you things might quickly get worse. Unfortunately, anxiety about gut feelings can actually intensify your symptoms. But if you breathe and stay with the sensation, your body learns to relax, even with intense feelings. You can learn to be with your symptoms in the same accepting mindful way that you stay with the sensations of a yoga pose. This can profoundly change your experience of the pain and keep a mild episode from becoming severe.

Yoga can even help you prevent episodes altogether by making you aware of what makes your symptoms worse. From specific foods to caffeine, alcohol, or sleep deprivation, every IBS sufferer has triggers they can learn to avoid. Yoga is a perfect training ground for cultivating a heightened awareness of cause and effect in your body that carries over to choices off the yoga mat. With time, you will find yourself having stronger insights into what is healing, and what is harmful, to your body. You will find yourself wanting to do what is good for your body, and less attracted to what makes your symptoms worse.

Finally, yoga may help restore normal motility of the gut. When you have IBS, the contractions of your intestines may be slowed to the point of constipation or spasming to the point of diarrhea. Some yoga poses, like seated twists or prone backbends, put gentle pressure on the abdominal organs. Others, like side bends



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and reclining twists, release tension around the abdomen. A well-sequenced yoga practice will send gentle pulses of compression and stretch to sensory receptors along the digestive tract. This combination of pressure and release is believed to help balance the contractions of the gut, whether getting things moving or slowing things down.

## The Sequence

The following sequence will help reduce stress, release tension in the abdomen, and support general digestive health. It can ease discomfort during your milder symptoms and help prevent future episodes.

You can practice this sequence on its own or following a series of warm-ups and standing poses. As you hold each posture, stay with the sensations of your body and breath. Use the least amount of effort needed to hold the postures with integrity. Remind yourself in each pose to release any unnecessary tension throughout the body.

### *Parighasana (gate pose)*



From tall kneeling, stretch your right leg out to the right, heel on the ground, foot flat, toes reaching to the floor. Inhale and lift your left arm up; exhale and lean your torso over the right leg. Rest your right hand on a block, the floor, or your shin. Reach through the left arm and hand with clear intention, noticing how this gesture increases the stretch in the left side of your body. Feel the breath in the left rib cage, waist, and belly. Choose a position for the head and neck that feels least strained, and remember to relax your face, softening your forehead, eyes, mouth, and jaw.

Stay in the pose for 5 to 10 breaths, then repeat on the other side. After practicing this posture on both sides, return to kneeling. Place your hands on your side ribs, and feel the movement of the breath under



# DIGESTION & IBS

your hands. Inhale and exhale patiently and fully, letting your rib cage expand and contract.

## *Ardha matsyendrasana (half-seated spinal twist)*



Come into a seated position, extend your left leg and cross your right leg on top, planting the foot flat on the ground next to your left knee. Then bend your left knee and bring the left foot to the outside of the right hip. Sit evenly on both hips and lengthen up through your spine. Slowly turn your torso toward the right leg. You can hug the right knee with your left arm, or bring the left elbow across the right thigh and press the outer thigh into the upper arm. As you exhale, slowly draw your navel toward your spine to help press the breath out smoothly. You may find that you can twist a bit more with each exhalation, but do not force or strain.

If this twist feels too compressive, try twisting in the opposite direction—to your left, away from the top leg. This version of the pose gives a little more space for the abdomen to relax and for the belly to breathe.

Hold for 5 to 10 breaths, then switch sides.

## *Jathara parivritti (reclining abdominal twist)*



# DIGESTION & IBS

Lie down on your back with both legs straight. As you exhale, bend your right leg and hug it in to your belly. Pause here for a couple of breaths. Then take the right leg across your body, rolling to your outer left thigh and hip. Reach your right arm back, extending straight out from the shoulder, palm up. Let your right shoulder blade come off the ground, so that the spiral of the posture moves all the way from your legs through your pelvis, spine, ribs, and chest. If the pose feels too intense, consider placing a blanket or other support underneath the right knee and/or right arm. As you rest in the pose, feel the breath stretching the lower belly, side waist, and chest from the inside out.

Hold for 5 to 10 breaths, then return to lying on your back. Repeat on your left side.

## *Salamba setu bandhasana (supported bridge pose)*



Place a bolster, a stack of firm blankets, or a block underneath your hips and lie on your back. Make sure the support is under your sacrum and pelvis, not your lower back or ribs. Slide your legs out straight, and relax your arms by your side, palms up. If you have a strap, loop it around the mid-thighs to support your legs in place. The strap should be tight enough for you to completely relax the effort in your legs, but not so tight that the legs are squeezed together. If you don't have a strap, you can place the soles of your feet against a wall to provide more support for your legs.

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Stay in this posture for at least 10 breaths, and up to five minutes. As you hold the posture, bring your awareness to your belly. Imagine that you are inhaling and exhaling through your navel, the breath moving into and through any tension in your abdominal organs. Sense the tension dissolving with each breath. When you come out of the posture, rest for 5 to 10 breaths lying on your back, hands on your belly.

If this posture is not comfortable, or you do not have props available, consider another gentle inversion, [viparita karani](#) (legs-up-the-wall pose).

*Ananda balasana (happy baby pose)*



Lie on your back, hug your knees into your chest, and take a breath or two, feeling your back relax into the support of the ground. Then let your knees drop wide apart, and reach the soles of your feet toward the ceiling. Keep your legs bent, with your feet directly over your knees. Hold on to the big toes or the sides of your feet. Relax into the pose, without trying to pull yourself deeper into it. Let the arms be straight, shoulder blades dropping to the ground. Relax the weight of your hips, lower back, and ribs, and feel the stretch in your groin and hips. Let the movement of your breath and belly fill the open space between your legs. Stay here for 10 breaths.

# DIGESTION & IBS

If this posture is too intense a stretch for your hips, practice *supta baddha konasana* (reclining bound angle pose) instead.

After you complete this sequence, rest in *shavasana* (corpse pose). Practice slow abdominal breathing, allowing the belly to rise and expand as you breathe in, and sink as you breathe out. Place your hands on your lower belly. Let this gesture be a comfort, reminding you of your deep desire to take care of yourself. If you have any discomfort in your abdomen, imagine the breath moving into and through the pain. Let the breath lead you into a state of deep rest and healing.



# DIGESTION & IBS

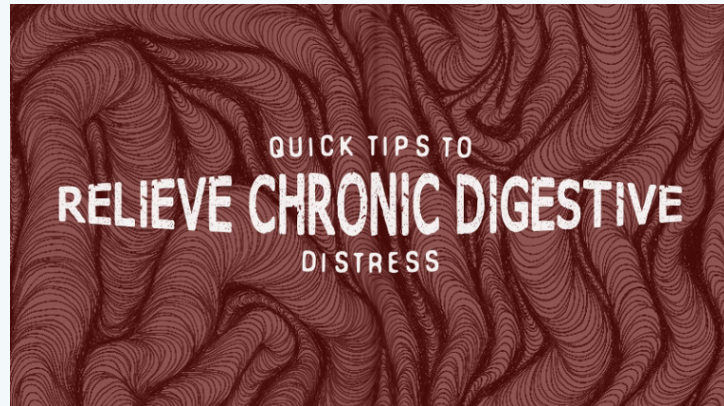
## Additional Digestion Resources



### Gut Reaction: Ayurveda for IBS

CARRIE DEMERS, MD

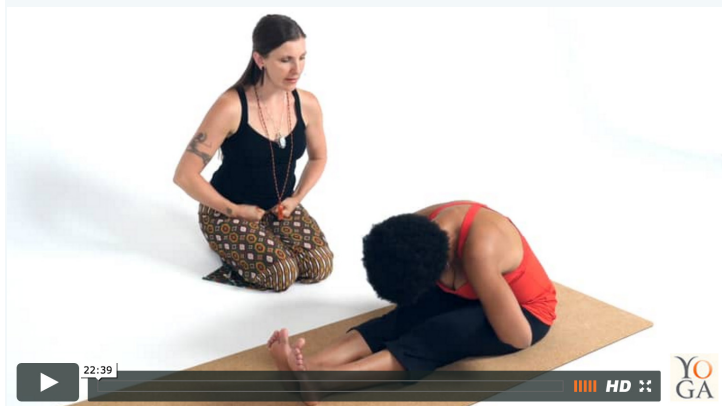
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### Tips to Relieve Chronic Digestive Distress

JACKIE DOBRINSKA

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### A Short Practice for Healthy Digestion

BROOKE SULLIVAN

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### Gentle Practice to Enhance Digestion

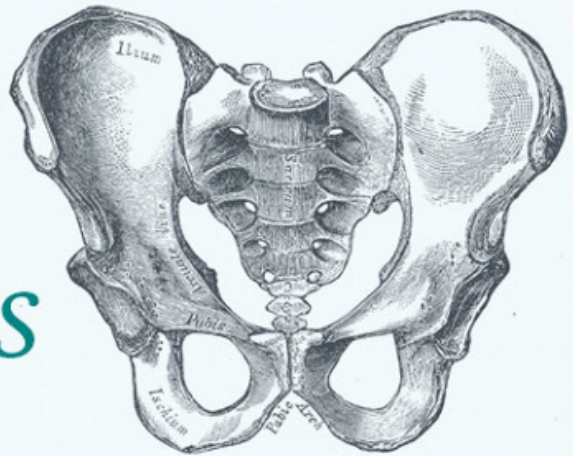
ZACH ZUBE

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## HELP *for the hips*



### Help for the Hips

SANDRA ANDERSON

*Pulling ourselves up by our “neckstraps” is an unconscious, painful habit. The solution is surprisingly simple.*

Ideally, asana practice brings us closer and closer to a balance point, to a state of stability, ease, and inner stillness from which health and happiness blossom. But as practice progresses, you may feel “stuck” in a particular part of the body. One area of common complaint, especially for those developing a sitting posture for meditation or pranayama, centers around the hips and the pelvis. And considering that the hip joints must bear weight and provide structural stability to the whole body while at the same time allowing us to walk, run, jump, bend over, and sit, it’s





# HIPS & PELVIS

no wonder problems develop there. The pelvis is the foundation for the entire torso, and its alignment is crucial to the healthy functioning of the whole organism. A brief anatomy overview may help evaluate your problems and modify your practice for bringing balance and flexibility to the hips and pelvic region.

The pelvis, lower spine, and hip joints bear the weight of the upper half of the body, stabilize the relationship between the torso and the legs, and form the framework needed for walking, running, twisting, and bending in all directions. The primary connection between the pelvis and the lower spine takes place at the sacroiliac joints, which lie on either side of the sacrum and are relatively immobile. Their semi-rigid construction firmly anchors the base of the spine, and for the most part the lower spine and pelvis function as a unit.

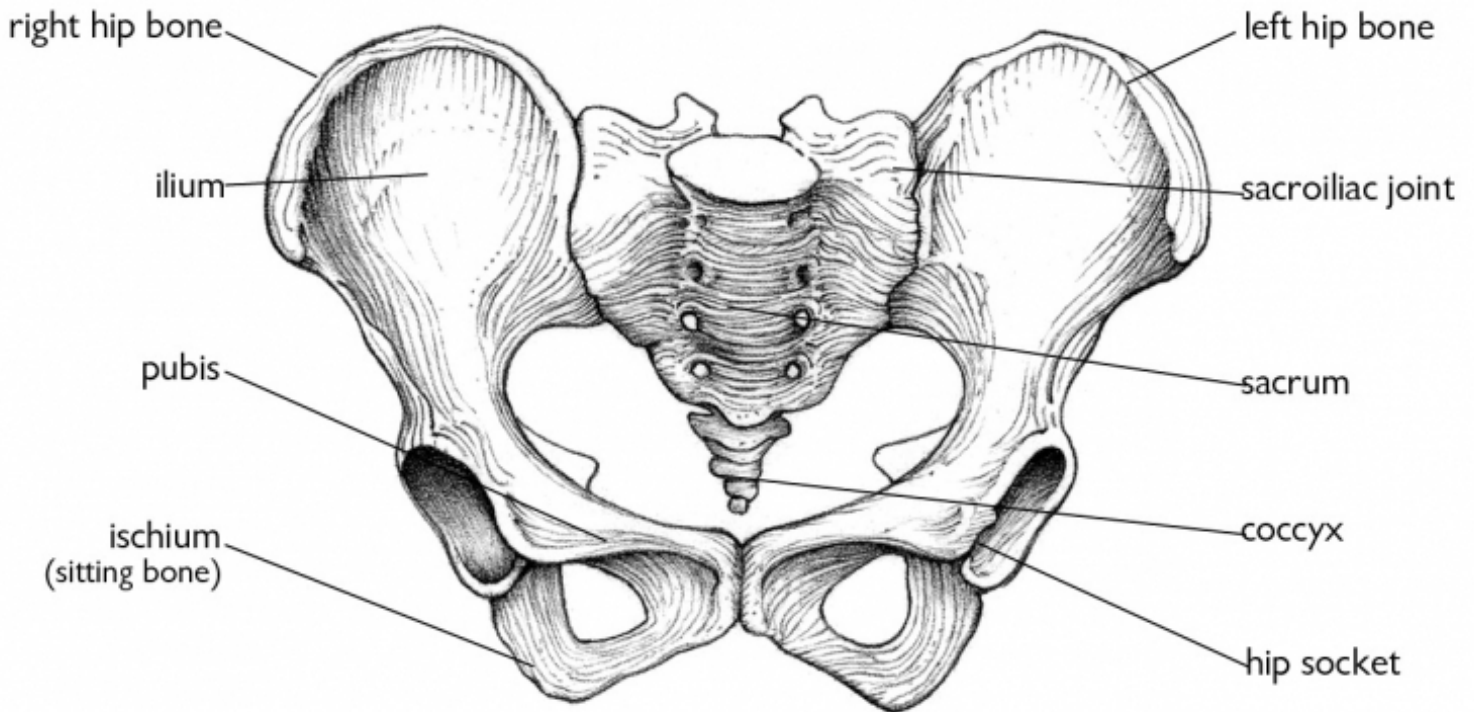
The thighs, on the other hand, are joined to the pelvis in ball-and-socket joints that are among the most mobile joints of the body. This allows for a wide range of movements at the hip—the thigh can move forward and backward and side to side, and it can be rotated so that it turns in and out. And as might be expected in an area that includes such different functions, many muscle groups contribute to flexibility and strength. The hamstrings in the back of the thighs, the quadriceps in front, the adductors of the inner thighs, the abductors behind and to the sides, the rotators, and the hip flexors (iliopsoas muscles), which are located deep in the pelvis, all move the thighs in relation to the pelvis. Finally, the abdominal muscles support the front of the body and help with proper alignment of the pelvis and lower spine.

Unless the hip joints are exercised regularly in all directions, problems such as stiffness, pain, or chronic foreshortening of their muscles will invariably appear. The following exercises are designed to strengthen and open up this area. When limited mobility in the hips is accompanied by tight hamstrings and a stiff lower back, you will also need to work on those areas. Keep in mind that tight muscles are often compensating for weak ones; a well-rounded program that includes strengthening exercises will restore balance to the musculature and bring a normal range of motion more quickly than specific stretches done in isolation.



# HIPS & PELVIS

## The Pelvis



The following postures target the common restrictions in hip joint flexibility, except for the hamstrings, which we'll address in a separate article. Include any or all of these poses in your regular asana routine, wherever they fit in the flow of a sequence. For example, do the side angle pose with your standing poses, or substitute it for *trikonasana*, the triangle pose. Do the groin openers with your prone postures, and so on. As always, regular practice is a must.

### Side Angle Pose (*Parshvakonasana*)

The standing poses are excellent for the hips and pelvis because they develop strength and flexibility, and because they integrate your awareness with postural movements. The side angle pose increases mobility deep in the hip joints; strengthens the quadriceps and other muscles of the legs and pelvis; stretches muscles along the entire side of the body; and expands the chest.



# HIPS & PELVIS



Stand with the feet about a leg's-length apart. Turn the right foot out 90° and the left slightly in, hips and chest facing forward. Inhaling, stretch the arms straight out from the shoulders, palms down, keeping the shoulders broad and down away from the ears. Exhaling, bend the right knee until it is directly over the ankle. Steady the pose and relax the breath.

With the torso still facing forward, exhale, lengthen the spine, and bend to the right, resting the right forearm on the thigh while turning the left palm up and raising the left arm parallel to the side of the head. Then further open the chest and abdomen by slightly tucking the tailbone and drawing the shoulder blades in. Press the feet firmly into

the floor, and lengthen from the left heel through the left fingertips. For stability, keep the right knee directly over the ankle, and the outer left foot pressing into the floor.

To deepen the pose, stretch the inner thighs away from each other. Then release the right arm from the thigh and place the hand on the floor at the outside of the right foot. Lower the left hip until it is in line with the extended leg and arm, lengthening the stretch through the entire left side. Keep the right arm and leg together, rotating the rib cage and abdomen open, and lifting the chest away from the pelvis. Stretch the left arm; open the left shoulder; and keeping the neck long, look straight ahead, or turn the head to look up. Now breathe steadily as you center yourself in the pose, holding for 3 to 5 breaths or until you feel ready to come out. Then press through the ball of the right foot, lift the torso, and straighten the leg. Exchange the position of the feet, and repeat on the other side.



# HIPS & PELVIS

## Lunge Pose Variations (*Banarasana*)



The lunge and its variations are excellent postures for correcting pelvic alignment and lower back problems. The iliopsoas muscles, instrumental in flexing the hip, connect the lower spine and pelvis to the thigh bones. These muscles are often tight, and either weaker or more flexible on one side than the other, throwing off the alignment of the pelvis, legs, and spine. The lunge variations stretch the psoas muscles as well as the quadriceps.

Standing about three feet from a chair, place the left foot on the chair seat. Bend the left knee and distribute your weight between the two legs, maintaining an upright spine. Rest the hands on the left thigh. Keep the right leg straight, the heel resting on the floor, and the foot facing forward. Gradually deepen the bend in the hip joint, lowering the pelvis toward the floor. Relax and breathe in the pose; then repeat on the opposite side.



# HIPS & PELVIS

Next, begin on your hands and knees, then bring the left foot forward between the hands so that the toes are in line with the fingers. Extend the right leg straight behind you, resting the knee and the top of the foot on the floor. Keep the left knee directly over the ankle with the shin perpendicular to the floor. Lower the pelvis, lengthening the two thighs in opposite directions, and press the chest forward and up. Now bring the toes of the right foot under. Lift the right knee, straighten the leg, and press the heel away from the body. With the knee raised, continue lowering the pelvis toward the floor while pressing the left thigh forward and the right thigh back. Hold and breathe, then repeat on the opposite side.

## Groin Openers

These are intense stretches for everyone. They take advantage of gravity and the weight of the legs to stretch the inner thighs and groin, so relax and release the weight of the pelvis to the floor in all the variations.



Lie on your stomach with your chin on the floor (or rest the forehead on the crossed forearms). Bend the knees and spread them as far apart as possible; then bring the soles of the feet together. Without lifting the pelvis or changing the placement of the knees, relax the inner thighs and the muscles around the hip joints. Let the feet lower toward the floor, but keep the soles of the feet together. Relax deeply into the pose and breathe, allowing the weight of the legs to gently open the inner thighs and groin.

Next, increase the bend at the knees slightly and cross one ankle above the other.



# HIPS & PELVIS

Again, relax the tension in the hip joint, groin, and pelvis. Notice how the stretch intensifies. Then cross the ankles in the other direction. Hold each side until you feel ready to release.

## Butterfly Posture (*Baddha Konasana*)



The butterfly pose is difficult for many students because of tightness in the inner thighs. A good way to stretch these muscles is to sit on the floor with your back against a wall. Keep the back of the pelvis and the base of the spine as close to the wall as you can, and lengthen through the crown of the head. Bend the knees, clasp the hands around the feet, and release the knees toward the floor. Then use the palms of the hands to firmly massage the inner thighs from the groin toward the knee. Finally, within your capacity, carefully press the thighs and knees further toward the floor with your hands. Hold the pose and breathe smoothly and evenly, as if the breath is flowing into the whole body. If you like, you may also bend forward from the hips,

further deepening the stretch.

## Inner Thigh Stretch on the Wall

This stretch is similar to the seated angle pose, but it works particularly well for those who are stiff in the lower back and inner thighs and have trouble sitting up straight with their legs open to the sides. With the spine and lower back supported on the floor, gravity works to open the legs and gently stretch the adductor muscles.



# HIPS & PELVIS

Begin by sitting on the floor with the outside of one hip and shoulder against the wall, and your hands behind you on the floor.



To come into the pose, lean back, bringing the knees to the chest and lifting the feet. Then rotate the body so that you are lying down on your back with the tailbone near the wall and the top of the head pointed away from it. Extend the legs vertically against the wall and rest the back on the floor. Support the head and neck by interlacing the fingers behind the head and opening the elbows. Then spread the legs out to the sides, keeping them supported by the wall. Relax and allow gravity to draw the legs down and stretch the inside of the thighs. Avoid strain in the back of the knees; bend the knees slightly if you feel discomfort there. To make the stretch more active, lengthen the spine and press the tailbone to the wall; lengthen through the back of the

legs and press the heels away from the pelvis; keep the knees and heels firmly against the wall without rotating the legs in either direction. Breathe as you center yourself in the pose, gradually increasing the holding time over a number of practice sessions and relaxing more deeply.

Release the pose by bringing the legs back together on the wall, bending the knees toward the chest, and sliding the soles of the feet down the wall. Relax, resting the legs and lower back and relieving tension on the inside of the knees. Finally, roll to one side and come out of the pose.



# HIPS & PELVIS

## Additional Resources on the Hips



### Overcoming Hip Pain

#### Overcome and Prevent Hip Pain

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### Healthy Hips and Knees

#### Healthy Hips and Knees

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### 7 Poses to Soothe Sciatica

DOUG KELLER

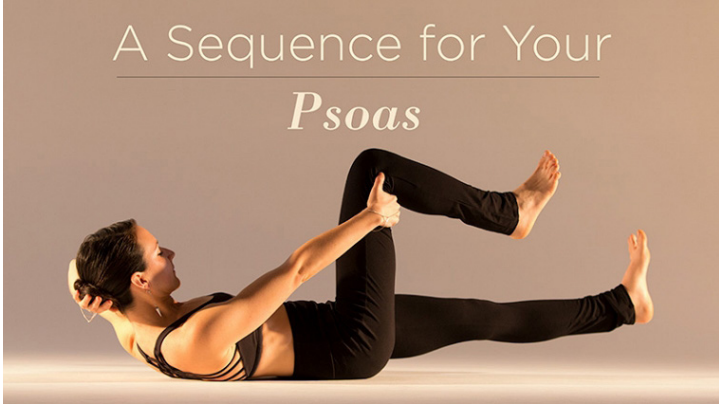
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# HIPS & PELVIS

## Additional Resources on the Psoas



### A Sequence for Your Psoas

KAT HEAGBERG

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### Yoga Practice: A Supplement Psoas Major

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### How to Stretch and Strengthen the Psoas

JULIE GUDMESTAD

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### Release the Psoas Class

SANDRA ANDERSON

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# BACK PAIN



## Release Tension & Build Strength: A Practice for Your Lower Back

SANDRA ANDERSON

Wonderfully designed to provide both support and a wide range of movement, the human spine has a unique feature: its upright vertical alignment in the gravitational field. Human beings alone among all creatures have this capacity—the ability to sit and stand with their head, neck, and trunk on a vertical axis. Yet if we are to enjoy this unique heritage, we must develop and maintain the structural integrity and flexibility of the spine, beginning with the deep muscles of the back that run parallel to the spine and support its upright position.



# BACK PAIN

In the lower back, the deep spinal muscles span the space between the twelfth rib and the pelvis, stabilize and mobilize the lower back, protect the abdominal organs, moderate and control forward bending, and assist in backward and side bending. They help support and maintain the normal spinal curve in the lower back, giving the spinal column its resiliency and capacity to absorb shock as it connects the pelvis and chest in alignment on the vertical axis. If the deep spinal muscles of the lower back are too tight, the lower back is too rigid to allow normal range of movement. If they are too weak, the structural support and upright posture of the body is compromised. Therefore it is important to release tension in the back as well as to build strength. The following set of poses does both. These exercises are intended to release minor tension in the back and to prevent more serious problems.

A balanced program of asana practice is the best therapy for long-term care of the whole back, since the mechanical function of the spine is affected by the strength, flexibility, and alignment of the whole body, including the legs, pelvis, and shoulders. For serious back pain, disk problems, or recent injury, consult your healthcare practitioner and a yoga therapist.

## Reclining Twist

The reclining twists stretch the whole spine, but they are particularly effective for stretching the muscles of the lower back. There are many different variations; this one emphasizes the lower spine, legs, and inner thighs.

Lie on your back, knees bent and feet on the floor near the pelvis. The arms are extended from the shoulders, palms down. Cross the right thigh over the left, wrapping the legs tightly (if possible, catch the left shin with the toes of the right foot). Now lift the pelvis off the floor momentarily, sliding the left hip underneath and toward the center. Then lower the pelvis, twist to the left, and let the wrapped legs release toward the floor.



# BACK PAIN



If you are very flexible you may be able to keep both the legs and the right arm and shoulder on the floor at the same time. For most people, however, the pose evolves over many practice sessions by alternately working with the twist in the lower torso (keeping the shoulder and arm firmly anchored) and then the twist in the upper torso (allowing the shoulder and arm to initially release from the floor, and then drawing them back). Whichever alternative you have chosen, breathe deeply into the abdomen as you center yourself in the pose. When you are ready, return to the center and repeat on the other side.

## Locust Pose Variations

Muscle tone, strength, and flexibility are seldom equal on both sides of the body, and this is as true for the pelvis and lower back as it is for the arms and legs. These variations of the locust pose help restore muscular balance deep in the pelvis and realign the sacroiliac joint. They strengthen the muscles of the lower back and buttocks; they may provide quick relief to simple lower back discomfort, as well as prevent lower back problems from developing.

Lie on your stomach with the chin on the floor and the legs together. The arms are alongside the body, palms down. Bend the right knee and flex the ankle so that the sole of the foot faces up. Exhaling, lift the right thigh and press the foot toward the ceiling. Once the leg is raised, turn your attention to the left side of the body, relaxing the lower back, the buttocks, and the leg, and grounding the pelvis. This will isolate muscle contractions on the right, and you may not be able to lift the leg as high as before. For maximum benefit in this pose, adjust to the new height and



# BACK PAIN

carefully observe the contrast between the two sides of your body as you breathe out and in. Finally, release the right leg, noting any residual tension on the left side. Relax for three breaths and repeat on the other side.



Now bend both knees. Tighten the buttocks and press the lower abdomen into the floor. Exhaling, lift both thighs equidistant from the floor, keeping the chin down and the feet square. Keep the knees directly in line with the hips. Stretch up equally through the inner and outer edges of the feet, and out through the toes. Hold for three breaths, then gently release back to the floor. Repeat two more times. Watch your feet in a mirror, or have a friend watch you, correcting tendencies to rotate the toes out, lift one foot higher than the other, or tilt the feet.



# BACK PAIN

## Squat Pose with Variations

Squatting poses are excellent for stretching and releasing tension in the lower back, developing elasticity in the ankles and knees, relieving tired legs, increasing flexibility in the hips, and massaging the abdominal organs.

Stand with the feet parallel and just wider than hips-width apart (this distance between the feet makes the pose easier, while narrowing the distance makes the pose more difficult). Bend the knees and lower the pelvis toward the floor into a squatting pose. Allow the heels to come off the floor if necessary to keep your balance, but maintain the alignment of the feet. If your knees feel strained, check your foot alignment again or redistribute your weight. Drop down through the heels and the tailbone, while at the same time stretching the torso up and forward. If you have come all the way down with the heels remaining on the floor, then spread the knees and place the hands on the floor, arms between the legs. Hold and breathe.



If you are uncomfortable, or if the heels don't reach the floor, try either of the following modifications. Start by placing a firm folded blanket or mat under the heels. Lower the heels onto the support and open the knees, keeping the feet pointed straight ahead. Folding at the hip joints while broadening and flattening the lower back, extend the torso forward between the thighs. Then hold and breathe, relaxing more deeply into the pose. A second method for lowering the heels in the pose is to spread the knees and hold on to a stable support (a low ledge, railing, or piece of heavy furniture will do). Use the support to counter falling backward as you lower the heels further toward the

floor. Once in the pose, lengthen and flatten the spine and lower the torso between the legs, continuing to use the support to maintain the pose. Hold and breathe.



# BACK PAIN



If you can bring the soles of the feet flat to the floor, then the next challenge is to gradually bring the feet together. At any point in the process it may help you to momentarily lift onto the balls of the feet, open the thighs, and press the torso forward and down. Then release the heels back to the floor again. Once you can bring the armpits inside the knees, spread the elbows to the sides and grasp the outer ankles with the hands. If possible, lower the head and the tailbone toward the floor.



# BACK PAIN

## Additional Resources on Back Pain



### Yoga for Lower Back Pain

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### Yoga Tips to Relieve Sacroiliac Joint Pain

JUDITH LASATER

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### No More Back Pain! Tone the Right Abs

DOUG KELLER

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### Yoga to Relieve and Prevent Low Back Pain

SARAH GUGLIELMI

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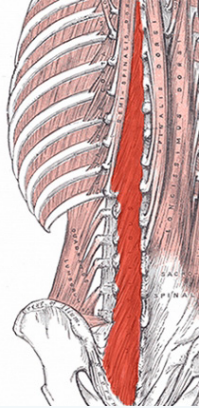




# BACK PAIN

## Additional Resources on Back Pain

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*Fresh Insight into Relieving Back Pain*



### The Multifidus: Fresh Insight into Back Pain

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# KNEE PAIN



## Yoga Therapy for Your Knees

DOUG KELLER

*With a simple anatomy lesson, isometric exercises, and attention to alignment in standing poses, you can undo chronic pain in your knees.*

If you have chronic pain in your knees, if they “snap, crackle, and pop” when you bend or extend them, or if they tend to hyperextend, you may have improper tracking or “dislocation” of the kneecap. This misalignment causes the most common kind of chronic knee pain and damage to the knee joint, which develop slowly over time.

Here’s a simple anatomy lesson: The kneecap is designed to slide along a groove



# KNEE PAIN

in the femur, and it has to move smoothly within that groove to do its job well. If it goes “off track” (and it often does), it grinds away at the cartilage underneath and destabilizes the knee. The ensuing wear and tear is a key reason for knee replacement surgery, which a lot of people believe is necessary because they think the cartilage is “gone.” But the truth is that cartilage can grow back, albeit slowly. The main problem is that if we don’t correct the imbalanced pull of muscles on the kneecap, we will continue to grind our cartilage down faster than our body can replenish it.

So why does the kneecap go off track? The cause lies mainly in the quadriceps, a group of four muscles that merge just above the knee into a single quadriceps tendon. This tendon surrounds and attaches to the kneecap, continuing down below the kneecap as the patellar ligament, where it attaches to the tibia (shin bone). The kneecap serves an important mechanical function. The quadriceps tendon passes over the kneecap like a rope over a pulley, and the kneecap—like a pulley—increases the strength of the quadriceps to straighten the leg by 30 percent. Together, the quadriceps and the kneecap form the “extensor mechanism” for straightening the leg. Misalignments come when the “rope” of the quadriceps exerts a sideways pull on the kneecap “pulley,” creating friction in the mechanism.

Hatha yoga has a lot to offer to correct this misalignment; the standing poses are especially effective. But be forewarned: Misalignments of the knee in various asanas can amplify the imbalances that lead to injury and can aggravate existing problems instead of correcting them. The good news is that good alignment and proper tracking are easy to achieve—once you know what to pay attention to.



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## Why Are We Prone to Knee Problems?



Our bodies are predisposed to injuries of the extensor mechanism because the hip joints are wider than the knees in a neutral standing position. The natural Y-shaped configuration to the leg bones promotes uneven contraction of the quadriceps, and problems such as hyperextension of the knees make these natural imbalances even worse. As a result, when we contract the quadriceps to straighten the leg, the unevenness of the contraction tends to pull the kneecap to the outside, thanks to the greater pull of the outermost quadriceps (the vastus lateralis).

The innermost quadriceps (the vastus medialis) is most responsible for counteracting this pull. This muscle tends to be weak and underused, while the outer thigh muscle tends to be stronger from overuse. So if you want to keep the knee healthy (i.e., tracking properly in its femoral groove), you need to learn to strengthen the vastus medialis. In fact, physical therapists consider exercises to strengthen this neglected

muscle key in the rehabilitation of knee injuries.

## The Challenge of Working with the Inner Quad

Yoga students are often told to “lift the kneecaps” in straight-legged poses to engage their quadriceps and, ostensibly, protect their knees from hyperextension. But lifting the kneecaps in a healthy and balanced way requires focused attention, especially if you already have problems in your knees.

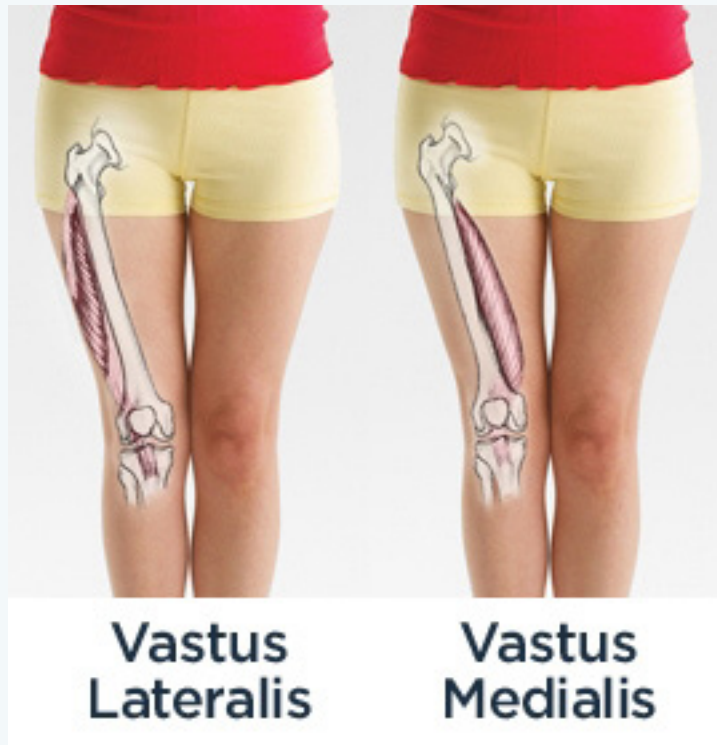
This is easy enough to check. Sit or stand with your legs straight and your feet parallel to each other, then engage your thigh muscles so that your kneecaps “lift” or pull toward your hips. Do your kneecaps move up in a straight line, or do they move in an angle toward the outside of your knees? If the latter is the case, then you need to strengthen the vastus medialis, the inner quad, and learn how to use it properly.

This has its challenges. First, it can be difficult to find and isolate this muscle, be-



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cause you can feel the vastus medialis firming most only in the last 10 to 20 degrees of knee extension. So it takes focused attention to even feel and understand what the muscle does.



Second, structural misalignments that cannot be changed (like being knock-kneed or bowlegged) tend to limit the vastus medialis's proper functioning—and can even weaken it in relation to the other quadriceps muscles, making it even harder to work with.

Finally, although engaging the vastus medialis properly can prevent hyperextension of the knee, doing so is essentially useless if the knee is already hyperextended. Consequently, it's important to consciously avoid hyperextension in the first place, rather than relying on the strengthening exercises to prevent it. This is critical, because the habit of hyperextension will otherwise pull you right back into your imbalanced patterns of knee extension even after you do the work of strengthening the vastus medialis.



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Here's what you can do to keep your kneecaps tracking properly:

1. Find your vastus medialis, the inner quadriceps muscle.
2. Strengthen it with small extension exercises.
3. Continue to strengthen the vastus medialis in bent-knee warrior poses.
4. Incorporate that work into straight-legged asanas.

## How to Strengthen Your Inner Quad



Isometric extensions will help you identify the inner quad and its action as you strengthen it. To do this, sit in *dandasana* (staff pose) with your legs extended forward. Support your upper back against a wall if that's more comfortable. Roll up a small blanket or sticky mat and place it under your knees to prevent hyperextension while your quadriceps are contracted. Next, rotate your right leg out 10 to 15 degrees (if the sole of your foot were on a clock face, your toes would be pointing to one o'clock). To find the vastus medialis, place your fingers about one inch above the inner (or medial) corner of your kneecap, and then walk your fingers

# KNEE PAIN

about one and a half inches toward the inner thigh. Straighten your leg slowly to feel the quadriceps engage. You're looking in particular for the firming of the tear-drop-shaped muscle just under your fingers. This is the vastus medialis, the inner quadriceps. You will feel it fully engage as your leg straightens completely. Hold the contraction for 8 to 10 seconds, then release. Repeat this for two more rounds, making sure you don't extend the leg so hard that you feel locking or pinching in the knee. Repeat this exercise with the left leg.

Next, do the same exercise without rotating the leg out. Keep your leg aligned so that your kneecap faces straight up toward the ceiling. Extend your leg fully and see if you can engage the inner part of the quadriceps—where you're touching with your fingers—as strongly as you can engage the outer part of the quadriceps. Watch how your kneecap moves in a straight line along the center of the knee joint when your quads are engaged in a balanced way, rather than pulling to the outside. Repeat on the other leg. You can do these exercises several times a day—just be careful not to fatigue the muscle by doing too many sets at a time.

## The Warrior Poses

Among the traditional asanas, the warrior poses (*virabhadrasana I and II*), in which the front leg is bent and the back leg is straight, are particularly effective for strengthening the vastus medialis, if done with proper alignment and action. Because although it's easiest to isolate this muscle's action when the leg is fully extended, it is also engaged and strengthened when the knee is bent at a 90 degree angle and the leg is bearing weight—as long as the knee is positioned vertically over the heel and the inner heel remains grounded. This is the case in a well-aligned warrior pose.



# KNEE PAIN

To come into the pose, step your feet wide apart, while extending your arms out to either side. Your feet should be roughly beneath your wrists. Turn your left foot in about 30 degrees and your right leg out 90 degrees. Keep your torso upright as you bend your right knee. Make sure your knee does not go beyond your ankle and toes: Keep the shin vertical while striving to bring the thigh parallel to the floor, so the leg is bent at a right angle. If the knee goes beyond your ankle and your weight shifts into your toes, widen the distance between your feet. Turn your head to look out over your right fingertips.

Even when your stance is the proper width and your knee bends to a right angle, a common—and harmful—misalignment is to let the thigh turn inward so that the knee points more toward the big toe. This happens especially when the arch of the foot collapses, which places stress on the inner knee and prevents you from strengthening the quadriceps in a balanced way. A less common misalignment is to shift the weight to the outer edge of the foot, so that the knee turns more toward the little toe. In this case the muscles along the outer thigh tighten, and the outer (lateral) side of the knee is stressed. In this case, too, the vastus medialis doesn't function properly.



*TO PROTECT THE KNEE make sure it's above the second toe and that both the toe and the knee are on the same plane as the sit bone. If the vastus medialis is not properly engaged the knee falls inward. The vastus lateralis then pulls the kneecap outward, stressing the inner knee. When the weight shifts to the lower heel, the knee splays out over the little toes and stresses the inner knee.*



# KNEE PAIN

Proper alignment in the warrior pose allows the vastus medialis to work in harmony with the other quadriceps to align and strengthen the extensor mechanism of the knee. Misalignments, on the other hand, disable the vastus medialis and increase the muscular imbalances that cause wear in the knee. You can protect your knees and strengthen the vastus medialis by following three basic rules for the warrior poses.

**First,** make sure your knee is bent properly to a right angle, so the weight is centered in your heel. If your toes are gripping, it's a sign that your knee is going too far beyond your heel.

**Second,** don't let the inner arch of your foot collapse, for this is a sign that your knee is turning inward too much. We sometimes compensate for this collapse by shifting weight to the outer edge of the foot, causing the inner heel to lift. But this stresses the outer knee and defeats the purpose of the pose. The challenge of aligning the knee is to keep your inner heel and big toe mound grounded while keeping the inner arch of the foot lifted. These two actions—grounding and lifting—will keep the knee from turning inward or outward too much. Lift your toes to help engage and lift the inner arch; as you bend your knee, draw the energy from the inner arch up through the calf to your inner knee, so that your knee remains directly over your heel and does not turn inward.

**Third,** make sure that the heel, kneecap, and hip joint of your bent leg are in the same plane by allowing a slight turn of the hips. (If you were doing the pose next to a wall, your outer right ankle, knee, and hip would all be touching it.) To achieve this, when you bend your knee, let your outer hip descend toward the floor (as if you had something heavy in your hip pocket) as you lift energy from your inner arch up through your inner knee. This will make your leg spiral out as you bend it, until your heel, kneecap, and hip joint are all aligned.

The purpose of these three actions in the bent leg is to ensure that all four quadriceps muscles are working harmoniously to stabilize the knee. As a result, the vastus medialis gets a much-needed workout that brings it into balance with the other quadriceps. To confirm this, gently pinch your thigh above the inner knee to check that the muscle there—the vastus medialis—is as firm as the thigh muscles at the outer knee.



# KNEE PAIN

## Trikonasana

Proper alignment of the knee in the warrior poses automatically gives the vastus medialis a healthy workout. Now you can apply these same actions to the straight-legged poses like trikonasana, in which working the vastus medialis consciously is more challenging.



Step your feet wide apart, turning your left foot in 45 degrees and your right leg out 90 degrees, toward the edge of your mat. Bend your right knee slightly and align your heel, knee, and hip as in warrior pose. Then straighten the leg mindfully, engaging the vastus medialis, especially in the last 20 degrees of extension. If you engage this muscle properly and your leg is aligned as you straighten it, you'll see your kneecap draw straight up your leg, and you'll find it nearly impossible to lock your knee. But if you let go of the vastus medialis even for an instant, the knee can easily hyperextend and lock into that position.

Fold at the hip crease to take trikonasana to the right. Keep the vastus medialis firm and lift along your inner thigh, maintaining the straightness of your leg without locking the knee. If you feel pressure in the knee joint, you've probably relaxed the vastus medialis and hyperextended your knee. Come out of the pose and try again. As a bonus for good alignment, you'll feel a stronger stretch along the inner edge of your thigh, from your inner knee back toward your sit bone. Be careful not to overstretch: use the support of a block for your hand if you need it.

## Conclusion

The standing poses of hatha yoga provide powerful and effective means for strengthening and stabilizing your knees, helping you to overcome structural imbalances that might otherwise lead to chronic wear and tear (and ensuing pain) in your knees. A little extra mindfulness in aligning and working your legs in these poses will enhance the natural therapeutic benefits these poses have to offer.



# KNEE PAIN

## Additional Resources on Knee Pain



### How to Keep Your Knees Safe in Asana Practice

LORI GASPAR

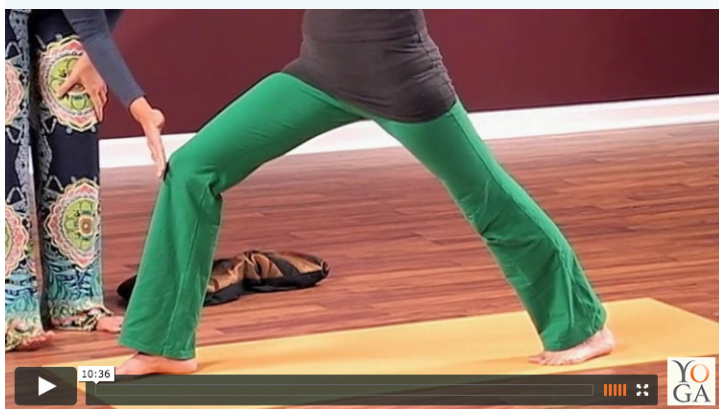
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### Healthy Hips and Knees

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### Support the Knee in Your Yoga Practice

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### A Yoga Practice That Won't Bear Weight on Hands or Knees

BETH SPINDLER

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# FEET & ANKLES



## Free Your Feet

YOGA INTERNATIONAL

On average, we take 10,000 steps a day, logging some 115,000 miles in a lifetime, the rough equivalent of four times around the planet. So it isn't really a surprise that your feet ache occasionally—rather, it's a wonder they don't hurt all the time. With 26 bones, 33 joints, and more than 100 tendons, muscles, and ligaments per foot, there's a lot that can go wrong, especially when you consider the beating they routinely take.

Still, that's little consolation when every step makes you wince in pain. What you want instead is relief, and, fortunately, you can do a number of things to free your feet.



# FEET & ANKLES

## Footloose—and Fancy-Free

According to Stephanie Slon, a reflexologist in Alberta, Canada, (stephsreflexology.com), walking barefoot in the grass decreases anxiety and depression by 62% and increases those feel-good endorphins.

## Massage Your Sole

Tired, sore feet respond well to massage therapy, benefiting from the way even, gentle pressure floods the foot with fresh blood and pushes out toxins and lactic acid. Try one of the following techniques:

1. Using some essential oil, massage the pada madhya marma point (between the second and third metatarsals, about a third of the way from the base of the second toe to the heel). According to Vasant Lad of The Ayurveda Institute, this relieves foot pain, headaches, and stress.
2. Sit down and place a tennis ball under the ball of your foot. Slowly roll it back and forth, making sure to focus on particularly tight areas. If you need more pressure, stand up and place the ball under the problem foot, with your other foot planted firmly on the ground.
3. Soak your feet in a tub of Epsom salts and lavender oil, and then rub them with lotion that contains soothing emollients.

## Wear Better Shoes

Eight out of 10 women say their feet hurt, and yet 9 out of 10 wear shoes that are too small. Over time, too-tight, too-pointy shoes with too high a heel shoehorn the foot into an unnatural position, pushing the big toe out of alignment and forcing the joint outward until a bunion forms. Choosing shoes with a roomier toe box and heels no higher than 2 1/4 inches will provide relief—and more than an ounce of prevention—even for those with a genetic predisposition for bunions.

To help prevent bunions, place a foam or plastic spacer between the big toe and the rest of the toes at night to reduce pressure and help straighten the foot.

To soothe bunion pain, brew a strong cup of chamomile tea and place the used tea bag directly on the bunion; slowly massage the affected area with the tea bag in



# FEET & ANKLES

place. The homeopathic remedy *Silicea* (6c twice a day for two weeks) may help dissolve the arthritic deposits around the big toe joint.

To avoid bunion pain altogether, go barefoot as often as possible. Barefooting can help strengthen cramped ligaments, straighten clenched toes, and lift flat arches—all of which helps decrease back, knee, and hip problems. Working through your whole foot as you walk, jump, and run encourages better balance and enhances coordination. And, of course, there's nothing like feeling the warm sand between your toes on a hot summer day.

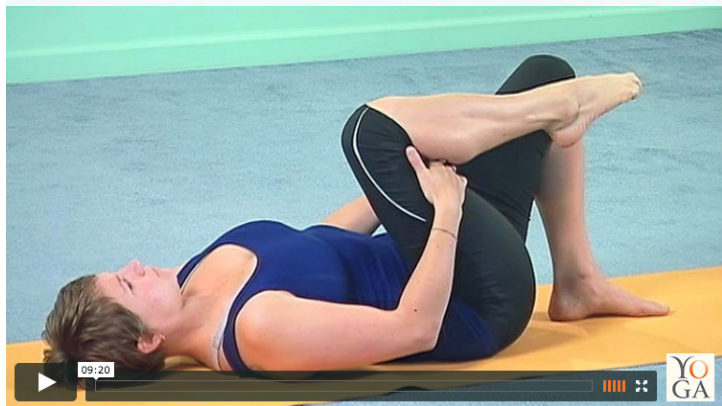
## Strike a Pose

*Vajrasana* (thunderbolt pose) may provide the most relief for tired feet and the pain of plantar fasciitis, one of the more common foot injuries. The key: keep your heels close together so your weight gently stretches the ligament (plantar fascia) that runs from your heel to the ball of your foot. You can intensify the stretch—and affect the calves and the Achilles tendon—by tucking your toes under as you sit back on your heels.



# FEET & ANKLES

## Additional Resources on Feet & Ankles



### Yoga for Lower Legs, Feet and Ankles

MARY CARDINAL

[TAKE CLASS>>](#)



### Yoga for Your Aching Feet

DOUG KELLER

[READ FULL ARTICLE>>](#)



### 9 Poses to Prevent Bunions & Relieve Pain

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### An Ayurvedic Foot Massage

SHANNON SEXTON

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