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IYT 500 HRS

INTERNATIONAL YOGA ORGANISATION®

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Syllabus Book

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This book is dedicated with "JOY OF YOGA"
IYS®-International Yoga School,
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IYT®-International Yoga Teacher 500 hours

Syllabus Book

IYT® 500hours Contents

- Twists
- Arm Balances
- Inversions
- Restoratives

1

The Tradition of Hatha Yoga in a Modern Context: A Brief Overview

Yoga is first mentioned in the Vedas, ancient and sacred books of Hinduism. Many key texts historically associated with yoga's origins clearly state that the primary focus of yoga was to quiet the mind, and the physical practice itself was to prepare the body for meditation. Throughout many, many years, yoga has evolved to encompass an extensive repertoire of styles and asanas inspired by innumerable teachers. The yoga we practice primarily in the West is from the lineage of T. Krishnamacharya, an Indian yoga teacher who systemized many of the asanas associated with modern Hatha yoga. Some of his renowned students included B. K. S. Iyengar (founder of Iyengar yoga), K. Pattabhi Jois (Ashtanga yoga), and T. K. V. Desikachar (developed Viniyoga) and Indra Devi (first female student of Krishnamacharya). These esteemed yogis have left a significant imprint on the poses and styles that are popular today. Figure 1-1 illustrates an abbreviated history of yoga with a few key texts, popular styles, and renowned teachers. It is not a comprehensive list, but simply a visual reference outlining traditions.

Highlighting a Key Text of Yoga Philosophy

Since the Western world is primarily introduced to yoga from a physical perspective, I would like to introduce some fundamental concepts of yoga philosophy in this book. There are many significant texts in the yoga pantheon, such as the Upanishads, *Bhagavad Gita* and the *Hatha Yoga Pradapika* , but I will specifically mention the significance of the *Yoga Sutras* by Sage Patanjali, which opens with Sutra 1.1, "*Yogas Citta Vrtti Nirodhah* " (yoga is the calming of the fluctuations of the mind). Throughout the *Yoga Sutras* , Patanjali outlines how we must practice and what steps we should take to achieve *samadhi* (bliss). The "Eight Limbs," Sutra 2.30, lists guidelines for the practitioner to follow.

1. *Yama:* abstinence (ethical behavior toward others)—Ahimsa (nonviolence), Satya (truth), Asteya (non-stealing), Brahmacarya (continence), Aparigraha (satisfaction)
2. *Niyama:* observance (self-discipline)—Saucha (purity), Samtosa (contentment), Tapas (accepting but not causing pain), Svadhyaya (study enlightening books, self-examination), Isvara pranidhani (surrender to a higher power)
3. *Asana:* posture
4. *Pranayama:* breath control
5. *Pratyhara:* sense withdrawal
6. *Dharana:* concentration
7. *Dhyana:* meditation
8. *Samadhi:* pure awareness (bliss)

(Patanjali, Sutra 2.30)

If one truly commits themselves to the practice and patiently works through the limbs, he or she will experience profound transformation on a physical, mental, and emotional level.

Incorporating some essence of the "Eight Limbs" in your practice will help you to discover more about yourself in a profoundly deeper way that is bound to have a favorable effect on your life. To help you understand how to apply the "Eight Limbs," I will refer to the limbs when appropriate in sections of this book. For more information, I recommend that you refer to the *Yoga Sutras* of Patanjali. There are

many translations, but the one I prefer would be the version by Sri Swami Satchidananda (Satchidananda, 1978).

With Patanjali's "Eight Limbs" as your framework, your exploration of yoga will mature and grow more refined in stages. I've experienced this myself over many years. Most of us approach yoga at the third limb, *Asana* , which is physical, still having to work through the first two, *Yama* and *Niyama* , which is the hard work of deeply examining ourselves and our beliefs, actions, and behavior. But with persistent practice (*Abhyasa* and *Vairagya*), you will tap into the subtle layers that are yoga's hallmark and ultimately experience bliss. Nevertheless, yoga philosophy can be daunting to some and it may take time before these concepts are introduced into your practice and you comprehend them. But to know them gives your practice depth and richness that makes it more than exercise. I highly recommend that you read some of the key texts. Since I lead trainings and thoroughly cover the history and philosophy of yoga, I know what obstacles make this material complex and confusing. However, if I give my students a glimpse of what they should learn through language, instruction, and skillful sequencing, they can truly experience yoga in a healthy way.

History of Yoga Chart

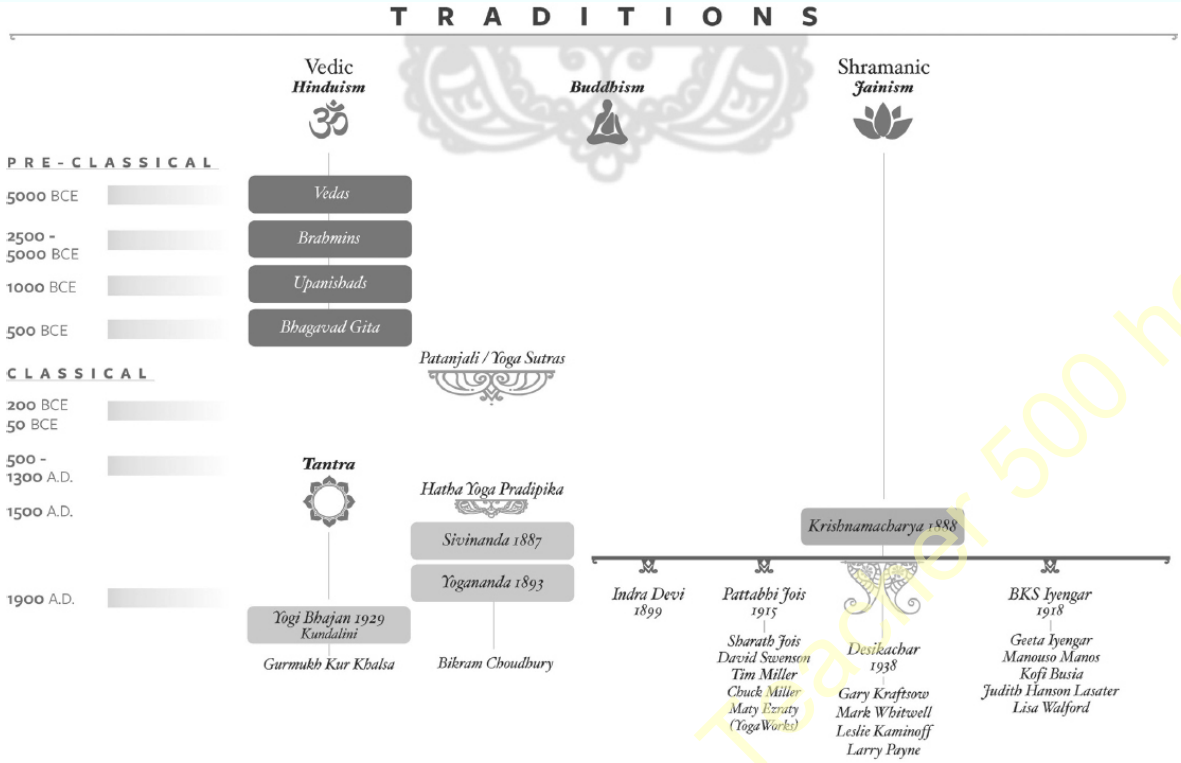


Figure 1-1 *This chart is an illustration of the history of yoga and the branching of different schools (styles) and prominent teachers.*

Different Styles of Yoga: What's Right for You?

As I mentioned, there are many styles of yoga being taught at studios around the world—Bikram, hot yoga, acro yoga, power yoga, Iyengar yoga, Ashtanga yoga, Kundalini, Sivananda, Yin yoga, and restoratives, just to name a few. Although they are all technically Hatha yoga, not all of them are taught in the same way, nor are some styles appropriate for certain individuals. I have often heard over the years, from people who have never practiced yoga, common misconceptions that prevent them from ever stepping into a classroom: "I'm not flexible enough," "I don't think I can get myself twisted up in a pretzel," "I'm too old," "I'm too heavy." With yoga, there is a reasonable starting point for every individual, no matter what age or condition, but the style and approach is key. Given the infinite variety and ways of practicing, how can you identify what is right for your condition in a classroom setting or home practice? When is it appropriate to modify and in what way? How do

you know what's right for you? The answers to these questions will present an entirely different way for each individual's approach to yoga.

In this book, I will draw upon my experience with a few distinct styles: Ashtanga, Iyengar, Viniyoga, Yin yoga, and Kundalini. Throughout the book, I explore many elements associated with Ashtanga and Iyengar. There are many other styles that I won't mention in the context of this book, such as Bikram, hot yoga, Sivananda, or acro yoga. Why? Not to say that other styles are not relevant, but I have practiced in depth a range of fundamental asanas within the Ashtanga and Iyengar styles, and I believe they provide a great resource for building physical awareness and developing skills as a teacher as well as a practioner. Futhermore, an invaluable resource for teaching and practicing yoga is *Light on Yoga* by B. K. S. Iyengar, which illustrates approximately 200 yoga asanas with over 500 detailed images and descriptions on the benefits and correct teaching method of each pose. The book also provides a fundamental overview of yoga philosophy, bhandas, kriyas, and pranayama. *Light on Yoga* has been integral to my education on yoga and is the essential book in each training I've taken and taught. The styles listed below are in some way the primary influence for this book and fall under the umbrella of Hatha Yoga. They are taught differently and appropriate for different levels, ages, and abilities.

Ashtanga —Created by Sri K. Pattabhi Jois (Mysore, India). There are six levels of sequences in Ashtanga: Primary (Yoga Chikitsa), Secondary (Nadi Shodhana), and four advanced (A, B, C, D). In each of these sequences is a set number of asanas that are memorized as the student progresses over time, mastering a pose before learning the next. The asanas are linked with a vinyasa that is synchronized with the breath. Some poses are held for five to eight breaths. The sequence is always completed by "finishing poses," which include backbends, inversions, pranayama, and meditation before Savasana (Corpse Pose). The breath, bandhas, and drishtis are principle elements to the practice. Classes are usually conducted Mysore style, where the student memorizes the sequence and is adjusted at key times by the teacher. Primary series helps to build strength and flexibility with a focus on forward bends, twists, and hip openers. One can develop focus, stamina, mental stamina, confidence, and mind-body awareness. Intermediate

series is considered nerve cleansing with a focus on backbends that make the spine more supple.

Although I have known Ashtanga yoga to have many benefits and I love to practice it, it can be rigorous and physically demanding and, therefore, not suitable for certain populations and those with specific injuries. For example, first-time seniors to yoga, depending on their physical ability, and pregnant women may need to carefully evaluate their participation before practicing this style. However, a qualified instructor can help an individual modify the poses if necessary, and perhaps they will only practice a short section of the Primary series. I will admit there is a tendency to get injured in some poses and there is a risk of injury from repetitive movements and extreme flexion, extension, or rotation in some poses. From what I've learned, to truly progress without the risk of injury, one must commit to a regular and, ideally, daily practice (six days a week). In addition, to minimize the potential for injury, it is relevant that you study with an authorized or certified Ashtanga teacher. They are listed on the Ashtanga Yoga website: .

Iyengar— Developed by B. K. S. Iyengar (Pune, India). The emphasis in this style is placed on technique and alignment. There is also the ample use of props, which Iyengar developed to guide the body into position, support the body for special conditions, or to enhance a pose. Many of the props we use today come out of this system. Blocks, straps, bolsters, blankets, rope walls, benches, chairs, sand bags, and more were created to help support or guide individuals deeper into their practice. Therapeutics are another facet of this practice as well as restoratives—where the body is supported in asanas with specific use of props to help trigger the "relaxation response." Iyengar can be the most accessible to all populations, no matter what their condition, since the teacher has many options for creating a practice suitable for the individual. An Iyengar class tends to be instructed in great detail, with pauses for demonstrations. Fewer poses are taught and it is great for building and reinforcing foundation in every pose. In addition, one can learn how to practice safely for special conditions and what would be the appropriate props to use to help them.

Viniyoga —Attributed to Desikachar. With Viniyoga, sequences are developed utilizing asana, breath (*pranayama*), meditation, and other

elements that are more specific to the individual's needs. There can be dynamic movement that is gentle as well as therapeutic. Movement is synchronized with the breath, and there is the option to utilize variations of asanas to make a pose accessible.

Yin Yoga —Created by Paulie Zink, a martial artist and Taoist yoga teacher. Paul Grilley, who was one of his students, is a distinguished Yin yoga teacher as well. The art of Yin yoga draws upon the doctrine of the five elements of earth, metal, water, wood, and fire, and the principle of yin and yang used in Chinese medicine and acupuncture. Yin and yang are the polarities of a whole, the complimentary opposites of dark and light, cold and hot, soft and hard, and female and male that allow all things to come into being. Many of the yoga postures associated with this practice invoke the spiritual attributes of various creatures, both real and mythical. Yin yoga poses highlight stillness for promoting growth, clearing energetic blockages, and enhancing circulation. Yang yoga poses develop core strength, muscle tone, balance, and stamina. This practice is done primarily on the floor, where poses are held for a while, similar to restorative yoga, but not the same. I have found Yin to be very relaxing and practicing on the floor very grounding.

Kundalini —Brought by Yogi Bhajan to the West from India. In the Kundalini tradition, the belief is that we have dormant energy that resides at the base of the spine. Many asanas in this practice target this energy to activate and awaken it. A wide range of mantras, *pranayama* (particularly breath of fire), *kriyas* (specific yoga sequences), dynamic posture, meditation, and music are integral to this practice. Kundalini tends not be alignment-based and focuses more on internal energy.

Vinyasa Flow —A modern rendition with elements of Ashtanga yoga where poses are linked dynamically in a sequence. The teacher can be creative in this style and many routinely include arm balances and inversions. These classes tend to be challenging or practiced in a heated room with music. Vinyasa flow is not accessible to special populations and tends to be taught in the upper levels (Level 2, Level 2/3) with less emphasis on detailed instruction.

Class Levels

Standard indications of levels for most Hatha yoga classes are as follows:

- Level 1—Beginners
- Level 1/2—Beginner Intermediate
- Level 2—Intermediate
- Level 2/3—Intermediate Advanced
- Level 3—Advanced

I can't emphasize enough the significance of class levels. Many people who are new to yoga may have as their first class experience a sweaty, strenuous, Level 2/3 vinyasa flow class, which they find way over their ability. In many cases, they never come back to a yoga class again. In my opinion, Level 1, and especially Level 1 Iyengar, is the best approach for anyone new to yoga. In this setting you will learn the fundamentals of Hatha yoga in a safe way. In fact, although I've been practicing for many years, I will occasionally drop into a Level 1 class to refine my sense of focus and heighten my sensitivity to teaching at this level. There are many foundational poses that are the building blocks of a regular, ongoing yoga practice. Acknowledging this is a key factor in minimizing yoga-related injuries. Many advanced yoga asanas require years of practice starting with the fundamentals to learn correct alignment and good habits that you can later apply to advanced asana. Therefore, in this book, I feature instructors who demonstrate advanced asanas and who have been practicing for years to achieve those results. Additionally, I will also highlight the modifications and variations of these poses suitable for beginners or those who are experiencing injury to emphasize the accessibility of yoga to a wider audience.

Finally, since there are many methods and styles of yoga to practice, simplicity will be the focus for this book. I will present the contributions of the yogis mentioned above and adhere to basic categories of asanas: standing poses, seated postures, backbends, twists, and inversions. In an effort to establish a universal system of communication and uphold tradition, Sanskrit names will be given and then translated in English.

"It is through the alignment of the body that I discovered the alignment of my mind, self, and intelligence."

—B. K. S. Iyengar, *Light on Life*

3

A Brief Comment on Yoga Therapy

In the broad scope of the definition of yoga, we must make a distinction between what yoga is and what yoga therapy is (*yoga chikitsā*). In a traditional sense, Ayurveda, the sister science of yoga, is considered complimentary or alternative medicine, with yoga therapeutics as a key element. In addition to herbs, specific foods, *pranayama* , meditation, and lifestyle changes, certain postures would be recommended to balance an individual's *dosha* (constitution: *Vata* , *Pitta* , *Kapha*). However, in this book I will leave out the discussion on Ayurveda, which is a vast topic in itself, and highlight current concepts of yoga therapy as a growing field. Over the years, it has been discovered that yoga asanas have an inherent therapeutic benefit and, depending on the specific pose, some affect the body physically, physiologically, and even mentally. With proper training and awareness, one can discover the benefits of a multitude of asanas, and the poses themselves can be modified down to their essence to be accessible to anyone. For example, for Desikachar, who developed Viniyoga, it was important that a teacher adapted the practice to be accessible and unique to the individual. Similarily, B. K. S. Iyengar extensively developed variations of traditional Hatha yoga poses for therapeutic purposes, through the instruction of specific sequence, *pranayama* , and the use of props, to address many physiological ailments, conditions, or injuries, such as high blood pressure, depression, insomnia, or fatigue. Yoga therapy uses the framework of *koshas* (see

Section 10) to address and heal the body as a whole, on all levels, from the physical to the innermost essence.

Just as there many styles of yoga, there are many methods of yoga therapy as extensively outlined in the book *Yoga Therapy and Integrative Medicine* (Payne, 2015). In this book, many essays on the traditional and contemporary approaches to yoga therapy are given, and how various styles and methods have influenced the field.

What's the Difference between a Yoga Teacher and Yoga Therapist?

The lines have become blurred between these two designations and there have recently been strict guidelines enforced both by Yoga Alliance (YA) and the International Association of Yoga Therapists (IAYT) over the definition. One cannot call oneself a yoga therapist or claim to heal without proper certification. Yoga therapists are trained in therapeutic methods that are not typically covered in a yoga teacher training. They learn yoga-based assessments, maintain therapeutic relationships, and set goals with their clients. Nevertheless, yoga therapy continues to grow as a field and become recognized as a viable modality for healing. Ray Long, MD, FRCSC, states that "yoga therapy complements Western medicine by using a broad spectrum of traditional yoga techniques and applying them to the health and healing of individuals at all levels—physically, mentally, and emotionally." He goes on to say that "there has been growing interest focusing on the application of modern Western science to the practice of yoga, both to enhance its benefits and to minimize the risks of injury" (Long, 2015).

However, please keep in mind that yoga therapists are not physicians or primary care providers, but they can collaborate with other healthcare providers to:

1. Offer rehabilitation after a client has received physical therapy
2. Address common conditions and have knowledge to work with a wide range of health concerns safely and effectively
3. Educate on prevention

A yoga therapist is trained in clinical decision-making and knowing what is appropriate in different conditions. They know how to modify a yoga practice for students and clients in a therapeutic manner. Furthermore, a yoga therapist is skilled with working with individuals to identify whether each individual is in an acute, chronic, rehabilitation, re-educated, or maintenance phase. Overall, they should help clients be as healthy and pain-free as they can.

Keep in mind that yoga therapists and yoga teachers are not trained to handle acute medical problems or make medical diagnoses. However, they can work safely within their scope to explore, examine, and educate on:

- Therapeutic applications of yoga practices
- Asana
- *Pranayama* and meditation
- Anatomy, physiology, and kinesiology to help determine the type of yoga asana that would be best for their students and clients
- Practicing the style that suits you best, that inspires you to learn a variety of ways to help others and yourself

With this knowledge, yoga instructors and therapists can make the best recommendations for their students and clients. For further information about yoga therapy,

4

What Is Yoga Forma™ ?

Forma is the Latin word for information. In addition, in technical terms, *forma* means shape, form, substance, and many aspects of the physical and mental body. Therefore, *Yoga Forma* means:

- Building precision and alignment in your yoga practice to keep the body safe and pain-free
- Approaching your practice or instructions with informed facts to help create a true mind-body connection.
- Strengthening awareness of how movements impact how you feel
- Practicing to maintain energy and balance

I created a series of workshops that included manuals to provide resources for questions that have come up throughout my years of teaching. For example, I always begin my classes by asking if anyone has any injuries or specific health conditions that will impede their practice—almost always someone does. It can be physical, such as lower back pain or an injury or medical condition in the knees, hips, neck, or shoulders; or physiological, such as high blood pressure, insomnia, breast cancer, autoimmune disease, or fibromyalgia. Finally, I've occasionally had someone pull me aside and tell me that their problem is psychological, such as anxiety or depression. Although I would acknowledge the injuries or conditions, in many cases in the past, I would not know how to help the student. I would often ask myself—what attention does this condition require? What do I do? How can I

help? After treatment with a licensed medical professional, people who are recovering may be ready to take a group class or resume movement safely in a classroom setting or in a private session. I felt that we should embrace these students and let them feel as if they are welcome and give them tools to adapt safely in a classroom setting, a private session, or offer guidance for self-care.

In a standard yoga teacher training, we learn basic anatomy and kinesiology, correct alignment, and how to prevent injuries, but it would be helpful to have a little more information so that we can offer informed guidance. I'm making it very clear that we are not diagnosing or treating conditions in yoga, but creating a safe environment for practice **that does not aggravate or intensify a condition.**

In the Yoga Forma workshop series, I collaborate with healthcare professionals to offer facts about injuries and conditions that are commonly asked by students in my classes and workshops, and teachers in trainings. There seems to be a need for concrete facts and information to support a safe yoga practice and to highlight some of the relevant studies that are being conducted in the field.

This book and resource guide highlight common injuries and conditions (see Section 8) you may confront in the classroom or with individuals. You are given a definition of key terms, risks, and suggestions and taught how to advise students in their practice. Use this guide as a quick reference to gain knowledge and to find resources for study and recommended poses and books. Remember, I am not promoting a method or specific yoga style, but I am emphasizing the nuances, benefits, and potential of traditional yoga poses that we practice routinely. How do we see them in a new light? I am also providing key resources derived from relevant studies on yoga that may be useful to you as a teacher or practitioner. So how do you navigate through the sea of research on yoga to find relevant material? I've featured key studies in this book for you to get started. Once you're comfortable with these initial studies, perhaps you'll look and find more. This book also provides important studies that list yoga poses specifically addressing back pain, validating their safety and effectiveness for specific conditions. You can use these studies as a base for developing sequences, addressing problems, or understanding what is appropriate for certain situations.

5

Research on the Benefits of Yoga

The following are relevant research studies on yoga being conducted by medical and yoga professionals on a broad range of topics. Sources for these studies can be found in the reference section.

- A study conducted in a military medical center found that **yoga** sessions were a viable treatment for lower back pain (Higland et al. 2018).
- “In adults with mild-to-moderate major depression, an 8-week **hatha yoga** intervention resulted in statistically and clinically significant reductions in depression severity” (Prathikanti et al. 2017).
- “The results of this integrative review suggest that clinicians may consider recommending nonpharmacologic treatment options, such as gentle physical activity and **yoga-based interventions** , for PR-LBPP [pregnancy-related low back and pelvic pain] and related symptoms” (Kinser et al. 2017).
- “Evidence suggests that combined physical and psychological treatments, **medical yoga** , information and education programmes, spinal manipulation and acupuncture are likely to be cost-effective options for low back pain” (Andronis et al. 2017).
- “Among adults with chronic low back pain, treatment with mindfulness-based stress reduction [training in mindfulness meditation and **yoga**] or cognitive behavioral therapy, compared with

usual care, resulted in greater improvement in back pain and functional limitations at 26 weeks, with no significant differences in outcomes between MBSR [mindfulness-based stress reduction] and CBT [cognitive behavioral therapy]. These findings suggest that mindfulness-based stress reduction may be an effective treatment option for patients with chronic low back pain" (Cherkin et al. 2016).

- "With few exceptions, previous studies and the recent randomized control trials indicate that **yoga** can reduce pain and disability, can be practiced safely, and is well received by participants. Some studies also indicate that yoga may improve psychological symptoms, but these effects are currently not as well established" (Chang et al. 2016).
- "Within 12 weeks, **yoga practice** reduced pain and state anxiety but did not alter MRI-proven changes in the intervertebral discs and in the vertebrae" (Telles et al. 2016).
- **Yoga** can improve upper-extremity function in individuals with hyper kyphosis, a spine deformity that causes a forward-curved posture of the upper back (Wang et al. 2012) and decreased adult onset kyphosis in seniors (Greendale et al. 2009).
- "Six weeks of uninterrupted **medical yoga therapy** is a cost effective early intervention for non-specific low back pain, when treatment recommendations are adhered to" (Aboagye et al. 2015).
- "Poor physical health at baseline is associated with greater improvement from **yoga** in back-related function and pain. Race, income, and body mass index do not affect the potential for a person with low back pain to experience benefits from yoga" (Stein et al. 2014).
- "These results suggest that **Iyengar yoga** provides better improvement in pain reduction and improvement in health-related quality of life in nonspecific chronic back pain than general exercise" (Nambi et al. 2014).
- "**Yoga therapy** can be safe and beneficial for patients with nonspecific low back pain or sciatica, accompanied by disc extrusions and bulges" (Monro et al. 2015).

Hopefully this helped you see the extent yoga has on improving lives and bodies. There is an impressive amount of research being conducted

that validates the benefits yoga has on the body, especially for preventing injuries.

6

Commonly Asked Questions about the Spine and Lower Back

The following questions have been commonly asked during my yoga workshops, teacher trainings, and classes. Of course, more detailed answers and instructions are explained during my specialized workshops, but this section provides brief answers to some frequently asked questions.

How can one prevent lower back pain from reoccurring?

To prevent lower back pain from recurring, one must consider the following: body mechanics and functions in daily life—how you sit, pick up heavy objects, and stand, or even the shoes you are wearing. Your yoga practice must minimize and avoid going too deeply into poses that cause extreme flexion, extension, and rotation of the spine. Preventative measures can be taken by stabilizing the core, approaching difficult poses in a logical sequence, and properly transitioning in and out of poses.

Which muscles can be stretched to release lower back pain?

Lengthening the lower back in supine positions can help. Gentle forward bends, hip openers, and standing poses done properly can also stretch the lower back. Also, try stretching the quadratus lumborum (QL) and psoas and other muscles that trigger lumbar pain. Traction techniques, such as rope wall hanging and assisted adjusting, may also be used.

Which yoga poses help to strengthen lower back?

Core stabilization and back extension poses, such as the Salabhasana (Locust Pose) and Setu Bandha (Bridge Pose), generally strengthen the lower back. In more traditional exercises, this also includes alternate arm and leg extensions in quadruped or prone, and light abdominal bracing in a variety of positions. Remember, the core is generally considered the muscles of the trunk (front *and* back) as well as the sides of the waist (obliques).

Which yoga poses should be avoided when lower back pain is present?

First, your back pain should be diagnosed by a healthcare professional, because certain injuries and conditions require the avoidance of certain movements. Having said that, all extreme movements such as flexion, extension, and rotation should be avoided until you are diagnosed and the pain has subsided.

I would like a simple short sequence to practice every morning to strengthen my back.

Developing a home practice is a great habit to establish for strengthening your back. Allotting the time you need each day to do what's necessary will allow you to have a better day. I personally start each day with seated meditation. If you were to sit with the correct alignment on a *zafu* (cushion), your back will be straight and get stronger in that position. If you have time after meditation, perhaps you could practice a few half salutes, Ardha Uttanasana (Standing Half Forward Bend), alternate arm/leg extensions, Bhujangasana (Cobra Pose), and Adho Mukha Svanasana (Downward-Facing Dog). Please keep in mind that if bending over early in the day is a challenge, try practicing a few gentle poses lying on the floor on your back.

Which yoga postures should I modify so as not to aggravate degeneration of my lower back discs?

I recommend modifying twists, extreme flexion, and extension. However, working with a professional will help you fine tune even more.

What can you do to prevent back pain when you have to sit at a computer 8 to 10 hours a day?

First, you must stand up and walk around every so often. One guideline is the get up every 30 minutes and be active for at least 30 seconds (the 30/30 rule). Yes, that is a lot of standing breaks, but your back will appreciate it. I would also recommend some yoga postures during those breaks, such as sun salutes, standing poses, and simple inversions (such as Adho Mukha Svanasana) if possible. During your lunch hour, walk around the building or block. If you work from home, take a walk in your neighborhood during your lunch break. Also look at Section 9 of this book for more information.

I was diagnosed with osteoporosis. Are yoga poses helpful in building bone strength?

Yes, weight-bearing yoga poses will help build bone strength. Consider adding poses such as planks, alternate arm/leg extensions, and standing poses. Avoid inversions and balancing postures where you may fall out of the poses. Use support (a wall or chair) if you do decide to practice these poses.

How do I know the cause of my back pain (and sciatica) is due to degenerative disc disease, piriformis muscle, or sacroiliac joint disfunction? Are there different exercises to address each one?

This is best addressed by your healthcare provider. And yes, there are different exercises and treatments to address each type of problem. Once the problems are addressed in therapy, then you may resume a modified yoga practice and later resume your prior yoga program gradually.

What postures should I avoid for degenerative disc disease, sciatic pain, and sacroiliac joint dysfunction? What postures help?

It is import to realize that each of these terms has a different definition and describes a different condition. It is best to be diagnosed and initially work with a healthcare provider, since each situation requires a different approach. They can recommend appropriate movements that can be adapted into practice by a qualified teacher.

I have three herniated discs and have constant lower back pain and numbness in my feet. What should I do?

Start by immediately seeing your healthcare professional. Once you are medically cleared, work with a yoga practitioner who will ease you back into your yoga practice by modifying poses and design a personalized corrective program for your needs.

I have been told that I have tight psoas muscles. Is that connected to lower back pain, and can yoga help?

Yes, a tight psoas muscle may cause back pain. Tight psoas muscles tend to cause a tilting of the pelvis, thus potentially straining the lower back. Your yoga practitioner can show you poses to stretch your psoas. If your symptoms do not go away with the stretching, then go see a healthcare professional.

I have constant lower back pain in the sacrum after my car accident. What should I do?

Start by immediately seeing your healthcare professional. Once you are medically cleared, work with a yoga practitioner who will ease you back into your yoga practice by modifying poses and design a personalized corrective program for your needs.

How do I prevent long-term problems with my lower back with age?

7

Concepts of General Back Pain

In this section, I will discuss lower back pain in the context of practicing yoga. What movements and poses are risky and what should you do to minimize these risks? I will take this opportunity to deconstruct a few examples of advanced asanas, which are demonstrated by yoga teachers.

General Spine and Lower Back Pain

Overview

As I mentioned previously, I ask at the beginning of each class if students have any injuries. I have been teaching for approximately 18 years and there rarely has been a class where a student hasn't raised their hand and mentioned that they have an injury. In regards to lower back pain, they commonly mention a muscle sprain, herniated disc, spinal stenosis, sciatica, or scoliosis. When I was new yoga teacher, I didn't know exactly what to say, but I would usually suggest that they use caution when bending over by slightly bending their knees, and just be careful as they practice. **I've come to learn that all sources of back pain are not the same and that some students, based on their condition, may need additional advice before they continue to practice yoga.** However, during a class I do have to make some decisions. For example, if a student says they have a disc herniation, a suggestion might be to use caution when twisting and bending.

Since there are many causes of back pain, I will highlight those injuries or conditions that may be evident among the general population in your class. I would say the most common source of back pain I see in yoga practice is muscle strain from **poor posture and body mechanics.** Building awareness

about posture with yoga practice and functional body mechanics will help to alleviate some general back pain.

General Recommendations

First and foremost, good posture is the key to establishing ease in the body and potentially living pain free. We can start with **Tadasana** (Mountain Pose) alignment—head above the spine, collarbones wide, and shoulders back (Figure 7-1). Just standing up straight can take some strain off the neck and back. B. K. S. Iyengar states that Tadasana is the foundation and it is "essential to master the art of standing correctly" (Iyengar, 1979). He underscores the relevance of this yoga asana by positioning it as the first pose in his book *Light on Yoga* . As yoga practitioners, we know that the alignment principles of Tadasana are applicable in many asanas, whether we are lying down, standing, or inverted. Tadasana is also a good pose to apply to observations of postural assessment. Figure 7-2 illustrates postural tendencies that may lead to lower back pain. For further information, consult the book by Kendall et al. (2005). Do you notice any postural imbalances when looking at your student or client? Do you feel them yourself, when standing at attention? Additionally, you should also be aware of the different sections of the spine since we refer to them in the remaining sections (Figure 7-3).

Figure 7-1 *Carl in Tadasana, the blueprint for standing in correct alignment*

Similarily, Dandasana (Staff Pose) is the foundation for seated postures. The natural curves must still be observed when sitting on the floor. However, physical limitations that weren't apparent when standing in Tadasana may be noticed when having to sit on the floor or in a chair. For example, the hamstrings may be tight, and placing the pelvis in a posterior tilt, which flattens the lumbar curve or moves it into a "kyphotic curve," can strain the lower back. Props and adjustments may be necessary. Nevertheless, we should also remember to consider these alignment principles in our daily lives off the mat, in the way we walk and stand, so that we minimize the pain and strain caused by misalignment.

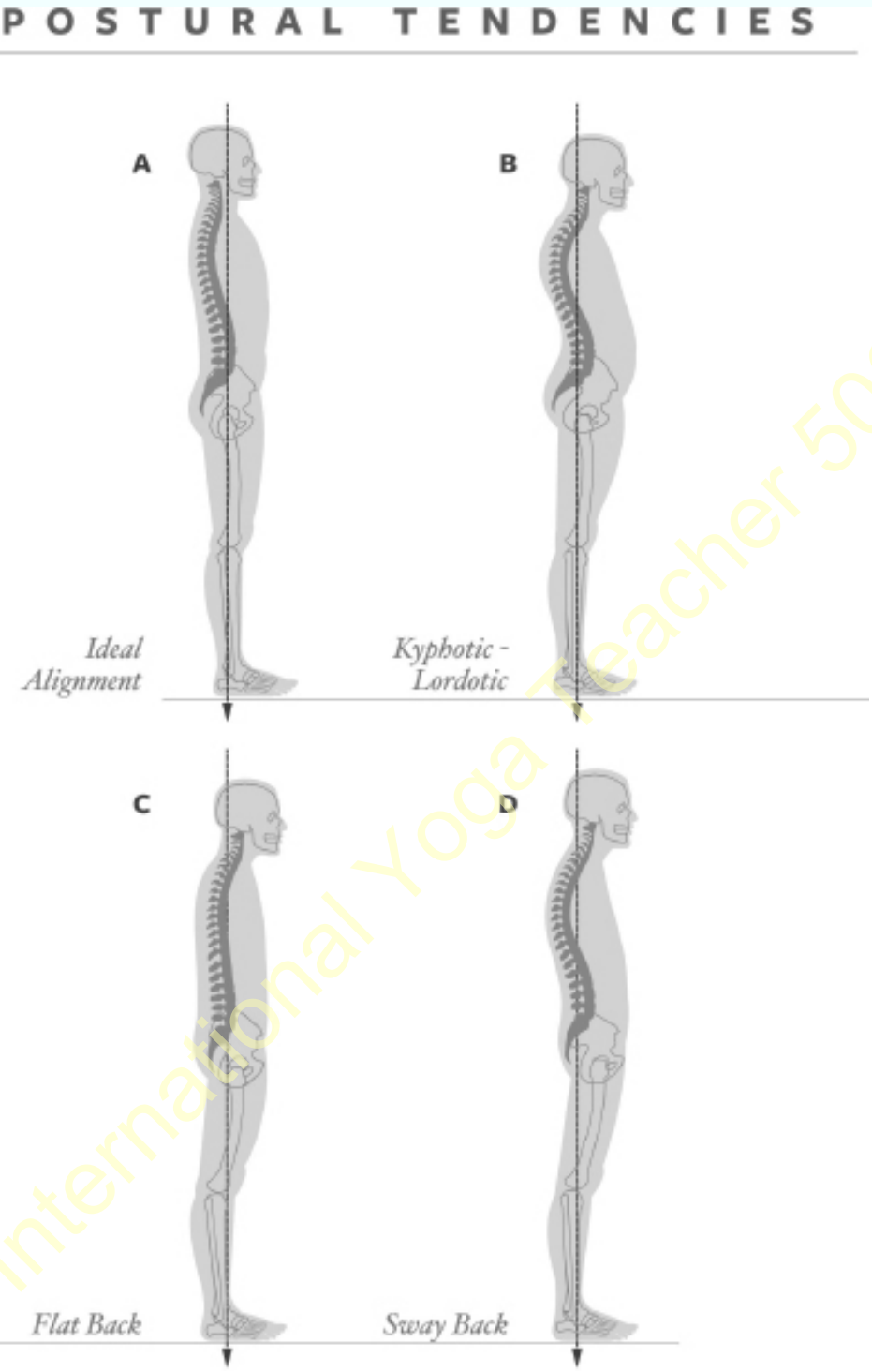


Figure 7-2 *Postural Tendencies (Graphic designed by Lee Wolfort, WDesign)*

What are the natural curves of the spine?

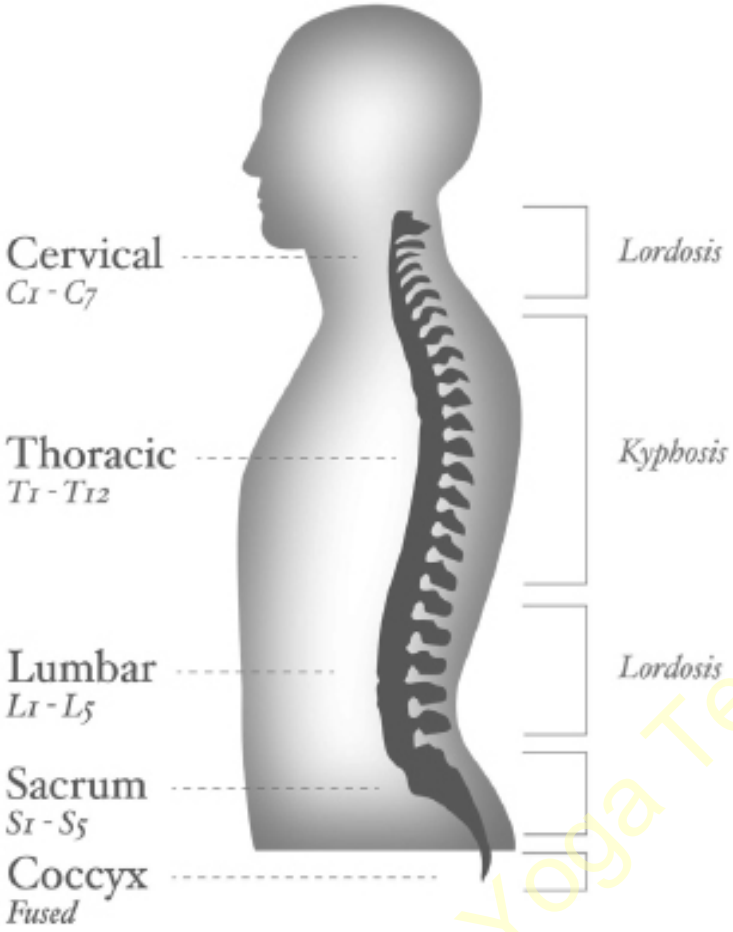


Figure 7-3 *Divisions of the Spine (Graphic designed by Lee Wolfort, WDesign)*

Melissa is able to sit correctly on the floor and maintain the natural curves of the spine (Figure 7-4).

Figure 7-4 *Dandasana*

However, in the first image of Orlando (Figure 7-5), we can observe that his lower back is rounding in a posterior tilt, quite possibly straining the muscles in the lower back. Therefore, a modification is recommended. In the next image, he is sitting on the edge of a folded blanket with a slight bend the knees.

Figure 7-5 *Posterior tilt and modification*

In Figure 7-6 , we see Brenda sitting incorrectly in the figure on the left. On the right, she is applying the principles of Dandasana sitting in a chair, maintaining the natural curves of the spine.

Figure 7-6 *Principles of Dandasana sitting in a chair*

A review article by Crow et al. (2015) states that yoga is an “effective treatment against nonspecific spinal pain. Recent studies have shown the positive outcome of yoga in general on reducing pain and functional disability of the spine.” The article goes onto say that “a carefully adapted set of yoga poses can help reduce pain and improve function (the ability to walk and move).” This study focused on the benefits of Iyengar yoga and lists asanas that help to alleviate back pain.

TABLE 7.1 Asanas Recommended for Back Pain [a]

Asanas	Comments and Recommendations
• Tadasana (Mountain Pose and various/arm shoulder positions) • Ardha Uttanasana (Half forward bend to wall or ledge) • Balasana (Child’s Pose) • Adho Mukho Svanasana (Downward-Facing Dog Pose) • Utthita Trikonasana (Extended Triangle Pose) • Virabhadrasana II (Warrior Pose II) • Utthita Parsvakonasana (Extended Side Angle Pose) • Prasarita Padottanasana (Wide-Legged Forward Bend) • Setu Bhanda Dandasana • Supta Padangusthasana (Reclining Big Toe) and variations • Apanasana (Knee to Chest Pose) • Supta Savasana (Lying Supine Corpse Pose)	The yoga postures listed have been identified as common specific asanas designated to reduce spinal pain (back and neck) consistently mentioned in various studies. All the trials in the Crowe study had somewhat different sequences, postures, variations of cer postures, and corresponding props. If you notice, the asanas emphasize neutral spinal alignment and don’t mo the spine into extreme rotation, extension, or flexion. A person would still experience the physical benefits o yoga in a program composed of these postures.

The poses on this list (Table 7.1) may be a good starting point to help teachers and practitioners begin to build a program. Another advantage of this sequence is that it includes many of the foundation poses that are essential to evolving in your practice. An experienced yoga teacher would be able to modify and build a logical sequence that is appropriate and safe for the individual client or a group class.

Another significant study by Patil et al. (2015) concluded that 26 yoga practices (including *pranayama* and meditation techniques) were the basis for a comprehensive program for chronic lower back pain (Table 7.2). This

list of asanas differs from the previous study and includes twists and relaxation techniques. However, some of these asanas, like Parivrtta Trikonasana or Matsyendrasana, can be modified.

TABLE 7.2 Asanas Recommended for Lower Back Pain [a]

Sequences	Comments and Recommendations
Asanas • Supine Twist • Crossed Leg Lumbar Stretch • Apanasana (Knee to Chest Pose) • Dynamic Setu Bhanda (Bridge Pose) • Marjaryasana/Bitilasana (Cat/Cow Pose) • Bhujangasana (Cobra Pose) • Salabhasana (Locust Pose) • Balasana (Child's Pose) • Uttanapadasana (Straight Leg Pose) • Ardha Kati Chakrasana Variation (Lateral Arc Pose) • ¼ or ½ Sun Salutes • Parivrtta Trikonasana (Revolved Triangle Pose) • Ustrasana (Camel Pose) • Marichyasana C (Marichi's Pose C) • Matsyendrasana (Lord of the Fishes Pose) • Viparita Karani (Legs-Up-the-Wall Pose)	When practicing Marjaryasana/Bitilasana (Cat/Cow), make sure you emphasize movement the thoracic (upper spine) instead of t lumbar (lower back). In Balasana (Child's Pose), the arms be extended or placed in a relaxed position by the ankles. Uttanapadasana (Straight Leg Pose) i similar to Urdhva Prasarita Padasana- hold the legs up and lower 30 degree making sure the lower back doesn't strain or flatten. I am replacing Ardha Kati Chakrasan with a variation that is shown in the asana guide. Ardha Kati Chakrasana can be replac by ¼ or ½ salutes. Parivrtta Trikonasana can be modifie using a wider stance, or placing the hands on a chair. Ustrasana can be modified and will b further discussed in this section.
Quick Relaxation Techniques • Recommend supported Savasana with blankets or on bolster. Breathe deeply	To experience the benefits of deep relaxation, poses such as, Savasana should be held for a minimum of five minutes and up to ten minutes.

Deep Relaxation Techniques • Lie in Savasana and instruct deep breathing, guided meditation with imagery, mantra, or *koshas* • Yoga nidra **Pranayama** • Diaphragmatic Breathing • Viloma (Interrupted Breathing) • Nadi Shodhana (Alternate Nostril Breathing) • *Dharana* /*dhyana* (Meditation) **Meditation** • Chanting • Om Dhyana (Om Mediation)	

[a] *See glossary of asanas in the back of book for guidance.*

Adapted from Patil NJ, Nagarathna R, Tekur P, et al. (2015). Designing, validation, and feasibility of integrated yoga therapy module for chronic low back pain. *International Journal of Yoga* 8 (2): 103–108.

Although this sequence includes asanas that address more complex postures and methods than those highlighted in the previous list, it also underscores the significance of the subtle body: various relaxation techniques, *shatkarma* (yogic practices involving purification of the body), meditation, and *pranayama* (practice of controlling the breath). Nevertheless, both lists provide you with a nice range of options and the potential for variety in sequencing. I will provide my adaptation of the elements of these two studies in Section 11.

Case Study

General Back Pain, Bonnie

I'm fifty-eight years old and a preschool teacher. I lift up children, jump up and down during circle time, crawl on my knees, and squat at their level when I talk to them. I also lift 40 lb. boxes of supplies daily. I use my back a lot. My lower back (lumbar) area is in discomfort and pain frequently. I find that if I do yoga consistently at least two days a week I'm okay.

Recently, Romy helped me discover that if I practice Supta Padangusthasana first as my warm up before class starts, it balances and stabilizes my hips, stretches out my very tight calves, and opens up my hips. If I do this exercise first, I find when I do my first Downward-Facing Dog, I don't have to bend my knees from lower back pain. By the end of class, my back feels looser and stretched out and my calves are stretched as well.

If I don't do yoga, I start to feel uncomfortable all over, especially in my lower back while driving and at work. Compared with my much younger thirty-year-old parents of my students, I'm much more flexible and can run and keep up with my preschoolers. As I've gotten older, I feel yoga is essential to my well-being and daily body maintenance in order to feel no lower back pain and remain functional. I've started to practice Supta Padangusthasana at home when I start my day just to maintain daily comfort in my lower back. It's been a lifesaver.

I've noticed, over the two years since I've practiced yoga, a continual increase in overall strength and the ability to do more than ever. I'm more aware of what daily activities aggravate my back and left hip and have been able to make modifications to my daily routine that helps overall. I'm more in tune with my body and emotions and how life affects me more than ever. Yoga has helped me to rebuild my body and take charge of my own maintenance, all for the better. While many of my high school buddies are on anti-depressants, on high blood pressure medicine, have forgetfulness, and have pre-diabetes and weight problems, I'm on no medications and use yoga, walking, and a healthy diet to avoid all these diseases. I'm healthier and happier and pain-free most of the time due to yoga.

Practice Tips by Romy

Supta Padangusthasana I, II, III. Place both feet on the floor with the knees bent. Place a strap on the right foot. Straighten the right leg up toward the ceiling and pause. If your hamstrings are tight, slightly bend the knee and keep the left knee bent as well. If your hamstrings are flexible, straighten both legs. Hold and breathe for five breaths. Each inhale and exhale cycle is equal to one breath.

The heel and calf of the left leg that is extended along the floor should firmly press against the floor. To avoid hyperextension of the knee, slightly bend the left leg and engage the top of the thigh by firming the quadriceps muscle. Release the inner thigh down toward the floor. Try not to shrug up around the shoulders (Figure 7-7a).

Next, place both ends of the strap in the right hand. Lower the right leg and let it rest on a rolled-up blanket (Figure 7-7b). You should try your best

to keep the pelvis and the entire left side of your body balanced. Press the left shoulder, left side of the torso, and left side of the pelvis firmly toward the floor. Imagine that the left hamstring can touch the floor. Pause and hold for a few breaths.

Now, bring the leg back up and place both ends of the strap in the left hand. Slowly lower the right leg slightly diagonal across your body (Figure 7-7c). Push through the heel to lengthen the leg. Turn and look toward your right shoulder. Press the back of the right shoulder toward the floor. Pause here as you reach the foot and hand in the opposite direction. You can go further in the twist if you wish. Slowly release and rest the right leg on the floor. Pause and notice the sensations in your body before repeating the sequence on the left side. Some people feel as if the right leg is slightly longer than the left. What do you feel?

These asanas (Supta Padangusthasana I, II, III) are highlighted in the case study on Bonnie. This simple sequence can be practiced at home or in a studio. I often open my class with variations of Supta Padangusthasana, depending on what the theme for the class will be. I sometimes use this sequence as a counter pose after a backbend-focused class to help neutralize the spine and release any lingering aches and pains in the lower back. This sequence primarily addresses tight hamstrings and is safe for most. The knees can be bent and the twist can be avoided. Simply work with Supta Pandangusthasana I.

Figure 7-7 *Supta Padangusthasana*

KEY MOVEMENTS OF THE SPINE

In this section, we will explore key movements of the spine in the context of yoga asanas. It is important to be fully aware of reasonable movement in various regions of the body instead of what we may perceive. Table 7.3 shows the standard range of motion in degrees for the spinal movements.

TABLE 7.3 Range of Motion Values [a]

	CERVICAL	THORACIC	LUMBAR
FLEXION	45–50°	30–40°	45–55°
EXTENSION	75–80°	15–20°	15–25°
LATERAL FLEXION	35–40°	25–30°	20°
ROTATION	65–75°	25–35°	5–7°

[a] *Measured in degrees*

Adapted from Neuman DA. (2017). *Kinesiology of the Musculoskeletal System: Foundations for Rehabilitation.* 3rd ed. St. Louis, MO, Elsevier.

As you see from the chart (Table 7.3), certain regions of the spine have more range of motion than others. It is not wise to practice pushing range of motion (ROM) in certain asanas. However, as Eden Goldman states in his chapter *Yoga Therapy and the Spine* , "In Yoga, people frequently cultivate a level of flexibility that is so advanced that the chart may not be relevant for a long-time Yoga practitioner." He also includes in this essay a chart that features slightly higher degrees for movement in each area of the spine (Payne et al, 2015) compared to Table 7.3 . In general, the lumbar spine is more susceptible to injury due to its vulnerability from lack of bony protection. The bones of the ribcage attach to the thoracic vertebrae, therefore minimizing flexion and extension movements, but with more possibility of rotation.

I often say to my students and trainees that backbends are not initiated from the lower back, but we must *lengthen* the lower back instead. Emphasis is therefore placed on arching from the thoracic region of the spine, which has limited possibility for extension. The lumbar spine has the potential for lots of movement in flexion, but you should be careful in pushing the limits. The cervical spine is susceptible as well. There is greater mobility where the

curves of the spine change direction (C7–T1, T12–L1, L5–S1). Movement back and forth at these vulnerable joints can cause injury, especially when we transition in and out of poses.

Below are examples of asanas that illustrate these movements from simple to advanced (Table 7.4).

TABLE 7.4 Examples of Asanas in Categories of Spinal Movement

Flexion	Rotation
Pascimottanasana (Seated Forward Fold) Janu Sirsasana (Head-to-Knee Pose) Upavistha Konasana (Wide-Angle Seated Forward Fold) 	Marichyasana, A, B, C, D (Marichi's Pose) Matsyendrasana (Lord of the Fishes) Parivrtta Parsvakonasana (Twisted Extended Side Angle Pose) Parivrtta Utkatasana (Twisted Chair Pose) Parivrtta Trikonasana (Revolved Triangle Pose) 
Extension	**Neutral Spine**
Salabhasana (Locust Pose) Bhujangasana (Cobra Pose) Dhanurasana (Bow Pose) Ustrasana (Camel Pose) Urdhva Dhanurasana (Wheel, or Upward Facing Bow Pose)	Tadasana (Mountain Pose) Vrksasana (Tree Pose) Utthita Hasta Padangusthasana (Extended Hand-to-Big-Toe Pose) Sirsasana [a] (Headstand)

[a] *Use caution if you have neck or shoulder pain.*

A Word about Transitions

In my opinion, many injuries occur in yoga when people move unconsciously in and out of positions. It only takes a moment to tweak a ligament or strain a muscle, when bending forward, twisting, jumping into a pose, or pushing up into a pose. Therefore, in addition to the foundation of each pose—how your hands and feet are placed on the surface—transitioning in and out of asanas needs to be done in a conscious and focused manner. For example, when moving into a forward bend such as Paschimottanasana, you must first be aware of the foundation of the pose. How are you sitting? Do you need a blanket? Do you need to bend your knees? Then as you go into the pose, lengthen the lumbar, hinge at the hips, and extend the chest toward the toes, not rounding from the lumbar. When coming out of the pose, follow a similar sequence of movements. Inhale and lengthen the spine, leading the chest to rise up.

Another example would be for prone back extension poses. For this example, Bhujangasana, you start with the foundation again, hands placed next the ribcage, legs reaching back, firming the thighs, toes pressing into the floor. To lift up, initiate the movement from the thoracic, not the cervical (head) or lumbar (Figure 7-8a). This also applies to standing poses, backbends, and inversions. I've seen many people round their backs coming up out of a standing forward bend—Sun Salutations, Uttanasana, Prasarita Padottanasana. In this case, when coming up from standing forward bends, hands should extend to the side or be placed on the hips. Rising up from forward bends with the arms reaching forward places a lot of strain on the lower back.

Figure 7-8a *Carol is demonstrating the correct placement of the hands and arms for Bhujangasana. She is initiating moving into this pose from the thoracic area of the spine and not the cervical or lumbar. Also notice that she is maintaining a neutral cervical spine.*

As you can see from the few examples that I provided (Figure 7-8b), transitions are key to help prevent injuries. There are general rules for transitioning in the categories of spinal movement. They will be highlighted throughout the text as needed. Instructing how to move in and out of a pose safely and effectively is also a quality of good teaching.

Uttanasana (Standing Forward Fold)

Ardha Uttanasana (Standing Half Forward Bend)

Prasarita Padottanasna A (Wide-Legged Forward Bend)

Parsvotanasana (Intense Side Stretc Pose), hands on hips to transition u

Figure 7-8b *Transitioning in and out of forward bends should also be done correctly. What is the correct way to transition in and out of forward bends without straining the lower back? For example, when coming out of Uttanasana, first inhale and lengthen the spine. The sternum is reaching forward and there is a slight lift in the belly. Your body continues to lift on the inhale. The same applies to Prasarita Padottanasana A, B, C, D. Inhale, lengthen, and then lift up.*

Back Extension: Is it Good or Bad for You?

Figure 7-9 *Melissa in Urdhva Mukha Svanasana (Upward-Facing Dog). Notice that the pelvis is lifted off the floor.*

Can back extensions cause harm, or are they good for you? I've heard that many people say it causes harm. And yes, if done incorrectly, poses such as Bhujangasana (Cobra Pose) and Urdhva Mukha Svanasana (Upward-Facing Dog, Figure 7-9) do have the potential to cause harm to the lower back, especially for certain conditions such as spinal stenosis or facet joint degeneration. In back extension asanas, whether they be gentle or advanced poses, you are closing the vertebral foramen, which may not be appropriate with a condition such as stenosis. Also, in general, if the practitioner doesn't lift the inner thighs and engage the leg and abdominal muscles, there is a risk of compression of the lower back. This is true for extreme back-bending poses like Urdhva Dhanurasana (Wheel Pose) or Dhanurasana (Bow Pose). The emphasis should be on working from the upper spine and creating length in the lumbar spine, as well correct alignment and actions of the hands, arms, legs, and feet. One shouldn't be afraid of backbends. The benefits can't be ignored—they are energizing and help the spine to stay flexible and correct the effects of bad posture. There are many options to

practicing backbends from gentle to advanced, prone or supine, in categories that strengthen or traction.

Practice tips for Bhujangasana (Figure 7-10): Lie on your stomach and place your hands by the sides of ribcage, palms pressing against the floor. Make sure your elbows line up over the wrist. Press down through the width of the palms and fingers. Reach through the legs and press the toes into the floor. The knees will lift up away from the floor as you engage the legs. Inhale, press down through the hands, and lift the front of the shoulders. Exhale, lightly lifting the chest. Keep the neck neutral with the spine. The lifting movement is initiated from the upper back. Exhale and release. Repeat again, this time emphasizing lifting the head off the shoulders, widening the collarbones, and drawing the tips of the shoulder blades toward each other. I always instruct my students to feel as if they're lifting up instead of pushing aggressively off the floor, which tends to cause people to shrug the shoulders. By practicing lifting with breath, you strengthen the back muscles (rhomboids, erector spinae, and latissimus dorsi).

a.

b.

Figure 7-10 *In the first image (Figure 7-10a), Lee is practicing Cobra Pose (Bhujangasana) incorrectly by pushing off the floor, shrugging the shoulders, and quite possibly compressing the lower back. In the second image (Figure 7-10b), she has lowered the torso and is working on using her back muscles (spinal extensors—erector spinae), retracting her shoulder blades to lift the shoulders, and engaging the abdominal muscles and firming the legs. Performing Cobra Pose (Bhujangasana) in this way would minimize compression to the lumber spine.*

Focus on an Asana: Ustrasana

Figure 7-11 *Melissa in Ustrasana, a backend with many options for variations and modifications. Melissa is practicing the pose correctly with length in the lumbar region, pelvis over the knees. Ultimately, we have to consider each individual's anatomical and biomechanical limitations. Getting to the full variation of the pose should not be the goal. If practicing, you should ask yourself,* How far should I go? *Stop when you feel pain.*

We will analyze ways of practicing a somewhat challenging backbend like Ustrasana (Camel Pose, Figure 7-11 to Figure 7-13). Although there are many options for accessibility, there is a tendency to compress the lower back, because it's difficult to maintain a neutral pelvis (front hip bones lifting up and lumbar/sacrum releasing down). Most people will move into the pose in an anterior pelvic tilt because the hip flexors and rectus femoris may be tight (Krentzman, 2016). However, keep in mind that you must carefully prepare for this pose in a sequence that would have addressed the hip flexors and prepared the spine for this backbend.

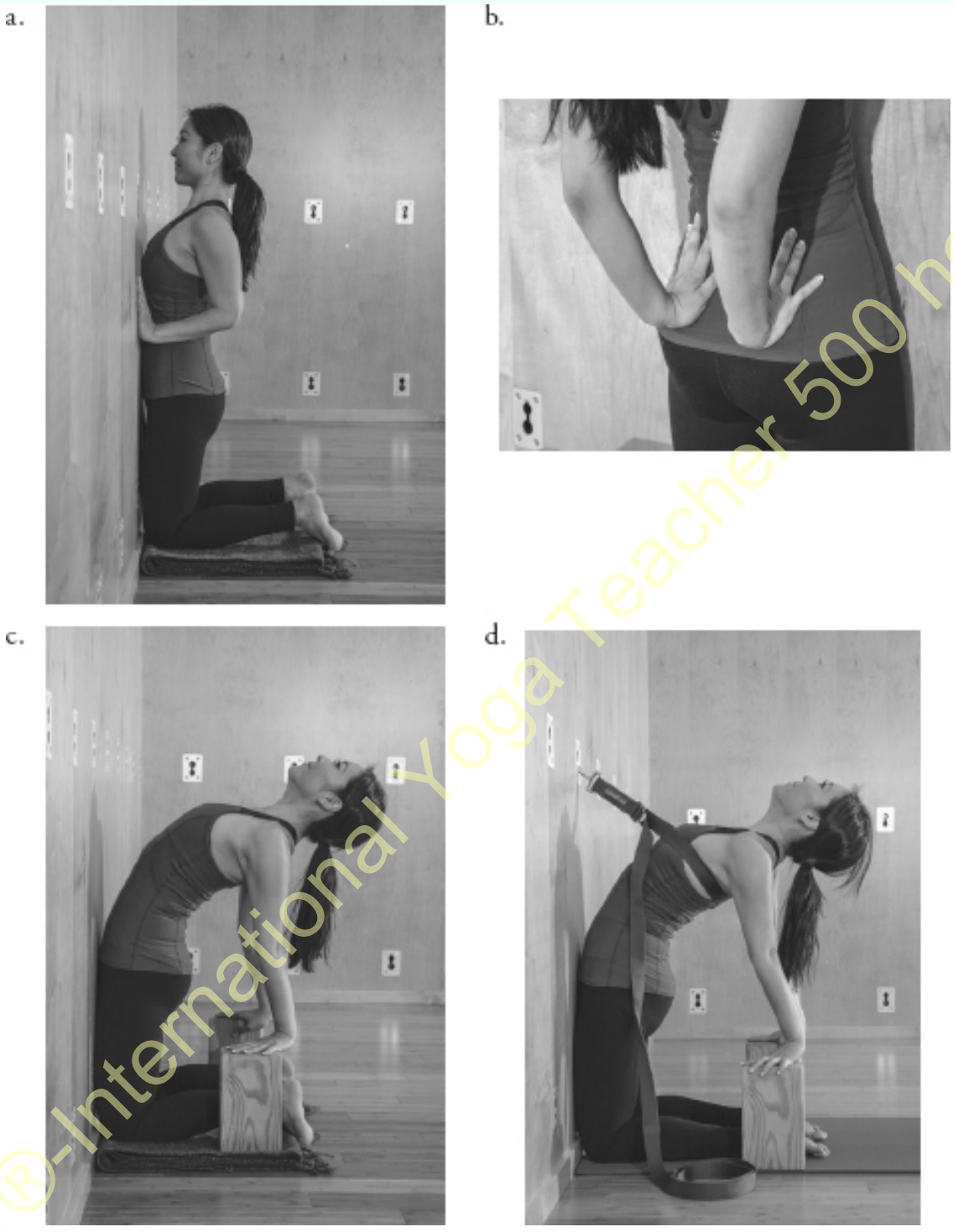


Figure 7-12 *In these images, I illustrate various approaches to working through phases of Ustrasana.*

a) Use the wall for a foundation to align the pelvis and provide protection for the lower back.
b) Next, place the hands on the sacrum and emphasize lengthening the lumbar spine as you continue to press the pelvis against the wall.
c) Finally, if you are able to go deeper, place the hands on blocks and continue to press the thighs against the wall and breathe into the chest.

d) Another option would be to use the rope wall. Place a strap around the thoracic spine and keep the pelvis pressed against the wall. Hands can rest on blocks. A supportive lift will help minimize the tendency to compress the lower back.

Variations away from the wall

a.

b.

c.

d.

Figure 7-13 *There are many variations of Ustrasana that can be practiced away from the wall and that minimize compression to the lumbar spine.*

a) Hands on sacrum, releasing the tailbone down toward the knees. The pelvis and thighs continue to press forward. Imagine you are pressing against the wall although in the middle of the room.
b & c) Lift one arm up while keeping the other hand on the sacrum.
d) Place hands on blocks or a bolster. Remember when coming out of Ustrasana to press down through the shins and keep the pelvis aligned over the knees; lead with the chest to come up.

Now we look at another backbend—Urdhva Dhanurasana—which many people practice incorrectly for any number of reasons. Figure 7-14 shows Brenda performing the correct alignment, lengthening the lumbar, hip flexors, with correct placement of the feet and legs as well as adequate flexion of the shoulders. There are many variations and modifications with the use of props, which I will not discuss in this book. Figure 7-15a shows the model with his feet turned out, which causes compression in the lower back. In Figure 7-15b the model shows Setu Bandha (Bridge Pose), a safe alternative with the use of a block to help build awareness of alignment of the feet. Figure 7-16 shows a chair backbend, which is typically taught in Iyengar classes and is useful for teaching students key concepts of backbends, such as where to bend from and how to engage the legs.

Figure 7-14 *Brenda in Urdhva Dhanurasana with a nice, even arching of the back. The hip flexors and shoulders must be opened to practice backbends correctly.*

a. b.

Figure 7-15 *Many people turn out their feet when practicing Urdhva Dhanurasana, which has a tendency to compress the lower back. Make sure to keep the feet parallel and the legs neutrally rotated. It is helpful to place a block between the feet or inner thighs, or even strap around the thighs. Setu Bandha is a good preparation for Urdhva Dhanurasana; master key actions in this pose before progressing into Urdhva Dhanurasana (* Figure 7-15b *).*

Figure 7-16 *Chair Backbend (Dwi Pada Viparita Dandasana)*

Next are variations of prone Savasana and Setu Bandha, which are still considered back extensions but are much more accessible to different levels of practitioners (Figure 7-17).

Figure 7-17 *Prone Savasana and Setu Bandha*

Flexion: How Far Should You Go?

Most forward bends performed either sitting or standing have the potential to injure the lower back due certain factors, such as tight hamstrings. Use caution with Paschimottanasana (Seated Forward Bend, Figure 7-18) and Uttanasana (Standing Forward Bend, Figure 7-19), where the tendency is to over-reach in an attempt to get the hands on the floor or place the chest on the thighs. Muscle strains or an irritation of a pre-existing disc herniation may occur from repeatedly working these poses without proper form and transitions. Remember that in forward bends we want to lengthen the spine and not bend from the lumbar region. Your upper back is really extended when you go into forward bends. There are also many variations and modifications to make forward bends accessible. Forward bends have a calming and grounding effect on the nervous system.

Orlando has tight hamstrings, and forward bends (flexion) can be risky. In this variation of Upavista Konasana, he can engage the legs and lift up from the lumbar spine.

The same would apply Paschimottanasna. This would be safer variation to practice.

On the other hand, Melissa is very flexible and can reach beyond her toes in Paschimottanasana and yet lengthen her spine.

If she backs off a bit, notice how can still lengthen the lumbar spine engage the muscular action in the leg

I've taught this variation for those with extremely tight hamstrings or as a gentle and effective way to release the lower back after a backbend practice.

Allow the belly to rest on the thighs maintain length in the lumbar spine.

Figure 7-18 *Variations and modifications for practicing seated forward bends*

Figure 7-19 *The same principles of modification apply in standing forward bends. For example, for Uttanasana, the hands can be placed on the shins, blocks, or a chair.*

Rotation: Where Do You Twist From?

When we mention twists in yoga, many people who don't practice think that they will somehow have to get themselves into pretzel positions. I will admit that there are twists for more advanced practitioners (Figure 7-20). However, these advanced twists are the foundation for many simpler versions of twists. We do twists and bends in yoga for a well-balanced sequence that in turn may allow better function in daily life. The intervertebral discs allow movement between each vertebrae and that movement lubricates the discs. Discs are gently squeezed like a sponge with rotational and bending movements. Gravity and the aging process cause the discs to shrink. However, the lumbar and cervical regions of the spine are at risk with twisting type movements. It is essential that you focus on what you're doing when twisting. Remember, lengthen the spine first, and then rotate gently from the thoracic spine (Figure 7-21). Avoid initiating the movement from the neck and the lumbar spine. Quite often, I'll see students twisting from the neck or lumbar spine, which may lead to neck or lower back pain. The primary muscles that rotate the torso are the obliques, but the leverage from limbs, props, and use of the breath help to deepen the twist.

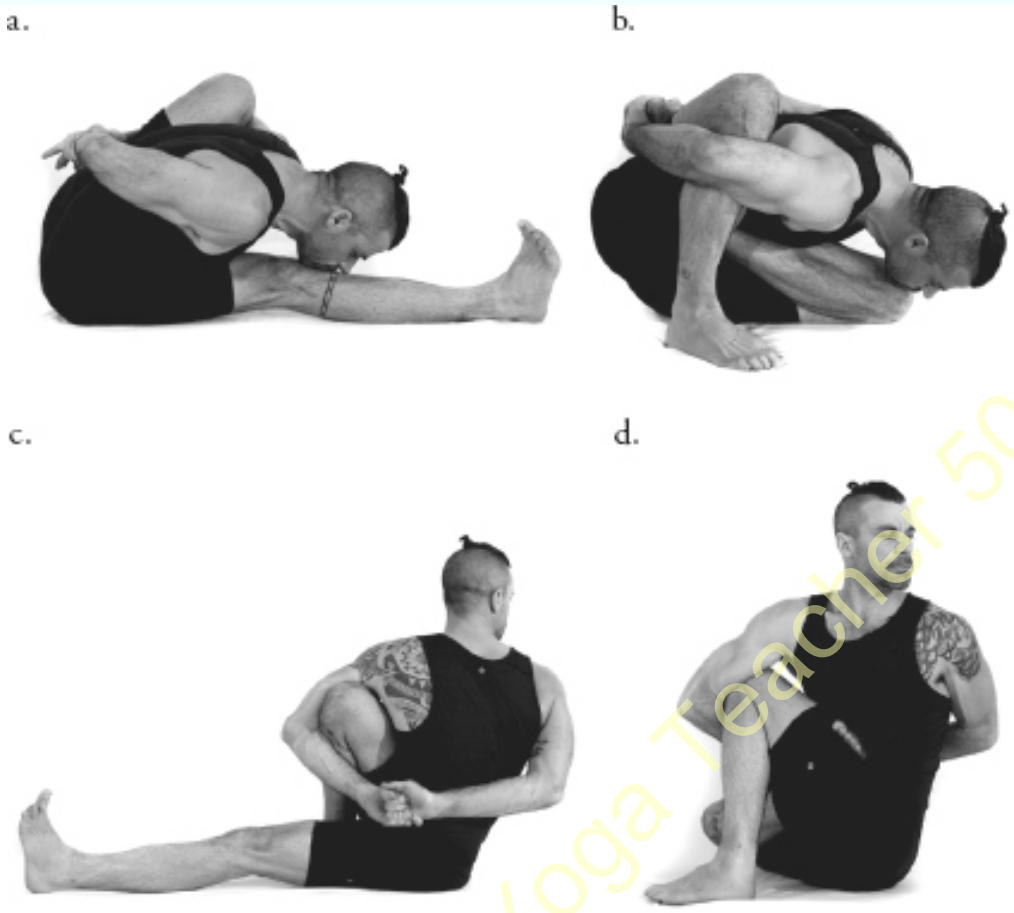


Figure 7-20 *Sean is demonstrating Marichyasana, A, B, C, D, a series of advanced twists that includes wrapping the arms, and for B & D, one leg, in Padmasana. These four classical Hatha yoga twists provide numerous options for variations and modifications.*

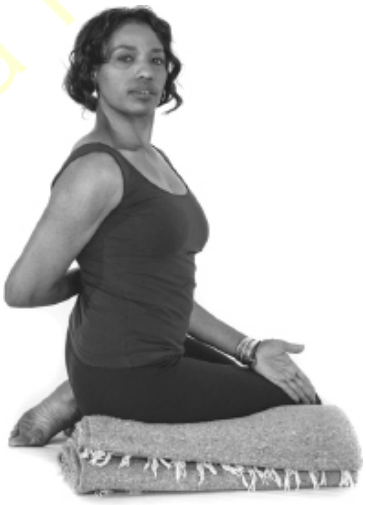
Where do we start? The next images (Figure 7-21) depict how we can make something advanced more accessible. The complex twists shown in Figure 7-20 demonstrate rotations, wraps, and binds that many people can't do. But if we focus on some elements, we can create many other options. Even standing up using a chair is another option (Figure 7-22).

We can start with a chair twist. Then Marichyasana 0 (open twist ou

Bharadvajasana, twisting out with blanket for support

Bharadvajasana variation with the a wrapped

Marichyasana C variation, elbow hooked outside of thigh



Matsyendrasana, moving toward a deeper twist

Figure 7-21 *Seated Twists. Avoid tilting in twists. Sitting on a blanket is advisable. Notice how Lee is lifting up in the twist on the right (b). Initiate twists from the thoracic and turn from the lumbar, which has more movement and a higher potential for risks.*

Figure 7-22 *Use the wall and practice a twist. The foot is on a chair and heel on a block. Hands are placed on the wall. There is length before rotation.*

Core Stabilization

Lower back pain may be caused by weak abdominal muscles. Many yoga asanas require the strength and stabilization of the trunk muscles to balance and move; for that reason, they're great for core stabilization. There are specific asanas that are ideal to practice isolating the trunk muscles. Most people think of the core as only composed of the abdominal muscles, namely, the rectus abdominus. However, to truly address the core, we are focusing on the deeper muscles in the trunk, including the back (erector spinae, multifidi, paraspinals, quadratos lumborum, gluteus medius) and sides of the waist (transverse abdominus, internal and external obliques) and other synergistic muscles (iliopsoas, pelvic floor). All of these muscles work synergistically to create a "girdle effect."

Posterior pelvic tilts help you to engage core muscles and are useful for conditions such as spinal stenosis (Figure 7-23b).

a.

Figure 7-23a *Anterior Pelvic tilts, arching.*

b.

Figure 7-23b *Posterior pelvic tilt, flattening*

Figure 7-24 *Alternate arm/leg balance*

Alternate arm/leg balance is an excellent core stabilizing exercise (Figure 7-24). I often teach this in Level 1 and Level 1/2 classes to build awareness of balance through using the trunk muscles.

Practice Tip by Romy: An example of teaching alternate arm/leg extension is as follows: Start on the hands and knees. Shoulders line up over the wrists. Make sure you spread the weight evenly through the palms. Extend the right leg behind you, flexing the foot at the ankle. The left arm is extended, the inner palm facing inward. Lift the inner right thigh toward the ceiling and keep the pelvis neutral by rolling the outer hip down. Lift the belly and front ribs. Avoid flattening the lumbar spine, but maintain the natural curves of the lumbar spine.

Salabhasana (Locust Pose) variations are excellent for isolating the back muscles (extensors). This example in Figure 7-25 is very similar to the alternate arm/leg extension in Figure 7-24 . This may be more suitable for someone who finds it difficult to put weight on the wrists and hands. Because the body is resting on the floor, the work of the extensor muscles will be intensified. However, be careful when lifting both arms and legs off the floor simultaneously (Figure 25b) because it may cause compression and therefore irritate the lower back or spine.

a.

b.

Figure 7-25 *Salabhasana (Locust Pose)*

Navasana (Boat Pose) is a challenging but effective asana to strengthen the lower back, abdominals, and hip flexors (Figure 7-26). Make sure to maintain the natural curve of the lumbar spine. Variations of the pose can make this possible, such as bending the knees or holding on to the back of the legs.

a. b.

Figure 7-26 *Navasana (Boat Pose)*

Suggested Asanas for Supine Core Stabilization

I generally teach core stabilization in almost every class—either prone, supine, or side body. Many supine core-stabilizing exercises and asanas prepare my students for balancing poses and inversions (Figure 7-27a –f). They are also great counter poses to release the lower back toward the end of

the class. I wouldn't necessarily teach all of these in one class but select one or two to instruct when appropriate. Many of the poses illustrated below address the deeper abdominal layers (transverse abdominus, internal and external obliques, erectus abdominus). These muscles, when weak, can cause injury to the spine (Figure 7-28).

a. Eka Pada Uttanpadasana (Alternate Leg Lifts)

b. Uttanapadasana or Urdhva Prasar Padasana (Legs up and hold)

c. block between inner thighs

d. block between thighs, curl up

e. Curl up and reach arms forward

f. Stomach Churning Pose (Jathara Parivartanasana)

g. Stomach Churning Pose (Jathara Parivatanasana, legs hovering above the floor)

h.

Figure 7-27 *Eka Pada Uttanpadasana (Alternate Leg Lifts)*

Lie on your back. Bring your knees to your chest (Apanasana). Lift the legs up toward the ceiling. Slowly lower the right leg above the floor. Keep reaching through the heel. Straighten the left leg up toward the ceiling. Keep the shoulders pressing down and avoid letting the upper back lift off the floor. Breathe smoothly as you hold the legs in this position for a few breaths. Change sides and repeat several times—right and left. If the lower back is sensitive, bend the knees, you can also hold on to the shin.

Figure 7-27a *Place your hands down by your sides and lift both legs up. Firm the thighs and reach through the balls of the feet. Slowly lower one leg down toward the floor and let it hover. Maintain the neutral spine throughout. Change legs.*

Figure 7-27b *Lift both legs up and hold for a few breaths. Focusing on reaching through the heels, firming the thighs, and hugging the outer hips in. The sacrum and shoulders should press firmly against the floor, the front ribs releasing down. You are not trying to flatten the curves of the lumbar spine. Inhale, lower the legs about 30 degrees, hold, then lower another 30 degrees and hold, finally letting the legs hover above the floor. Either bend the knees toward the chest to come back to minimize straining the back or lift the legs up. Repeat several times. This pose engages and isolates the transverse abdominus.*

Figure 7-27c–e *Variations with block between the thighs to further engage the transverse abdominus. Hands can be placed lightly behind the head, arms can reach forward, or from side to side.*

Figure 7-27f–h *Jathara Parivartanasana (Stomach Churning Pose) Lie on your back and bend both knees. Align the shins with the knees (imagine the shins being a shelf). Turn the legs from the abdomen (the movement is initiated from the abdomen). Keep the back of the shoulders firmly pressing against*

the floor. You can also practice with straight legs. Remember not to let the shoulders lose connection with the floor.

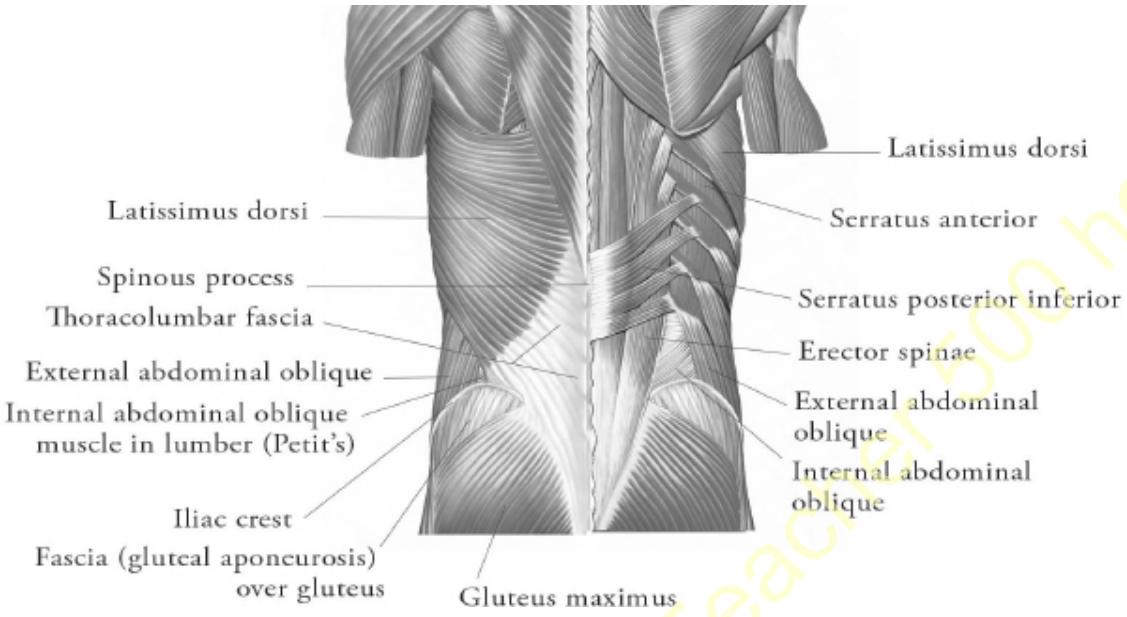


Figure 7-28 *Trunk muscles, abdominals, and obliques*

The Hip Flexors: Is It Really a Tight Psoas?

In addition to weak abdominal muscles, a tight iliopsoas can also cause back strain because it tends move the pelvis into an excessive anterior tilt. This anteriorly tilted position may compress the lower back and cause pain. Gently stretching the hip flexors (which include the iliopsoas, psoas major, psoas minor, iliacus and quadriceps, vastus lateralis, rectus femoris, vastus medialis, Figure 7-31) will help ease back pain in some cases (Figure 29). So, it may not just be the psoas but your quadriceps as well. We must consider other muscles in the hip that, when tight, can be a cause of lower back pain (adductors, abductors) (Kretzman 2016). There are few key yoga asanas that isolate and lengthen the hip flexors as outlined in the following images (Figure 7-30).

Figure 7-29 *Anjaneyasana Variation (Crescent Lunge)*

Virabhadrasana I (Warrior I)

Natarajasana (Lord of the Dance Pos

Virasana (Hero Pose)

Supta Virasana (Reclined Hero Pos

Setu Bandha (Bridge Pose)

Figure 7-30 *Key yoga asanas that isolate and lengthen the hip flexors*

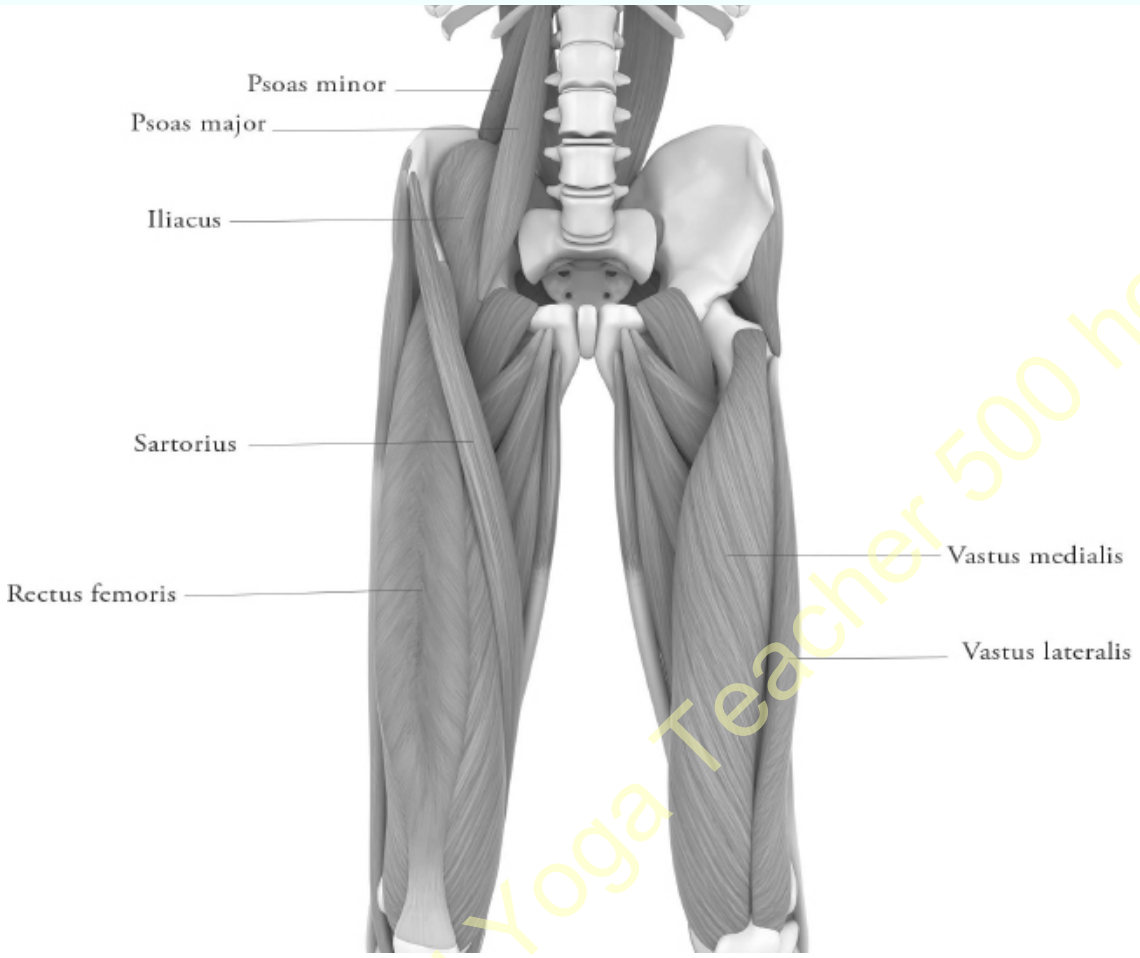


Figure 7-31 *Hip flexors*

Traction: Reversing the Effects of Gravity

It is possible to use adjustments and props to lengthen the spine. Assisted adjustments and the rope wall are excellent ways of traction (Figure 7-32). We are creating more space between the vertebrae, lengthening contracted muscles and reinforcing concepts of alignment. The effects of lengthening make traction ideal for conditions such as scoliosis, spinal stenosis, and possibility for general lower back pain and disc herniation. The rope wall is unique to the Iyengar system of teaching and it is best if you work under the supervision of a certified teacher.

Practice Tips for Supta Padangusthasana with Traction

You will need two straps. Lie flat on your back and position both feet against the wall. The first strap is tied into a loop and placed on the crease of the left thigh at the hip. The other end of the loop is placed on the ball of the right foot (Figure 7-32c , d, e). Press the ball of the foot against the strap firmly to hold it in place. The left leg is lifted up and the other strap is placed on the ball of the left foot. Hold on to the ends of the straps with your hands. If you have someone to assist you, have them adjust the strap wrapped around the top of the left leg so that it feels firm. You are adjusting the “traction” by these two actions, the strap gently pulling at the top of the thigh (the femur bone) and the right foot pressing against the wall. You should or may experience lengthening (traction) on the left side of the body.

Place both ends of the strap in the left hand and then lower the left leg toward the floor. Make sure the pelvis stays neutral (you are not tilting to the right or left). Continue to press the ball of the right foot against the wall. The belt may need to be readjusted to gently pull the femur bone away from the torso.

Place both ends of the strap in the right hand and begin to twist the left leg toward the right side of the body. Make sure you relax the grip of the right foot against the wall, so that you minimize the risk of torqueing the knee. Feel free to let the left hip come off the floor. Lift the left leg up and lower to the floor. Place the strap on the crease of the right thigh and repeat the entire sequence with the right leg.

Figure 7-32 *The poses illustrated above are variations of Adho Mukha Svanasana (Downward-Facing Dog, a–b), Supta Padangusthasana (Reclining Hand-to-Big-Toe Pose, c–e), Baddha Konasana*

(Bound Angle Pose, f) utilizing traction. Baddha Konasana at the rope wall is excellent for traction and very helpful for creating symmetry in scoliosis.

And Finally: Counter Poses

I would like to close this section with a brief comment on "counter posing." When sequencing, make sure that you have created a balance of spinal movements. For example, if you taught or practice a fair number of backbends, neutralize the spine with forward bends and twists at the end of your sequence. If you've done a lot of forward bends, do backbends. Twists are ultimate neutralizers. Savasana (Corpse Pose), especially supported, is also helpful. A well-rounded sequence will help you and your students feel great after leaving class. Remember a well-rounded sequence includes sun salutes, standing poses, forward bends, backbends, twists, inversions, and Savasana.

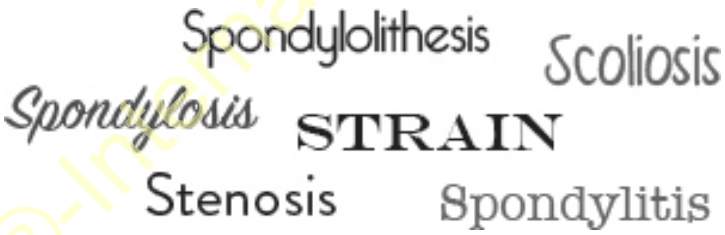
> Practice becomes firmly grounded when well attended to
> for a long time, without break and and in all earnestness.
>
> —Yoga Sutra 1.14

8

Common Injuries and Conditions

The ideal yoga class should take into account an individual's medical history, injuries, surgeries, and prior level of experience in order to create an optimal and individualized progression. In a large class setting, this is not always possible, but it is a goal to strive for as a teacher. Yoga was intended to be a personal experience for the user. In this section, I try to show modifications for common back ailments. However, this is only an introduction. Throughout this book, I have intentionally not mentioned pregnancy and back pain since this is a very specialized topic. I recommend that you work with a certified prenatal yoga teacher.

What is the difference between … ?



This list underscores the significance of understanding the basic definitions for a variety of terms as they relate to back pain. Although seemingly similar in meaning, no two definitions are the same and there are different approaches to practicing safely for each condition. In this section, I will provide a simple definition of these conditions and the yoga asanas that apply.

As a guide, I have provided some tables with recommended poses and those you should use caution with. Very few things are absolutes. Every person has different needs and variable tolerances to activity and movement. This includes yoga poses and yoga practice. My suggestions are to serve as guidelines and not as absolutes. Remember, if you or your student has a high level of irritability (such as pain or difficulty moving), yoga may not be appropriate at this time. However, if you or your student has a low level of irritability in the back, you will be able to do a wider variety of poses. The ideal way to determine which yoga poses are the best for you is to take specialized classes and work with a certified yoga instructor to help refine your practice.

Poses that are highlighted in the tables throughout this book will be helpful to use in sequencing for certain conditions. In addition, short practices will be given for certain conditions that have proven to be effective based on positive feedback from private clients as well as students in classes and workshops.

For all of the following conditions, suggested movements, and postures, you should follow these guidelines when practicing:

- Focus on pain-free movements.
- Work from the simple and basic poses and then progress to the more complex poses over a period of time.
- Utilize props such as blocks, blankets, or a chair to provide support to the spine.

MUSCLE TIGHTNESS

Definition: "Shortness; denotes a slight to moderate decrease in muscle length; movement in the direction of lengthening the muscle is limited" (Kendall et al. 2005).

Suggestions:

1. Improve your postural habits. For example, minimize crossing one leg over the other for prolonged periods since this habit can tighten certain muscles while overstretching others. Slouching will also tend to tighten muscles in front of the body (such as the chest muscles).
2. Stress tends to tighten muscles. Therefore, practicing meditation, *pranayama,* and restoratives is recommended.
3. Maintain a regular yoga practice. Doing a consistent yoga practice will keep you limber and loose in daily life.

4. Some yoga students may complain of pain or tightness across their lumbar and upper back region. So which muscles are tight? In general, the following muscles could be tight: the quadratus lumborum, thoracolumbar fascia, rhomboids, trapezius (upper, middle, and lower), and levator scapulae.
5. Try poses such as those outlined in Figure 8-1 .

Quadratus Lumborum	
Lateral stretching poses with the heel against the wall, such as Utthita Parsvakonasana. 	Seated postures that externally rotate hip and release the lower side back, s as Janu Sirsasana. 
Thoracolumbar fascia	
Balasana, also place a blanket under the hips. 	Lateral stretching poses, such as Parighasana and Utthita Parsvakonasa 
Rhomboids	
Garudasana arms and slightly bend forward.	Seated twists, such as Marichyasana

Levator Scapulae
Forward bends and twists with wraps, such as Marichyasana A and Bharadvajasana

Figure 8-1 *Examples of asanas for muscle tightness*

LUMBAR STRAIN

Definition: "Trauma to muscles and tendons [a tendon is "fibrous connective tissue serving for the attachment of muscles to bones and other parts"] from violent contraction or excessive or forcible stretch" (Venes 2017).

Suggestions:

1. Avoid extreme flexion, extension, or rotation. If the muscle strain is mild to moderate, you may be able to practice some gentle poses. However, if the muscle strain is severe, you may have to take time off from your practice for a short period to allow the tissues to heal. Even with a severe muscle strain, you will most likely be able to practice meditation and *pranayama* .

2. Ease into standing or seated forward bends, perhaps with slightly bent knees, paying careful attention to lumbar spine alignment.
3. Try supine poses that keep the spine neutral and focus on relaxing muscle tension and pain. For mild to moderate muscle strains, you could try Supported Savasana (Corpse Pose) with legs draped over a bolster or blanket, or Supta Padanguthasana (Reclining Hand-to-Big-Toe Pose) against the wall with a strap (Figure 8-2).

Supine Poses	
Supported Savasana (Corpse Pose with bolster under the knes)	Eka Pada Apanasana (Knee to Che Pose)
	
Seated and supine poses	
Pascimottanasana (modified) (Seated Forward Fold)	Supta Padangusthusana (Reclining Hand-to-Big-Toe Pose)
	

Figure 8-2 *Examples of different levels of asana for a lumbar strain*

LUMBAR SPRAIN

Definition: " Trauma to ligaments that causes pain and disability, depending on the degree of injury to the ligaments." A grade 1 sprain is stretching of the ligaments (a ligament is a "strong fibrous connective tissue connecting the articular ends of bones") but without tearing; a grade 2 sprain is

stretching of the ligaments with incomplete tearing; and a grade 3 sprain is complete tearing or rupture of the ligament (Venes 2017).

Suggestions:

1. Avoid extreme positions spinal positions, which may cause overstretching of ligaments. Please keep in mind that sprained ligaments (depending on the severity, such as mild, moderate, or severe) may take a long time to heal. For this reason, you may want to back off an intense yoga practice until you have healed.
2. For moderate to severe sprains, I recommend a gentle practice such as meditation and *pranayama* . Use caution with restorative poses that will cause irritation to the ligaments, such as twists, forward bends, external rotations, and backbends. Supported Savasana variations are safe (Figure 8-3).

Support head and establish neutral cervical spine

Weight the legs (femur bones) with blankets, blocks, or bolster

Legs resting on a bolster

Legs on a chair

Figure 8-3 *Supported Savasana Variations*

SCIATICA

Definition: “A condition in which pain emanating from the lower back is felt along the distribution of the sciatic nerve in the lower extremity” (Venes

2017).

Suggestions:

1. Focus on pain-free spine extension poses if they help minimize pain.
2. Perform spine-stabilization exercises and movements to help strengthen the core muscles.
3. Participate in low-impact aerobic activities, such as walking and aquatic therapy.
4. To determine the exact nature of your pain, I recommend you ask a healthcare professional to help you determine which type of movements such arching your back (Bhujangasana) are ideal for you.

Bhujangasana (Cobra Pose)

Setu Bhanda Dandasana (Bridge Pos

Virabhadrasana I (Warrior One)

Salabhasana (Locust Pose)

Figure 8-4 *Examples of different levels of extension asanas*

Research says …

- A study by Monro et al. (2015) found that "yoga therapy can be safe and beneficial for patients with nonspecific low back pain or sciatica,

accompanied by disc extrusions and bulges."

- A study by Singh et al. concludes that "both groups, one with Snehan with asanas and the second with asanas only showed significant improvement in the patients of sciatica (Gridhrasi)" (Singh et al. 2013). The asanas used in the study were the Bhujangasana (Cobra Pose) and the Salabhasana (Locust Pose).

PIRIFORMIS SYNDROME

Definition: "A condition marked by pain in the hip and buttock that radiates up into the lower back and down the leg" (Venes 2017). Symptoms often mimic those caused by a herniated lumbar disk or sciatica.

Suggestions:

1. "Stretching of the piriformis muscle and strengthening of the abductor and adductor muscles should also be included in patient treatment plans" (Boyajian-O'Neill et al. 2008).
2. If a self-stretching program or yoga sessions do not relieve the symptoms, then it's time to get a checkup from a healthcare professional. The diagnosis of piriformis syndrome is exclusively based on clinical examination (Michel et al. 2013). Remember, if in doubt, get it checked out. Ultimately, you need to determine the root cause of your hip or leg pain. This will help you target the correct area with your stretching and strengthening yoga program and also prevent a reoccurrence.
3. Avoid overstretching the piriformis muscle. If stretching further increases your symptoms or the symptoms do not start to subside in a reasonable amount of time (perhaps up to several weeks), it's time to see a healthcare provider.
4. I recommend you try the following asanas (Figure 8-5): Parivrtta Trikonasana (Revolved Triangle Pose), Supta Padangusthasana (Reclining Hand-to-Big-Toe Pose), Parsva Bakasana (Side Crane Pose), Marichyasana III (Marichi's Pose), Ardha Matsyendrasana (Half Lord of the Fishes Pose), Gomukhasana (Cow Face Pose), and Rajakapotasana (King Pigeon Pose).
5. In addition, Rachel Krentzman, PT, IYT®, in her book *Yoga for a Happy Back* (2016) cites similar postures but includes a few more neutrally rotated poses such as Tadasana, Ardha Parsvottanasana, Ad Mukha Svanasana (AMS) with ropes and assisted stretching, Prasarita

Padottanasana A, Thread the Needle, Supta Gomukhasana, and Savasana.

I will admit that when students came to my class and said they had sciatica, I always assumed it was because of a tight piriformis muscle that was pressing against their sciatic nerve. My immediate recommendation was to teach externally rotated poses and hip openers. But this isn't always the best approach. Sciatica can be caused by a variety of reasons. One must be properly diagnosed to determine the root cause of the pain. Sciatica and piriformis syndrome are two different conditions.

If a student comes to your class and says that they have sciatica, please make sure they have been diagnosed by healthcare professionals who have determined the source of their sciatica (in other words, is it compressed spinal nerves or a tight piriformis?) so that you can instruct them without causing additional harm.

Thread the Needle

Supta Padangusthasana I

Sukhasana Variation

Gomukhasana Variation

Parivrtta Trikonasana

Eka Pada Rajakapotasana

Parivrtta Bakasana

Prasarita Padottanasana A

Figure 8-5 *Examples of asanas that stretch the piriformis muscle*

SACROILIAC JOINT DYSFUNCTION

Definition: A sacroiliac (SI) dysfunction or sacroiliitis is defined as "inflammation of the sacroiliac joint" (Venes 2017). The sacrum is a triangular-shaped bone located between the two ilia and between the fifth lumbar vertebra and coccyx.

Suggestions:

1. To allow the injury site to heal, avoid overstretching the SI joint with forward bends, twists, and seated poses. Initially focus on the meditative aspects of yoga and select gentle, neutral poses such as Savasana. However, keep in mind that if your SI joint is highly irritable, even lying on your back or sides may put pressure on the joints and feel uncomfortable. Therefore, try side-lying poses with a

blanket between the knees or lying on something soft, like a blanket. If that doesn't work, find the best position for relief.

2. "Pain in the SI joint is usually felt in a localized spot much lower than the lumbar spine—in the area of the dimples of the buttocks. It is usually a sharp pain that worsens with certain movements, either spinal flexion or extension" (Krentzman 2016). Physical therapist Rachel Krentzman goes on to say that hormonal fluctuations in women can cause the pain to become worse, such as during the menstrual cycle and pregnancy.
3. Is it an SI instability or irritation that is causing your pain? You won't know for sure unless it's properly diagnosed. If, after a reasonable amount of time, your SI pain does not subside, it is time to seek professional help.
4. Participate in low-impact aerobic activities, such as walking (if tolerated) or aquatic therapy.
5. In many cases, for SI joint dysfunction, focus on strengthening and stabilizing instead of flexibility. For strengthening the SI joint, create stabilization by firming the hips and pelvic region in Tadasana (with or without a block or belt), Vrksasana, Utkatasana (Chair Pose), and also Virabhadrasana II (Warrior II) and Virabhadrasana III (Warrior III) as advanced poses (Figure 8-6). There are also poses using a block and ropes, such as Prasarita Padottanasana A (variation with blocks) and Adho Mukha Svanasana (Downward-Facing Dog) on rope wall, which may help unload the SI joint (Figure 8-7).

Examples of different levels of asanas for strengthening the SI joint region (Figure 8-6):

Tadasana (may also use block between knees)	Tadasana with belt around hips

Vrksasana (Tree Pose)

Utkasana (Chair Pose)

Virabhadrasana II (Warrior Two)

Virabhadrasana III (Warrior Three

Figure 8-6

Examples of asanas that may help unload the SI joint (Figure 8-7):

Prasarita Padottanasana A (variation with blocks)	Adho Mukha Svanasana (Downwar Facing Dog) on rope wall (also try crossing ropes)
	

Figure 8-7

Flexible practitioners may be at risk for SI joint injuries. In the example below, Melissa is forward folding deeply into Upavistha Konasana (Figure 8-8) without engaging the muscles. In the second image (Figure 8-9), Melissa backs off a little and she is working on engaging the muscles and grounding the hamstrings and calves. The inner thighs roll back and the lumbar spine lengthens.

Figure 8-8 *Upavistha Konasana*

Figure 8-9

LUMBAR SPINAL STENOSIS

Definition: "Stenosis [narrowing] of the spinal canal due to degenerative or traumatic changes at the level of the lumbar vertebra" (Venes 2017). Brody et al. (2018) further state that spinal stenosis is "an abnormal narrowing of the spinal canal (central) or intervertebral foramen (lateral or foraminal)."

Suggestions:

1. By seeing a healthcare provider, you will learn how to reduce the lumbar lordosis when standing and walking by using positioning techniques, such as the posterior pelvic tilt.
2. In your yoga practice, try supine posterior pelvic tilts and posterior tilts while practicing other poses, such as Tadasana or Dandasana, to see if this reduces your pain (Figure 8-10b). Remember, back bending (or spine extension) beyond neutral will narrow the spinal canal (see the definition above) and for this reason, it is not advised.
3. For gentle strengthening, try abdominal bracing (or tightening of about 10% maximal effort) with a slight posterior pelvic tilt while moving the arms and legs. Start in supine and progress to quadruped, sitting, and standing positions. Stuart McGill, PhD, in his book *Low Back Disorders* (2016), indicates that, depending on the daily task (such as holding or carrying a load during regular activities), an activation (bracing, tightening, or co-contraction) of 10% of maximum effort may be all that is needed. However, if you are about to lift a very heavy suitcase or a box, higher levels of core muscle activation may be needed.
4. If you do not have osteoporosis, for flexibility and pain relief, try supine single and double knee-to-chest stretches. For strengthening, try supine partial abdominal curls.
5. "Tight muscles that promote lumbar extension (quadriceps, hip flexors, iliopsoas, and erector spinae) will be progressively stretched and muscles that promote and control lumbar flexion will be strengthened (upper and lower abdominals)" (Ammendolia et al. 2016).
6. Participate in aerobic activities, such as stationary or recumbent bicycling or aquatic therapy.
7. As tolerated (and if you don't have osteoporosis), progress gradually into yoga poses as tolerated, such as Eka Pada Apanasana, Apanasana, Ananda Balasana (Happy Baby Pose), Balasana (Child's Pose), and

Adho Mukha Svanasana (Downward-Facing Dog, with variations). All of these poses are gentle forms of flexion (Figure 8-11).

8. Keep in mind that Savasana (Corpse Pose) is always useful for relaxation and meditation.

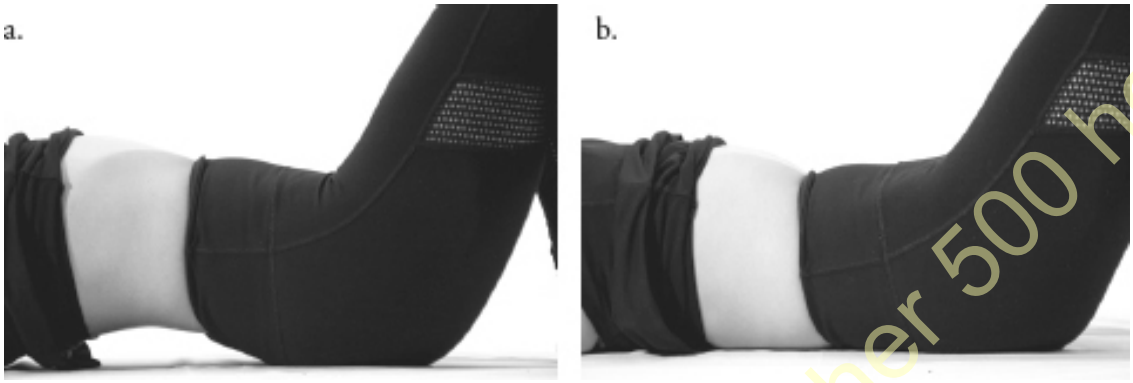


Figure 8-10 *The spine moving from regular curve, arched, to a flat back position on the floor or mat by tensing the abdominal muscles.*

Examples of asanas for spinal stenosis (Figure 8-11):

Eka Pada Apanasana

Apanasana

Balasana (Child's Pose)

Supported Child's Pose

Adho Mukha Svanasana (Downward-Facing Dog) on rope wall

Prasarita Padottanasana A (variatic with blocks)

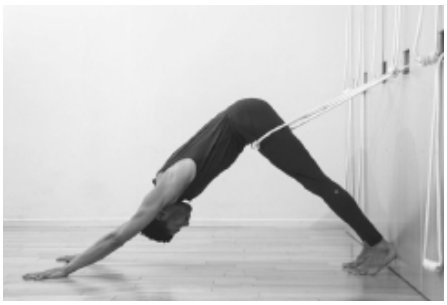


Figure 8-11 *Examples of asanas for spinal stenosis*

HERNIATED DISC

Definition: “ Prolapse [herniation] of the nucleus pulposus of a ruptured intervertebral disc into the spinal canal. This often results in pressure on a spinal nerve, which causes lower back pain that may radiate down the leg” (Venes 2017). See Figure 8-12 for an illustration of a disc herniation.

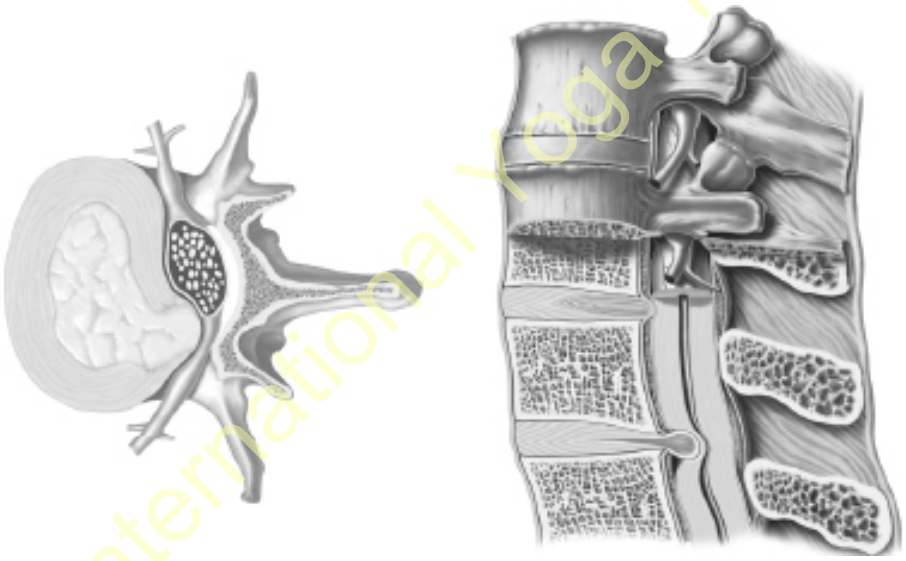


Figure 8-12 *Disc herniation*

Suggestions:

1. Minimize prolonged sitting at work. See the section “Take Care of Your Back” for the “30/30 rule” (after 30 minutes of sitting, try to take at least a 30-second standing-up break).
2. Focus on pain-free spine stabilization and extension poses.
3. Participate in aerobic activities such as walking and aquatic therapy.

4. I’m going to assume that you have already seen a healthcare provider regarding your herniated disc condition and they have provided you information about which movements are best for your spine. Having said that, the following are some poses for you to consider: Savasana (variation) for helping to decompress the spine, Setu Bhanda Dandasana, Bhujangasana, Ardha Chaturanga Dandasana, Sphinx Pose, Tadasana, Virabhadrasana I, Virabhadrasana II, and modified Salabhasana (arm or leg) (Figure 13). I would recommend minimizing poses such as forward bends.

Examples of different levels of asanas for a herniated disc (Figure 8-13):

Savasana variation

Setu Bhanda Dandasana

Bhujangasana (Cobra)

Ardha Chaturanga Dandasana (Plar Pose)

Virabhadrasana I (Warrior One)

Virabhadrasana II (Warrior Two)

Virabhadrasana III (Warrior Three)

Vrksasana (Tree Pose)

Figure 8-13

SPONDYLOLISTHESIS

Definition: Spondylolisthesis is defined "any forward slipping of one vertebra on the one below it" and spondylolysis is defined the "breaking down of a vertebral structure" (Venes 2017). Garet et al (2013) indicate that "repetitive extension and hyperextension, along with rotation, are risk factors for developing and aggravating spondylolysis and spondylolisthesis. The highest levels of stress on the pars interarticularis [part of the vertebra] were found with lumbar extension and rotation."

Suggestions:

1. Try supine posterior pelvic tilts (where you flatten your back with both knees in the bent position) (Figure 8-10b).
2. Try the following poses: Eka Pada Apanasana, Apanasana, Balasana, and Supported Child's Pose. Also, work on poses that train your abdominals. For example, you can practice alternate leg lifts, both legs up, with a block between the thighs. Finally, choose poses that focus more on the neutral spine poses (i.e., neither excessively flexed nor extended) such as Chair Pose (Utkasana) and Vrksasana (Figure 8-14).

Examples of different levels of asanas for spondylolisthesis (Figure 8-14):

Eka Pada Apanasana

Apanasana

Balasana (Child's Pose)

Supported Child's Pose

Legs Up (block between inner thighs)

Curl up and reach arms forward

Chair Pose (Utkasana)

Vrksasana

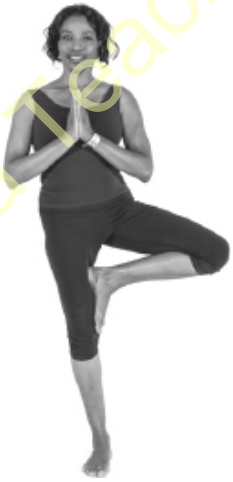


Figure 8-14

Research says …

- A study by Nava-Bringas et al. (2014) concludes that “lumbar stabilization exercises could be an effective treatment option in controlling pain and improving function in patients with degenerative spondylolisthesis.”
- The authors of a study (Nava-Bringas et al. 2014) state that in patients with degenerative spondylolisthesis, “muscle trunk imbalance with predominance of extensor over flexor muscles is associated with functional disability. Rehabilitation programs should be designed to improve muscle balance rather than muscle strength alone.”

- A study by O'Sullivan et al. (1997) concluded that "a 'specific exercise' treatment [training of the deep abdominal muscles, with co-activation of the lumbar multifidus proximal to the pars defects] approach appears more effective than other commonly prescribed conservative treatment programs in patients with chronically symptomatic spondylolysis or spondylolisthesis."

SPONDYLOSIS

Definition: "An ankylosis [immobility of a joint] of the vertebra" (Venes 2017).

Suggestions:

1. I highly recommend that you work with a qualified practitioner to find poses that are gentle and safe for your spine. Having said that, you can always practice meditation using Savasana or other restorative practices (Figure 8-15).
2. As you gain confidence in yoga, you can explore other pain-free poses to expand your practice.
3. Participate in aerobic activities such as walking and aquatic therapy.

Examples of two supported Savasana (Figure 8-15):

Figure 8-15

For the following three sections covering scoliosis, kyphosis, and osteoporosis, I will explore each condition in more detail since these are

areas that may be more common.

SCOLIOSIS

Definition: "A lateral curvature of the spine. It usually consists of two curves, the original abnormal curve and a compensatory curve in the opposite direction" (Venes 2017).

Concepts: Scoliosis may be classified as functional, structural, or idiopathic (Venes 2017). In functional scoliosis, the curve may occur as a result in leg-length difference and corrects when the person bends to the convex side (curving outward). Structural scoliosis is due to vertebral bone deformities and does not correct with a change in posture or position. Finally, idiopathic (undetermined cause) scoliosis is the most common type and is a result of many factors (including heredity). The curvatures in the spine can range in varying degrees, where they cause muscles imbalances, create asymmetry in the body, and sometimes lead to pain and tightness.

Treatment: Brody et al. (2018) indicate in their book, *Therapeutic Exercise: Moving Toward Function* , that individuals with "mild scoliotic curves often do not require treatment, as long as the curve does not progress. Periodic observation is required to make sure the degree of curvature is not increasing. After skeletal maturity has been reached, a curvature (as measured by the Cobb method) of less than 25 degrees to 30 degrees typically does not progress." The authors go on to say that in an individual "with an immature spine, if the curve is between 25 and 40 degrees, there is a high risk of progression." The authors state that these individuals need to be treated with a brace to prevent further progression of the curve.

Suggestions:

1. Focus on curve-specific yoga asanas and/or training. For example, rotations and side bends to the wrong side can further aggravate the condition. For this reason, I highly recommend that you work with a qualified yoga practitioner (perhaps a certified Iyengar instructor) to help determine which movements are best for your spine.
2. Focus on spinal alignment and the awareness of asymmetries to help improve muscle imbalances.
3. Initially, practice poses that encourage traction to lengthen the spine, such as Adho Mukha Svanasana (Downward-Facing Dog) with ropes (Figure 8-19). Later you can practice stabilization asanas, such as

alternate arm/leg extension and Vasisthasana (Side Plank) variations (Figure 8-20).

I have found yoga to be extremely helpful for my own scoliosis (I have a right thoracic and left lumbar curve). Acute pain caused by my spinal curves led me to begin practicing yoga many years ago. The journey has taught me quite a lot about my body and the topic in general. Overall, yoga is great for scoliosis, but you have to know about the degree of your curvature and what would be appropriate for you as an individual. For this reason, I recommend that you work with a medical professional to find the best practice or therapeutic guidelines for you. There are many Hatha yoga instructors, especially those trained in Iyengar yoga, who specialize in scoliosis and understand how to work with individuals. Since the curvatures of scoliosis can range in degrees, no two people are alike and there is no standard sequence that can be recommended. However, general principles can be followed and are listed in the chart below.

Figure 8-18 illustrates possible variations of spinal curves and the muscles that may be impacted by these curves. The shaded areas show hypertonic muscles (tightness or tension). As you can see, the tightening of these deeper and superficial muscles pulls the spine out of alignment to varying degrees and one may experience pain in these areas. The challenge is to ease and minimize pain experienced from scoliosis, try to create symmetry, lengthen tight muscles, and strengthen the weaker ones. Pain from tight muscles can be deep and difficult to access on a sensory level. However, there are many yoga asanas that, if practiced slowly and consciously, can isolate these muscles to help create more symmetry.

I personally practiced Iyengar yoga initially because it places an emphasis on alignment and there are many props that aid in supporting the spine and provide traction. In addition, Iyengar poses tend to be static, and you can hold the poses long enough to build awareness and imprint the mind with “symmetry” when aligned. I later progressed to Ashtanga yoga, which also had benefits, such as the consistent repetition of asanas that deepened self-knowledge and discovery and strengthened my awareness and capabilities in self-practice.

Quite often with scoliosis, one can overcompensate in misalignment, and when put in proper alignment, the person feels “crooked” (Figure 8-17). Figure 8-19 illustrates the various type of scoliosis in the spine. Figure 8-20 illustrates the concept of the convex and concave curve. Typically, for scoliosis, the convex side is weak and, therefore, strengthening exercises should target this side. On the other hand, the concave side is typically tight

and needs to be stretched. The key is to experience what it feels to be “straighter” and adapt new postural habit patterns that will support this. Once you build up strength, awareness, and flexibility, more advanced postures can be approached with caution. Self-practice is the key here, and knowing what works for you no matter what class situation you find yourself in. This is very important.

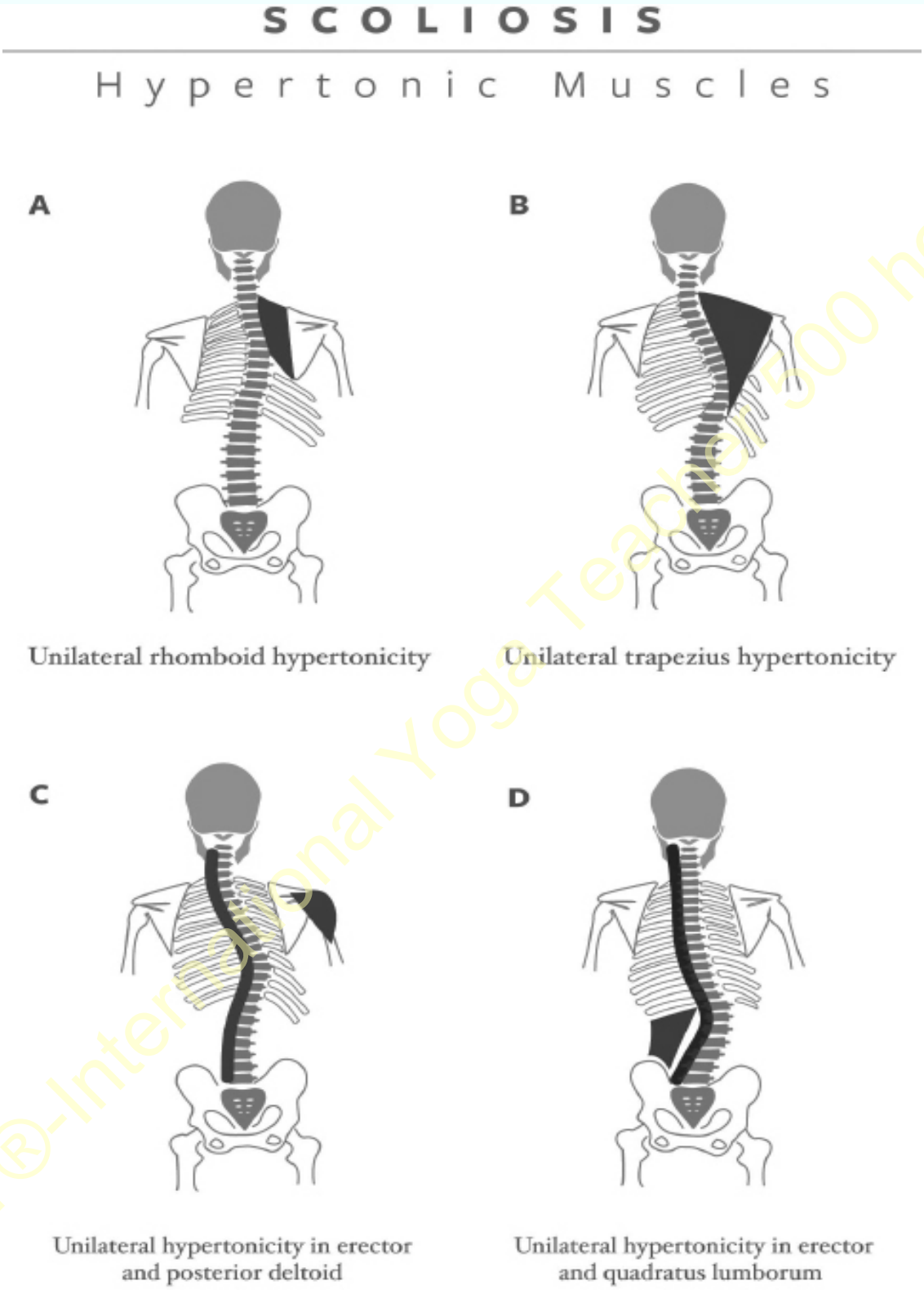


Figure 8-16 *Scoliosis variations representing hypertonic muscles (Graphic designed by Lee Wolfort, WDesign)*

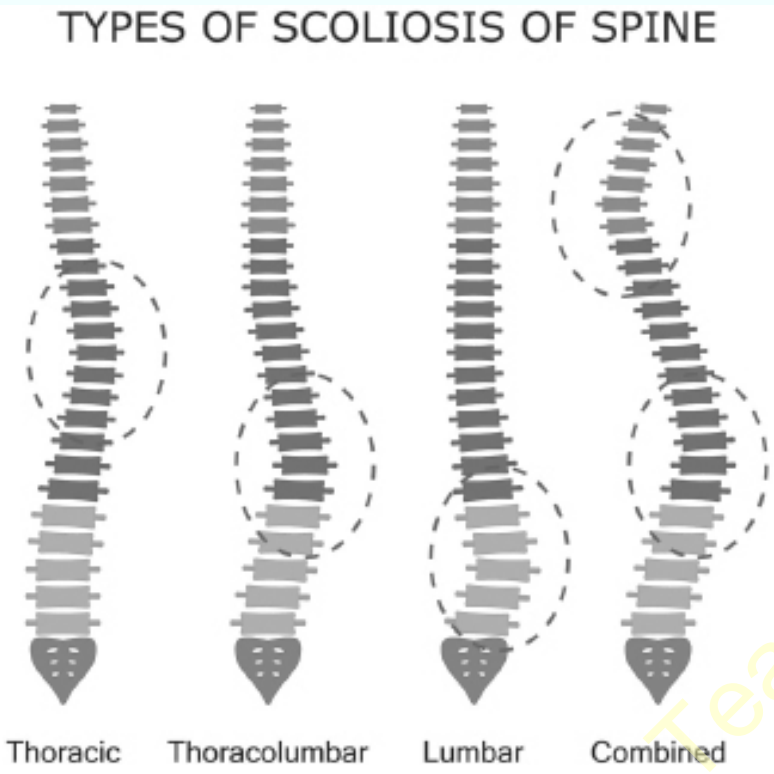


Figure 8-17 *Types of scoliosis of the spine*

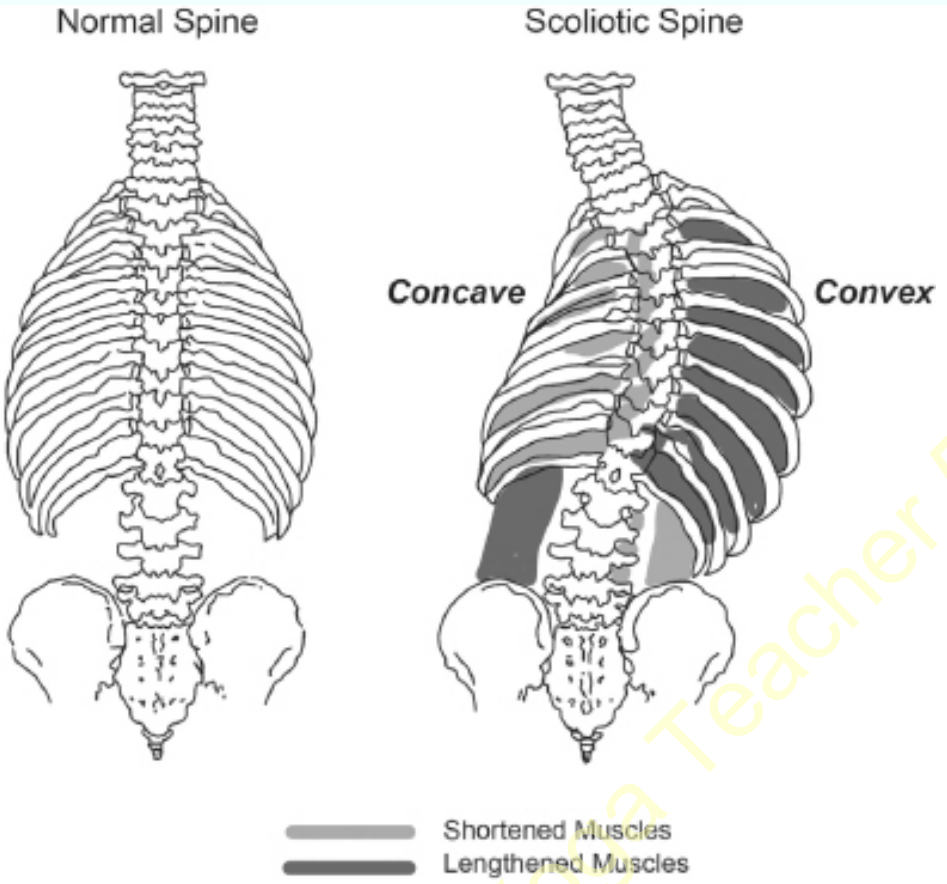


Figure 8-18

Examples of different levels of basic asanas for scoliosis (Figure 8-19):

Tadasana

Adho Mukha Svanasana with rope

Half Dog with assisted adjustments

Balasana (Child's Pose) variations

Virabhadrasana I variations

Trikonasana variations

Standing Twists with chair at wall

Salabhasana

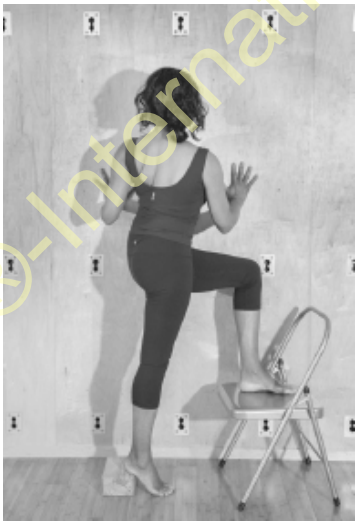


Figure 8-19

Variations of Vasisthasana for Scoliosis (Figure 8-20):

Figure 8-20 Adapted from Fishman et al. (2014). *Vasisthasana (Side Plank Pose). This pose can be modified: back against wall, forearm on floor, hands on block. You can always practice with the knee and hip on the floor.*

Research says …

- "Asymmetrically strengthening the convex [turning outward] side of the primary curve with daily practice of the side plank pose held for as long as possible for an average of 6.8 months significantly reduced the angle of primary scoliotic curves. These results warrant further testing" (Fishman et al. 2014). *(I am not here to debate whether this statement is absolutely correct or incorrect. In my experience and training, I have been taught to do the opposite of what this study states. I am simply citing this as one study. Clearly, more research needs to be done in this area. For this reason, please speak with your healthcare provider to outline the ideal plan for your needs. Also, consider exploring other methods such as the ones I list at the end of this section. When new studies are available, I will post them on my social media sites.)*

Case Study

Scoliosis, Romy

I was first diagnosed with scoliosis as a teen. Back then, it was recommended by a doctor to surgically correct my spine and then brace my body in a cast. Since I was an active teen and studying dance every day, my mother decided against it. The first therapeutic exercises given to me by a doctor at that time were prone back extensions, which I found very painful to do, so I avoided them. Instead, I would stretch on my own. Over the years, the pain the upper thoracic region began to increase. I would go to a chiropractor for adjustments, which only gave temporary relief. After a while, the pain would return. I began to do some research online and found sources that mentioned that yoga could help scoliosis. This was NYC in the '90s and I didn't know of any yoga studios except Integral Yoga in the Village. However, I stumbled across an Iyengar teacher who worked in a Pilates studio, and I felt some relief from the first class.

Once I moved to LA and began attending City Yoga, a newly opened Anusara yoga studio at the time, I embarked upon many years of practicing and studying and learned many concepts unique to practicing with scoliosis. Asymmetry vs. symmetry. How does it feel to be straight? How can you strengthen the weaker concave side (based on my personal experience and training) when you seem to have no sensation there at all? One teacher told me that my body was like a puzzle and I would learn from it. I found a combination of different practices to be effective: Iyengar, Ashtanga, and *pranayama* and meditation. Since I tended to be tight, I liked the dynamic movement and heat built in the Ashtanga

practice. Furthermore, the Ashtanga practice, particularly first series, was a well-rounded practice that addressed every part of my body. Each day I came to the mat, I would be forced to work with challenging physical issues that were a result of my scoliosis: a particularly tight right hip, weakness on the left side of the body, and a somewhat inflexible spine that found backbends challenging. What I did like was the repetition of the practice, right and left, each time. The progress, although subtle, was measurable. Ashtanga, Mysore style, is also a self-practice which helps you to slow down and sense what you're feeling in each pose. Over the years of practicing in this style, I began to heighten my sense of internal visualization—my anatomy and how my body moves and the concept of symmetry. There is an ongoing inner dialogue between you and your body, and in time, your body becomes your teacher. With Iyengar, there is much detailed instruction given and alignment is emphasized. It also includes the use of props, especially the rope wall. I could get in a pose and then be adjusted into what it felt like to be straight. Adjustments in any practice serve as useful tools to build awareness. There were times when I would take two classes a day and then, later, six classes a week. I have discovered so many asanas to be effective for aligning my body, minimizing pain and muscle contractions, and making me feel more confident about my physical abilities.

I soon learned the benefits of *pranayama* and meditation. The effects are very subtle but powerful. I can breathe into the concave side and expand into the dull back area to fill that space and feel gentle traction when sitting in meditation—the tight right side actually lengthens and my stiff hips gradually open. I actually feel, as one of my teachers has often told me, as if I am "unraveling."

After practicing now for approximately twenty years, I realize that I will never be perfectly straight, but I can be more aligned and balanced.

There has been much focus on scoliosis and yoga with many yoga teachers and therapists specializing on the topic. I have found yoga to be extremely helpful in minimizing pain and physical imbalance in my body. I suggest the following sources for further research and inquiry:

KYPHOSIS

Definition: "The normal posterior curvature of the thoracic and sacral spine." However, it is the "excessive curvature of the spine with convexity [curving outward] backward" that healthcare professionals and we as yoga practitioners are most concerned about (Venes 2017).

Concepts: Kyphosis may be caused by poor postural habits, such as sitting with a slumped or flexed spine, or conditions such as osteoporosis (Brody et al. 2018).

Suggestions:

1. Focus on scapular stabilization and back extension poses such as Bhujangasana and arm flexion and abduction poses such as Utthita Hastasana in Tadasana, ¼ salutes, ½ salutes.
2. Focus on opening the chest. See the *Gentle Chest Opener Sequence* outlined in Figures 8-24 through 8-26 .
3. Try deep breathing (*pranayama*) if you have a mid-thoracic compression fracture or progressive kyphosis (abnormal curvature in the thoracic spine). Practice several daily deep breaths while sitting erect in a firm, straight-backed chair (Kaplan 1995). In a seated position, do only one to three deep breaths (like when a doctor places a stethoscope on your back and asks you to breathe in) with 30-second rests between each breath. Wait one minute before getting up; some people may experience dizziness after deep-breathing exercises.
4. Breathing while lying on the back (prop head to create neutral alignment in the neck) encourages the chest to open and shoulders to drop away from the ears.
5. Try *pranayama* basics such diaphragmatic breathing, ujjayi, Viloma. See *Light on Pranayama* by B. K. S. Iyengar for additional guidelines.
6. Practice asanas on hands and knees (such as alternate arm/leg extension) and simple back extensions (such as Sphinx Pose, Salabhasana, Bhujangasana).
7. Try standing poses such as Virabhadrasana I (Warrior One) and Virabhadrasana II (Warrior Two).
8. Strengthen the abdominals, gluteal muscles, and the erector spinae muscles.

9. See Table 8.1 for a recommended sequence for kyphosis that was adapted from the study by Wang et al. (2012).

There are two studies that list asana sequences that were developed and applied for individuals with kyphosis (Greendale et al. 2009; Wang et al. 2012). Both studies showed that hyperkyphosis (excessive thoracic curve) was improved after yoga intervention. Both sources list a progressive series of asanas and *pranayama* that were conducted in the following categories: supine on floor, seated in a chair, seated on floor and prone on the mat, and standing with chair for balance as modified. For further information, please refer to Web Appendix 1 in the study by Greendale et al. (2009) and Table 1 in the study by Wang et al. (2012) for the specific asanas used in the studies.

TABLE 8.1 Highlights of a Sequence for Kyphosis

Part I: Lying on the floor, with knees bent and spine and head supported	
Asanas	**Instructions for Practice**
Setu Bandha Prep	Press scapulae toward chest and press shoulde into extension. This will be more accessible if palms are facing up. Once the shoulder blades are stabilized, have the practitioner hold the p and breathe for several breaths.
Supta Utthita Hastasana	Move arms into full flexion to the floor and th return. Repeat 3–5 times.
Ardha Setu Bandha	Exhale, lengthen the lumbar and lift hips. Inha release hips. Move slowly.
Eka Pada Apanasana	Bring one knee to the chest at a time and hold several breaths. The hands can be placed on th shin or behind the thigh if there is knee pain.
Jathara Parivartanasana	Bring knees to the chest, lower side to side wi control—the movement is initiated from the abdomen. One does not have to bring the legs the way down to the floor. Repeat 3–4 times.
Part II: Seated in a chair with support for neutral pelvis	
Surya Namaskar	½ Sun Salutes in the chair. Inhale, arms up. Exhale, arms down.

Namaste Vinyasa	Start with hands in prayer position and then abduct 90 degrees, inhaling. Exhale with palm together. This can be repeated several times.
Gomukhasana Arms	Using a strap, reach one arm up and bend at elbow (shoulder and elbow flexion) and the ot arm behind to hold the strap (shoulder extensi elbow flexion). Repeat other side. Hold for fiv breaths.
Virabhadrasana II (Warrior 2)	Practice this standing pose while sitting on a chair—one leg in external rotation and knee flexion, the opposite leg straight. Arms are extended at 90-degree abduction.
Chair Bharadvajasana (Twist)	Turn sideways in the chair; place legs togethe Make sure pelvis is stable. A block can be pla between the thighs to help align legs. Hold ba of chair with hands and rotate. Repeat other si
Part III: Seated on Floor and Prone on the Mat	
Sukhasana on blankets or bolster with ujjayi breath.	Sit with support; back can be against the wall. Inhale slowly. Exhale.
Marjaryasana/Bitilasana (Cat/Cow Pose)	Hands and knees.
Alternate Arm/Leg Extension	From hands and knees. Keep pelvis neutral. L weight out of shoulder. Press down evenly through palm. Repeat 2 times.
Salabhasana I (Locust)	Hands down by sides. Toes on floor.
Sphinx Pose	Hold for five breaths.
Part IV: Standing with a chair for balance if needed	
Tadasana (Mountain Pose)	
Utkatasana (Chair Pose)	
¼ Sun Salute	
Virabhadrasana I (Warrior I)	
Ardha Adho Mukha Svanasana (Puppy Dog)	
Chaturanga Dandasana (wall push-up)	

Examples of different levels of asanas for a thoracic kyphosis (Figure 8-21):

Depending of the level of kyphosis (mild, moderate, or severe), the following poses may be adapted to fit individual needs.

Savasana

Savasana variation

Supta Baddha Konasana

Supta Hastasana

Paschimottanasana (modified)

Bhujangasana

Tadasana

Urdhva Hastasana

Virabhadrasana II

Virabhadrasana I

Figure 8-21

Case Study

Kyphosis, Sandy

Sandy was a private client that I worked with for many years. She had severe kyphosis and was experiencing neck pain and general back pain and had difficulty breathing. In addition, she had been recovering from colon cancer. She tended to lie in bed for many hours of the day. In our session, I would usually help her out of the bed onto the floor and have her lie on her back. I would then

guide her through asanas and movements that focused on gently opening the chest.

First, I would have Sandy lie on her back in a supported Savasana to encourage the chest to open. I instructed her in basic *pranayama* (ujjayi) to help her expand in the restriction she felt in the chest cavity and encourage the shoulders to slowly release away from the ears. Next, I would use a rolled-up blanket placed at specific sections of the spine (the lumbar, thoracic, and finally neck) to help release muscle tension along the spine (see Figre 8-22 to Figure 8-24). She found this sequence very pleasant and noted that it helped her to build awareness of the natural curves of the spine. Our program would also include Supta Padangusthasana, Supta Tadasana, Parsva Bakasana, Thread the Needle. In Supta Tadasana, I would often gently pull the arms and feet to provide traction and length. Our session would move to asanas in the chair: ¼ salutes. As she gained strength, I would have her stand up with her back against the door or wall and focus on aligning her spine in Tadasana.

Sandy eventually felt less stiff and could attempt to stand up straighter. She found herself getting out more, walking, and being more active—and pausing to "stand up straight and get her shoulders back." She also noticed that it was easier to breathe.

Gentle Chest Opener Sequence

Take a firm blanket and roll it up. The size of the roll can be adjusted for the individual. First lie down on your back. Bend your knees and then position the rolled-up blanket under the lumbar spine. Lie with your chest open, palms facing up; keep the knees bent for a while. You will focus on breathing deeply into the chest throughout the three positions (Figure 8-22 to Figure 8-24). Some may experience discomfort; if so, either make the roll smaller or practice without the roll. We start from the lumbar spine and move upward.

Figure 8-22

Next roll to your side, gently rise up, and position the blanket a little higher to align with the mid-thoracic spine (Figure 8-23). Gently lie down over the blanket. This position may be intense for some. If you are comfortable, lie down and breathe in deeply into the chest. Keep the knees bent.

Figure 8-23

Finally, roll to your side and move the blanket higher up to align with the neck. Lie down with the blanket placed under the cervical spine (Figure 8-24). You can keep the knees bent or straighten the legs. Allow the back of the body to release into the floor.

Figure 8-24

Always roll to the side to come up. If you sit up abruptly in this sequence, you may risk straining your back muscles.

Retraction of the shoulder blades is another key element to correcting postures (Figure 8-25). By strengthening the upper back muscles, one can reinforce good posture. Additional key poses that retract and stabilize the shoulder blades are as follows: Bhujangasana (Cobra Pose), Prasarita Padottanasana C arms, Chaturanga Dandasana (Staff Pose).

Figure 8-25 *Retraction of the shoulder blades*

OSTEOPOROSIS / OSTEOPENIA

Definition : “Loss of mass throughout the skeleton [Figure 8-26], which predisposes patients to fractures” (Venes 2017).

Concepts: Risk of fractures increase with age, immobilization (such as leading a sedentary lifestyle), excess thyroid hormone, use of corticosteroids, excess consumption of alcohol and caffeine, smoking, and finally, menopause and genetics (Venes 2017).

Suggestions:

1. Exercise in general can improve the quality of life, functional mobility, and balance in osteoporotic women with a vertebral fracture (Evstigneeva et al. 2016). You can try weight-bearing exercises such as walking and hiking. Also, if you are cleared by your healthcare provider, you can try some weight training exercise. For weight training exercises, I suggest you work with a specialist, such as a physical therapist, to establish a safe and effective routine for your needs.
2. Focus on spine stabilization and extension-based exercises.
3. Standing and weight-bearing poses help to strengthen the leg muscles and bones. Weight-bearing poses will increase bone density; however, arm balances (such Bakasana, Parivrtta Bakasana) and inversions

(Adho Mukha Vrksasana) can put the practitioner with osteoporosis at risk (excess stress on the joints and bones, and possibly falls).

4. Use the wall or a chair for balancing poses, if you have difficulty with balance.

Research says …

- "Movements involving spinal flexion can increase risk for vertebral compression fractures; however, a combination of mild spinal flexion and extension may prove beneficial. Moderate, weight-bearing activities that strengthen the muscles supporting the spinal column, promote balance, improve posture, and enhance quality of life appear to be of greatest benefit" (Smith et al. 2013).
- "Exercise is effective and important for treatment of osteopenia and osteoporosis and should be prescribed for patients with vertebral bone loss. Some yoga positions can contribute to extreme strain on spines with bone loss. Assessment of fracture risk in older persons performing SFEs [spinal flexion exercise] and other high-impact exercises is an important clinical consideration" (Sinaki 2013).

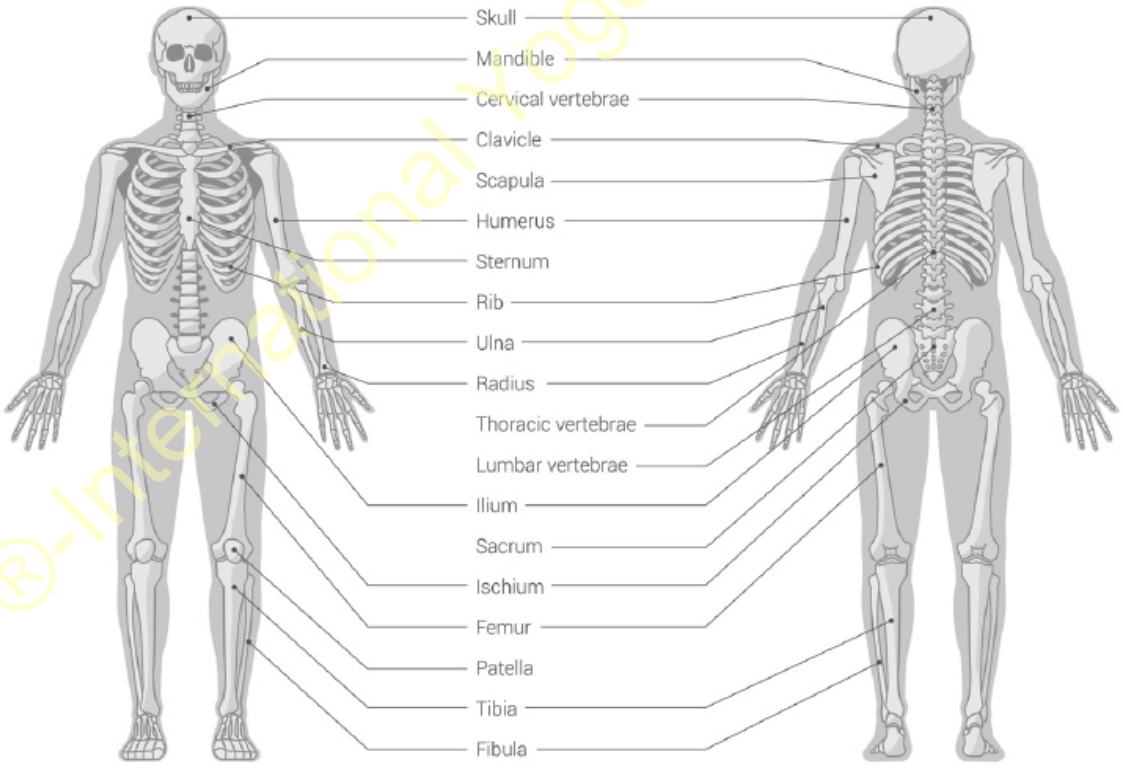


Figure 8-26 *The skeletal system*

Table 8.2 highlights a well-rounded sequence that would be safe for individuals with osteoporosis to practice. There are dynamic movements (sun salutes), standing asanas, and those that can be practiced safely on the floor. Use cushioning (blankets) as necessary when practicing on the floor.

TABLE 8.2 Recommended Sequence For Osteoporosis

Asana	Description
Surya Namaskar (5 minutes) ¼ Salutes, ½ Salutes Gentle variations of Surya Namaskar A & B	Surya Namaskar combines Yogasanas and *pranayama* . Each stage of Surya Namaskar is accompanied by regulati of breath.
Asanas in standing	Prarthanasana (Prayer Pose): stand in Tadasana with hands in Anjali Mudra Tadasana Utthita Trikonasana (Extended Triang Pose)
Asanas in sitting	Ardha Matsyendrasana Paschimottanasana Sukhasana
Asanas in supine	Setu Bandha Sarvangasana (Bridge Pose) Supta Vajrasana (Reclined Thunderbo Pose) Please note this pose will most likely have to be modified for most practitioners. The use of props is essential. Savasana (Corpse Pose)
Asanas in prone	Bitilasana (Cat Pose) Salabhasana (Locust Pose) (dynamically) Makarasana: (Crocodile Pose)

Pranayama	Ujjayi Pranayama Nadi Shodhana
Meditation	Visualization, Silent Chanting

In a study by Lu et al. (2016), the authors concluded that “the 12 yoga poses studied here appear to be a safe and effective means to reverse bone loss in the spine and the femur and have weaker indications of positive effects on the total hip measurement of the DXA [Dual-energy x-ray absorptiometric] scan. There is qualitative evidence suggesting improved bone quality as a result of the practice of yoga.” See Table 8.3 for the asanas used in the study.

TABLE 8.3 Recommended Sequence for Osteoporosis

1. Vrkasasana (Tree Pose) 	2. Utthita Trikonasana (Extended Triangle Pose) 
3. Virabhadrasana II (Warrior Two)	4. Utthita Parsvakonasana (Extended Side Angle Pose) 

5. Salabhasana (Locust Pose)

6. Marichyasana (Marichi's Pose)

7. Setu Bandha (Bridge Pose)

8. Supta Padangusthasana I (Reclinin Hand-to-Big-Toe Pose)

9. Supta Padangusthasana II (Reclining Hand-to-Big-Toe Pose)

10. Savasana (Corpse Pose)

Adapted from Lu YH, Rosner B, Chang G, Fishman LM. (2016). Twelve–minute daily yoga regimen reverses osteoporotic bone loss. *Topics in Geriatric Rehabilitation* 32 (2):81–87.

If you notice, many of the exercises outlined from this study appear relatively safe and minimize the risk for falling. The standing poses can be done at the wall or holding on to a chair (Vrksasana) if a person has difficulty with balance. My physical therapy consultant (ZA) would still have me avoid some of the twists and bending the researchers put into the program (such as poses #2, #4, #6 in Table 8.3). He goes on to say that when working with someone with osteoporosis, you need to know if their osteoporosis is mild, moderate, or severe (based on a DXA scan or Dual-energy x-ray absorptiometric scan). The word *osteoporosis* does not tell you the entire story. Since we don't know what type of medical condition the reader may have, or the extent of their osteoporosis, it is better to be on the cautious side and use poses such as #1, #3, #5, #7, #8 (in ZA's opinion). Ideally, if the reader has osteoporosis or osteopenia, I highly recommend that they consult with healthcare provider, who reviews the outlined asanas before proceeding with any program. This cautious approach would provide the safest manner for choosing the safest exercises for managing osteoporosis.

Here is a final word about caution. Most yoga teachers will rarely know all the medical facts about their clients in a class. For this reason, it is good practice to ask questions and know your class participants. This makes for a safe and effective class.

Case Study

Osteoporosis,

Four years ago, I reversed my bone loss from osteoporosis to osteopenia without medication. Breaking my foot set me back. It was a stupid accident running in the dark. After my foot heeled and I got back on my feet, I broke my elbow in a separate accident. I was walking down a hill in the rain and stepped n a large metal utility plate. I had 18 lbs. of weight in my backpack and an open umbrella. It was an accident that anyone could have had in the situation, but the difference is with osteoporosis, I shattered my elbow instead of cracking it.

Nabhi Kriya has been part of my daily practice since December 2011. Other parts have been added and subtracted, as I feel necessary or desired. Keeping something the same helps me tune into the subtle nuances, strengths, weaknesses, and changes in my practice and myself.

AM Sadhana: Warm up with Ego Eradicator (Breath of Fire), Spinal Flex in Sukhasana, then Rock Pose (sitting on heels), Spinal Twist, Shoulder Shrugs, Supta Padangusthasana II, Serabandanda Kriya (Adho Mukha Svanasana to Urdhva Mukha Svanasana, repeat). Nabhi Kriya (single leg lifts, double leg lifts, rest, legs to 60 degrees with arms wide, single leg lifts, rapidly), Uttanasana slowly and arms ups, then rapidly, Savasana, Meditation Releasing Fear (Aadays Tisai Aadays).

AM Meditation: Releasing Fear (Aadays Tisai Aadays) is physically challenging; arms are held at 90 degrees and raise to plus 69 degrees and down again to 90 with the chanting of the mantras, as it should be. It takes me from ease to quit, to pushing on, pain, and surrender and finishing, then that rush of endorphins and *prana* flooding the system when I put my arms down; it is a perfect analogy to releasing fear.

PM Meditation: Sodarshan Chakra Kriya (YB Version). Inside left nostril, suspend breath, pump navel while mentally chanting “Whaa-Hay-Guru” 16 times 3 pumps each = 48 pumps, exhale right nostril, repeat. To end, raise arms up and shake vigorously for three breaths with holds and release. Sodarshan is impossible if I clench the navel. If I maintain length, lift, and flexibility at the navel, the gentle Uddiyana Bandha goes smoothly. On a purely physical level, pumping the navel massages the vagus nerve to reduce stress, and pumping the navel challenges the spine.

When I brush my teeth, I do yoga, maybe Utkatasana moving slowly down and up for eight counts or Virabhadrasana II, or leg lifts out to the side, or Vrksasana. three times a day for another six minutes. Between teaching yoga classes, I walk across campus and the neighborhood about four miles with as many stairs as I can find. Two days a week I take Iyengar with long holds. Two separate days, I take Kundalini yoga, a bone-challenging endurance class with long meditations. I have not missed my home practice once in eight years. When I broke my foot, I practiced standing poses on my back. When I broke my elbow, I practiced with one arm.

Meditation and mindfulness is probably the most important part of my daily practice. Space, not compression, is paramount in everything. I aspire to grace, that balance of the breath, spaciousness, fluidity, and strength in my practice and life.

In general, she draws her inspiration from the Kundalini style of yoga. For your morning and afternoon practices.

Vrksasana at the wall

Utthita Hasta Padangusthasana

Half-Dog on chair

Eka Pada Rajakapotasana variation v
chair

Anantasana

Forward Bend variation with chai

Figure 8-27

For further information about osteoporosis and exercise.

FINAL WORDS

I have done my best to select safe poses for each condition based on research findings, knowledge I've gained in workshops, consultations with other professionals, discussions with my yoga practitioner colleagues, and of course my personal teaching experiences. However, no pose selections in this chapter (and throughout the book), or any other book for that matter, are absolutes. This is not a definitive book; there are infinite variations and modifications of poses that cannot be illustrated in one book. The selected poses serve as a simple guide and a framework to get you started.

Ultimately you have to do what works for you. For this reason, I highly recommend you work with a qualified yoga practitioner and healthcare provider to help in your journey to find the ideal asanas best suited for your body and your specific condition.

Pain that has not yet come is avoidable

—Patanjali, Sutra 2.16

9

Take Care of Your Back

The following are some simple recommendations to help you with normal daily activities and create good habits to take care of your spine. Also, this section can help you manage back symptoms if you are experiencing back pain. Consider the following self-help and self-management strategies:

- Avoid prolonged sitting. Prolonged sitting has many negative effects on the body. For this reason, consider the “30/30 rule” below. This means you should get up for at least 30 seconds and move around after 30 minutes of sitting. After sitting for long periods of time, please do *not* perform stretches in which you bend forward while sitting or standing. The discs between your vertebrae might already be in a compromised situation from prolonged sitting, so bending forward (as in toe touching or forward bending while sitting) might lead to injury or aggravate a back condition (Nachemson 1975, 1981).
- The following are some additional research-based guidelines about prolonged sitting:

    1. Sit no more than 20 to 30 minutes at a time, taking breaks by standing up and walking around for at least 30 seconds. Use a food timer or set an alarm near your workspace as a reminder to get up (Mclean et al. 2001).
    2. Taking a stand-up break for 20 seconds every 15 minutes resulted in no lumbar disc height changes during a four-hour period (Billy et al. 2014). If you have back pain, get out of your chair at least every 15 to 30 minutes. If possible, lie

down for several minutes to relax and decompress your spine (Gerke et al. 2011; Owens 2009).

3. Avoid prolonged standing, no more than 30 to 45 minutes at a time (Gallagher et al. 2014). Take breaks by sitting or walking around or, if possible, lie down

for her Decompression Exercise. Or you can get into the Corpse Pose (Savasana) and meditate for five to ten minutes.

4. During your 30 minutes of sitting, change positions periodically while maintaining your normal lumbar curve. You might need a small lumbar cushion (or small rolled up towel), depending on the shape of your chair (McGill 2015).
5. Avoid sitting in one position for no longer than ten minutes. Professor Stuart

"tissue loads must be migrated from tissue to tissue to minimize the risk of any single tissue's accumulating micro trauma." While sitting, try variable positions such as leaning back in the chair, propping your legs up, sitting upright, leaning forward with your elbows supporting the upper body, and finally, leaning on the left armrest and then the right armrest.

6. After sitting for prolonged periods, stand and walk for a few minutes prior to performing demanding manual exertions such as lifting and carrying (McGill et al. 1992).

- Avoid twisting at the waist when holding a heavy object.
- When lifting, bend at the hips and knees, not at the waist. For lifting a heavy object, first tighten (or lock) the abdominal muscles and then lift the item. Just remember "lock and lift."
- When sneezing or coughing, bend your knees slightly and place one hand behind your back or on your hip, or hold on to a solid object for support to avoid a sudden forward bend.
- To reduce back pain and spinal injuries, stay within tolerable motions, loads, and training volumes for your body (McGill 2014).
- Slow walking with restricted arm swing may produce more "static" lumbar spine loading and could be detrimental for certain injuries and tissues. On the other hand, faster-paced walking can produce a more cyclic loading pattern (Callaghan et al. (1999). So, if you are experiencing back pain during slow walking, try picking up the pace a bit and see if this helps your symptoms.
- Control early morning lumbar bending to help reduce lower back pain (Snook et al. 1998, 2002). Be especially careful with self-care activities, such as brushing your teeth, washing your face at the sink, using the restroom, and tying shoes in a forward bent position. Why? "Injury to the disk (herniation) is more likely in the morning soon after waking, when the nucleus pulposus [a part of the disc between

your vertebra] is maximally hydrated after a prolonged period of rest" (Goodman et al. 2015).

- Try to preserve your lumbar curve during daily activities. Think "preserve the curve." Your physical therapist can teach you proper techniques, as well as how to maintain a neutral spinal position if you injure your back or have surgery (Tarnanen et al. 2014).
- To align posture from a slouched position to a correct upright sitting position, "the lumbopelvic pattern strategy using predominantly the movement of anterior pelvic tilt results in smaller joint moments on the lumbar spine and also positions the lumbar spine closest to the neutral posture minimizing passive tissue stress." In other words, instead of lifting your chest and upper back to correct your posture, roll your hips forward a little while seated so your lower back is positioned in a normal arch (Castanharo et al. 2014).
- Carrying a load in one hand results in more spine load than dividing the same load between both hands. Ideally, try to disperse loads equally when carrying groceries, luggage, or other items (McGill et al. 2013).
- To protect your spine during rotational movements, like a golf or tennis swing, keep the pelvis locked to the rib cage by stiffening the core.
- "Obesity was associated with reduced disc height in the lumbar spine, but not at the lumbosacral junction, suggesting these joints may have different risk factors. There was also evidence for an inter-relationship between obesity, lumbar disc height, and recent pain, suggesting that structural changes have a role in back pain and may in part explain the association between obesity and back pain" (Urquhart et al. 2014). The take-home message here is that, if you are somewhat overweight, consider using lifetyle strategies such as eating wholesome foods, controlling stress, getting enough sleep every night, and exercising to help you lose the extra pounds. Not so surprising is that yoga helps you control stress, get better sleep, and exercise!

For additional back care strategies to fit your specific needs, please work with your healthcare provider (such as a physical therapist or

occupational therapist) for personalized instructions. Finally, spare your spine by training with good posture and form.

10

Pranayama, Meditation & Restoratives: The Foundation for Relaxation

Pranayama and meditation (*dharana*) represent the upper levels of the Eight Limbs as outlined by Patanjali. The methods and techniques of these disciplines embody great elements that refine and advance yoga asanas to another realm beyond the physical. The simplest poses can become much more interesting, holding your attention and strengthening your physical awareness. In some cases, a gentle understated approach to practicing yoga can be the perfect antidote for many physical or emotional challenges. Therefore, with the introduction of this information, I make an attempt to address the whole body, not just the lower back in regard to managing pain, alleviating stress, and supporting a healthy nervous system, all which have a positive effect on the body's functions. In this section, I will outline a few approaches to *pranayama* and meditation as well as restoratives, to help minimize stress. I will emphasize, when appropriate, aspects of these practices that may apply to lower back pain.

Figure 10-1 *Sean seated in meditation*

Koshas

Before discussing these topics, I would like to mention the *koshas* (pancha kośas), which represent the “subtle body,” which is composed of five energetic layers of our being that are tangible and intangible, from the physical to the innermost core, discovered through conceptualizing and sensing what you experience in yoga physically and psychologically. In yoga therapy, the *koshas* are used as a tool to assess the individual and heal on all levels, from the physical, breath, mental, emotional, or even spiritual, to address the body as a whole (Figure 10-2). Furthermore, I find the *koshas* useful in guiding you to move inward and experience yoga on a sensory level as well as an inspiration for teaching, *pranayama* , meditation, and restoratives.

Koshas—Five Layers of Being

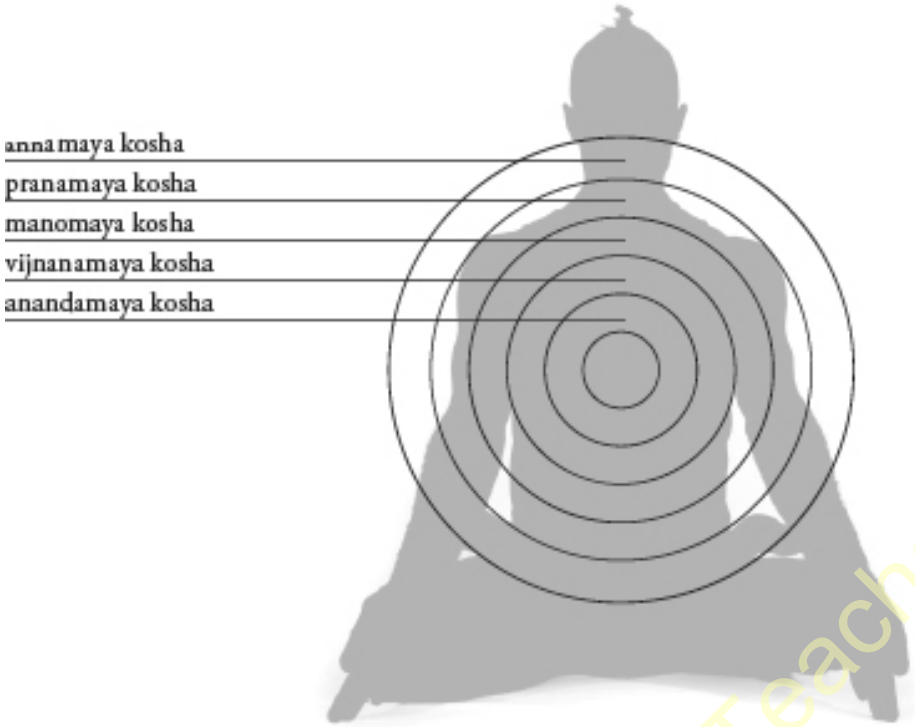


Figure 10-2 *The Five Layers of Being*

Annamaya Kosha (Physical Body)—The outer sheath. Muscles, bones, skin, organs. "Anna" is the food that sustains this level.

Pranamaya Kosha (Life/Force)—The Energy Sheath. The breath and the flow of energy through the body. Pranayama practice.

Manomaya Kosha (Mind)—The Mental Sheath. Thoughts, behavior, emotions, attitudes, and beliefs. Maintained through meditation.

Vijnanamaya Kosha (Knowledge)—Composed of wisdom, intuition, and perception. Meditation is key to this layer.

Anandamaya Kosha (Innermost Self)—The Bliss Sheath. Represents unending joy, love, peace, and complete happiness.

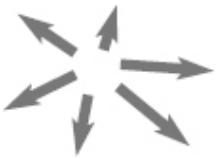
Pranayama

Pranayama (breath control) is the gateway between the physical and external to the subtle limbs. It is the link between the upper and lower limbs, the link

between body and mind. *Prana* is energy and *yama* is the control of this energy. There are many *pranayama* techniques, and you should learn under the guidance of a certified instructor. However, on a fundamental level, basic diaphragmatic breathing can be accessible and safe for many. The concept of diaphragmatic breathing is similar to “ujjayi” breath, where you emphasize the inhalation and lengthen the exhalation. This helps you to focus your attention on your body and can deepen your experience of practicing. For beginners, I explain that they are making an attempt to breathe consciously, fully, and deeply. Normally, we breathe automatically without awareness. However, when practicing *pranayama* , we make an effort to control the breath and the movements. Inhalation (*Puraka*), exhalation (*Rechaka*), and retention (*Kumbhaka*). Inhalations are energizing, exhalations are calming, and the retention generates stillness. We can also emphasize the direction of the movements, such as up, down, expansion (*vayus*) or the tempo (counts 1 … 2 … 3). Additionally, we can manipulate the mouth and nose to control the flow of the breath as it enters and exits the body. The benefits are physiological, physical, and mental. As you practice, you can visualize the breath moving internally, which helps your mind become less focused on thoughts and can also support your meditation practice. *Pranayama* can be a great preparation for meditation and can also enhance deeper relaxation in poses.

TABLE 10.1 Prana Vayus

Prana Vayu 	*Chest, Head* Intake, Inspiration, Momentum
Apana Vayu 	*Pelvis* Elimination, Down, Outward (I like to think of this as grounding.)
Samana Vayu	*Navel* Assimilation, Absorption, consolidation

	Core activities, twisting
Udana Vayu 	*Throat* Growth, Expression, Speech, Upward Movement
Vyana Vayu 	*Whole Body* Circulation, Expansiveness

I like to mention these terms in addition to the *koshas* because I have found them to be extremely good visualization tools when practicing asana, meditation, and restoratives (Table 10.1). Yes, the chakras could also be mentioned here, but I have found these concepts to be much easier for you to internalize and put into your own words and experience when practicing as well as teaching.

Since there are many *pranayama* techniques, it's best to start with a few basic methods. The following techniques (Table 10.2) are generally accessible to a wide audience and are a good place to start learning the fundamentals of *pranayama* or to help refine the quality of the breathing. However, I will note that some may find the retention of the breath in Viloma I and II a bit challenging. If this is the case, then stick with Ujjayi Breath for a while.

TABLE 10.2 Fundamental Pranayama Techniques

Ujjayi Breath—Victorious Breath	Inhale slowly, moving the breath upward toward the chest. Pause a brief moment before exhaling. The length of the inhale and exhale should be equal Emphasize the expansive quality of the inhale.
Viloma I—Interrupted	

Inhalation The inhalation is paused briefly at three sections of the torso.	Inhale to the navel, pause. Continue the inhalation tc the bottom of the diaphragmatic band. Pause, then lif breath higher into the chest and pause again. Slowly release.
Viloma II—Interrupted Exhalation The exhalation is paused briefly at three sections of the torso.	From the top of an inhalation, exhale from the ches down toward the diaphragmatic band, pause. Exhale from the diaphragm to the navel, pause. Exhale slowly release.
Nadi Shodhana—Alternate Nostril Breathing Thumb and fourth finger are placed on the nostrils, alternately closing off as one inhales and exhales.	Place the right thumb on the right nostril, the second and third finger between the brow, and the fourth finger on the left nostril. Close off the left nostril, exhale through the right nostril. Inhale through the right nostril, slowly. Pause, close of the left right nostril, then exhale on the left. Block the right nostril and inhale on the left, then exhale on the right. Repeat for ten to fifteen minutes, ending with an exhalation on the right nostril.

Meditation

Someone asked me when I said I would give an overview of meditation in this book, “What does meditation have to do with lower back pain?” I can’t emphasize enough the importance of a regular meditation practice. I have personally experienced profound benefits from a daily practice—physically, emotionally, and even spiritually. Furthermore, there is evidence about the many benefits of meditation and its ability to relieve pain. In this context, we are speaking of back pain. A study by Banth et al. (2015) showed that “mindfulness based stress reduction as a mind-body therapy including body scan, sitting and walking meditation was effective intervention on reduction of pain severity and improvement of physical and mental quality of life of female patients with nonspecific chronic low back pain.” The following table is a condensed adaptation of the patients who practiced for eight sessions (Table 10.3).

TABLE 10.3 Meditation Sequences

Week 1	Overview of the fundamentals of mindfulness.
Week 2	Practicing mindfulness meditation with a focus on the breath The suggested time frame could be 10–15 minutes for seated meditation.
Week 3	Focus on seated mediation. Instructions are given for a home practice with an increased time to 15–20 minutes a day.
Week 4	Introduce the concept of body scan step by step. Instructions are given for home practice 20–25 minutes a day.
Week 5	Continue body scan with advanced concepts. Instructions are given for home practice 20–25 minutes a day.
Week 6	Introduce walking meditation. Instructions are given to practice 25–30 minutes a day.
Week 7	Allow the participants to select a meditation technique that has been covered and that appeals to them for practice.
Week 8	Conclude by providing feedback and summarizing the program.

Adapted from Banth et al. (2015). *This chart shows the variety of methods for practicing meditation—sitting, lying down, and even walking.*

What I liked about the details of this study was the introduction to various styles of mediation—breath awareness, mindfulness, seated meditation, body scan, and walking meditation. If you are new to meditation, a program like this would be worth exploring to see what resonates with you. What method can you commit to for a while that will allow you to establish a regular habit of sitting in silence?

In your approach to developing a meditation practice, keep it simple. I conduct workshops on the fundamentals of meditation and instruct people how to establish a simple home practice. I have personally found that sitting everyday helps to release the tension I feel in my back from constricted muscles from scoliosis. For example, in my daily 30-minute meditation practice, I feel that in lengthening the constricted muscles on the right side of

my body, they relax and there is subtle stretching that feels similar to traction. The sensations I feel enhance my meditation practice in a pleasant way, especially when I emphasize the exhalation. Meditation in general can relax the muscles throughout the body. You may find that by sitting or even lying down on a flat surface, the muscle tension in your body releases.

Example: As I sit and breathe, I visualize the *koshas* . My imagery may include the tight muscles, the bones releasing, and settling. I then visualize the breath moving through different areas of the body (*vayus*). The longer I sit, there are moments of silence or thoughts that rise to the surface—I always come back to the breath.

Figure 10-1 shows one of the models in Padmasana, a classical pose for seated meditation that is physically inaccessible for many practitioners. However, there are many other options for positioning the body comfortably for meditation. Various props can also be used (Figure 10-3).

a. Supported Savasana is ideal for body scans and Yoga Nidra. Try laying on blanket and covering the body for additional comfort.

b. The ideal position for meditation. (Padmasana is also good for meditation, but it is risky for knees, so it is not shown.)

c. Virasana is also a good variation for those who find Sukhasana uncomfortable. One can place an emphasis on maintaining the natural curves of the spine.

d. The chair is also an option. A blanke can also be placed against the lumbar spine for support.

Figure 10-3

Using the wall with props is a great option for those who want to have additional support and work on strengthening their back (Figure 10-4).

Meditating for as little as three minutes in a session has great benefits. Slowly increase your time over a period of weeks and months. I would suggest that you set a daily ritual that supports your practice and that you will commit to. You should feel nurtured by your practice, not stressed. Practice without expectation or judgment.

Figure 10-4

It helps to start with a time limit that you are comfortable with and try not to be too ambitious and force yourself to sit for long periods of time. However, I've studied many styles of meditation and have had a great influence from Zazen, and I like to use these guidelines recommended by the Kundalini tradition. I've found this method to be quite effective in reinforcing the prospect of a daily meditation practice. Remember, you are trying to make your meditation practice a good habit.

"Sit and Do Nothing"

It takes 40 days to change a habit.

It takes 90 days to confirm the new habit.

In 120 days, the new habit is who you are.

In 1000 days, you have mastered the new habit.

—Yogi Bhajan, PhD

Meditation Minutes and Days

Yogic science tells us that there are specific time lengths required for certain desired benefits during meditation. Most meditations are done for 11 or 31 minutes.

- 3 minutes affects the electromagnetic field, the circulation, and the stability of the blood.
- 11 minutes begins to change the nerves and the glandular system.
- 22 minutes balances the three minds, and they begin to work together.
- 31 minutes allows the glands, breath, and concentration to affect all the cells and rhythms of the body. It lets the psyche of the meditation affect the tattvas and all layers of the mind's projections.
- 62 minutes changes the gray matter in the brain. The subconscious and the outer projection are integrated.
- 2½ hours changes the psyche in its correlation with the surrounding magnetic field so that the subconscious mind is held firmly in the new pattern by the surrounding universal mind.

Taken from Kundalini Meditation: The Path to Personal Transformation and Bliss *(McCusker, 2013).*

Keeping all of these guidelines and tips in mind, how do you develop a home practice? How do you motivate yourself to persist and work through the obstacles that you may confront when attempting to meditate? I would suggest the following:

- Meditate at the same time every day (preferably upon rising).

- Designate a quiet area for meditation (no external stimuli, music, TV, etc.).
- Have the props needed in place and ready to use.
- Don't be too hard on yourself; each day will be different.
- Keep track of your time and days (ex. 10 minutes for 40 days) on a calendar
- Keep a journal of thoughts as they come up, observations—physical and emotional.
- Don't increase your time until you've reached 40 days, and then only add more time when you feel you are ready to progress.
- Once you have increased the length of meditation time, notice the physical and mental differences.
- After you've completed a full 40 days, ask yourself, "How has a daily meditation practice changed the quality of my life?"

Restoratives: Relax the Body, Refresh the Mind

In the yoga tradition, restoratives help calm and balance the nervous system. The practice is done with the use of props positioned in a specific way to support the body (Figure 10-5). Just like asana, *pranayama,* and meditation, there are many methods and poses to consider. However, in the context of lower back pain, some poses are specific to helping ease pain, opening the chest, or releasing muscle tension. In general, reclining asanas relax and soothe the body and refresh the mind. When practicing restoratives, consider the condition of the body, mood, and time of day, and adjust accordingly. Judith Lasater in her book *Relax and Renew* refers to restoratives as "active relaxation." She goes on to say that we support the body with props, and alternately stimulate and relax the body to move toward balance. Restoratives can be a regular part of a yoga practice perhaps on a weekly basis or when you are experiencing stress or facing other challenges (major life events, grief, illness, or recovering from injury).

A Short Restorative Sequence

Mountain Brook Pose
5–10 minutes

Bidalasana (Cat/Cow)
several times

Adho Mukha Svanasana with block
2–3 minutes

Supported Child's Pose
several minutes or longer

Supta Padangusthasana I
1–2 minutes

Supta Padangusthasana II
1–2 minutes

Supta Baddha Konasana
10–15 minutes

Setu Bhanda Sarvangasana
up to 10 minutes

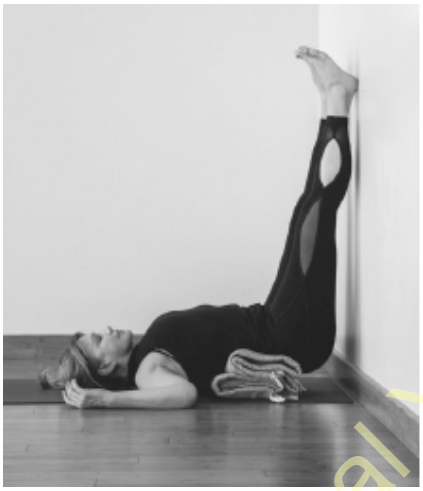
Supported Prone Twist

Supported Janu Sirsasana

5 minutes each side

2–3 minutes per side

Viparita Karani
15 minutes



Savasana
5–20 minutes

Figure 10-5

This is just one example of a restorative sequence. There are many options. For example, you can alternate the forward bends, with supported Janu Sirsasana, Upavistha Konasana, or Paschimottanasana. You can also practice the forward bends with a chair (Figure 10-6).

Figure 10-6 *Restorative versions of Upavistha Konasana and Janu Sirsasana with a chair*

When creating a restorative sequence, please keep in mind that it must be well balanced, in a similar way that a regular yoga class must be balanced. The sequence should include forward bends, backbends, twists, and inversions, and, in some cases, gentle dynamic movement (cat/cow, ¼ salutes) can be added to help release muscle tension through the synchronization of breath and movement. Why do we add inversions? Easy inversions will help alleviate blood and lymph fluid retention that tends to build up from sitting and standing during the day. Judith Lasater states that "by changing the relationship of the legs to gravity, fluids are returned to the upper body and heart function is enhanced" (Lasater 1995).

In the poses, you should experience subtle, not forceful, stretching. I like to tell students that they should feel as if they are "letting go" and the floor and props are there to provide support. Finally, there are physiological benefits in practicing restoratives that can positively affect internal organs, the circulatory and lymphatic systems, respiratory system, hormones, and blood pressure. Restoratives enhance overall energy.

I highly recommend attending workshops by Jillian Pransky. I had the opportunity to assist her in a workshop many years ago and really enjoyed learning her creative use of props and adjustments that enhance physical comfort.

Asana is a steady, comfortable posture.

—Patanjali, Sutra 2.46

11

Romy's Recommended Self-Practice and Sequencing Tips for the Spine and Lower Back

There are many approaches to an effective lower back pain practice. What are some simple approaches that you can incorporate into a class sequence or home practice? I will develop a few short practices based on the two studies in Section 8.

A Gentle Morning Practice

In this sequence, we will minimize the use of forward bends to address the typical stiffness many encounter in the morning. The practice will place emphasis on lying supine before standing up.

1. Apanasana
2. Eka Pada Apanasana
3. Supta Padangusthasana I & II
4. Dynamic Bridge
5. Apanasana
6. Balasana
7. Cat/Cow
8. Adho Mukha Svanasana
9. Tadasana

10. Ardha Kati Chakrasana
11. Tadasana
12. Balasana
13. Apanasana
14. Thread the Needle
15. Setu Bandha
16. Jathara Parivartanasana
17. Simple Twist
18. Savasana

An Active Practice

1. Tadasana
2. ½ Salutes
3. Ardha Uttanasana
4. Adho Mukha Svanasana
5. Balasana
6. Adho Mukha Svanasana
7. High Lunges (right/left)
8. Ardha Chaturanga
9. Bhujangasana
10. Balasana
11. Adho Mukha Svanasana
12. Uttanasana → Ardha Uttanasana
13. Tadasana
14. Surya Namaskar A (optional, 2–3x)
15. Tadasana
16. Standing Poses from Tadasana
17. External, Virabhadrasana II, Parsvakonasana, Trikonasana, Ardha Chandrasana (pick 2–3 standing poses)
18. Parsvottanasana
19. Virabhadrasana I
20. Adho Mukha Svanasana
21. Balasana
22. Dandasana
23. Janu Sirsasana C
24. Setu Bhanda Dandasana

25. Simple Twist
26. Savasana

Please note: For those who want more of a challenge, add Surya Namaskar A afterxs "13. Tadasana" before standing poses. Surya Namaskar A or B can also be added after "15. Parsvottanasana."

Creative Beginners

1. Sukhasana (sit silently and breathe, then practice shoulder openers)
2. Bidalasana (Cat/Cow)
3. Adho Mukha Svanasana
4. Alternate Arm/Leg
5. Ardha Chaturanga
6. Adho Mukha Svanasana
7. Balasana
8. Parighasana variations (knee bent, then straight)
9. Adho Mukha Svanasana
10. Tadasana
11. Parsvottanasana Prep (hands on block or knees bent)
12. ½ Salutes (or if able, Surya Namaskar A)
13. Tadasana
14. Vrksasana
15. Trikonasana
16. Prasarita Padottanasana A
17. Prasarita Padottanasana C
18. Tadasana
19. ½ Salute to Balasana
20. Virasana (use props)
21. Bharadvajasana
22. Dandasana
23. Janu Sirsasana
24. Paschimottanasana
25. Setu Bandha Dandasana
26. Jathara Parivatanasana (knees bent, or simple twist)
27. Viparita Karani

Key Concepts

- Work with basic traditional yoga asanas and focus on heightening your awareness.
- Focus on simple variations of these postures. Work in a specific way to notice the subtleties that will help you minimize pain, refine postural alignment, and strengthen key muscles that protect the back.
- Establish and maintain proper alignment in standing and seated postures.
- Progress slowly, moving patiently from simple to more challenging poses over time.
- Practice to relieve pain.

Self-Practice Tips

If you have limited time or resources and can't make it to a class, developing a self-practice at home can become a good habit. Set up an area in your home with props and practice when you have the time. Do what feels comfortable and accessible to you.

The following are helpful tips for self-practice that I recommend:

- Stretch but don't harm. Avoid stretching or taking any pose to the point of numbness, tingling, or sharp/shooting pain.
- Hold the poses and breathe. Notice what happens when you inhale and exhale. In the Ashtanga system of yoga, one generally holds poses for five breaths (each inhale and exhale is one count). I generally use this framework when practicing. I find it effective for experiencing the pose in a deeper and more mindful way. Of course, you can move quicker through a sun salutation, but they can also be practiced with a slow conscious breath. If there are poses that you want to hold longer than five breaths, feel free to do so; however, be careful that you aren't overstretching.
- Meditation is great for minimizing pain, alleviating stress, and sitting in Sukhasana can help strengthen your spinal muscles (assuming your back tolerates sitting). I start each day with a 30-

miunte session of silent seated meditation. A minimum of just three minutes can be beneficial; however, it takes time to cultivate a practice of up to 10 to 30 minutes.

- Be creative. Practice basic *pranayama* or even apply the *koshas* as a visualization tool.
- Start on the floor lying down if you have back pain that is aggravated by forward bends. Focus on gradually working toward standing.
- Try to create a well-rounded sequence that moves the spine in every direction, and then end up on the floor in Savasana for at least 5–10 minutes.

12

Index of Yoga Asanas & Miscellaneous Poses

This section not only serves as an index of the asanas but also a resource when you work with your healthcare provider. You can bring this book with you to your medical appointment and the clinician can circle the poses they recommend or want you to avoid.

13

Asana Category Index

Standing Poses

- Tadasana
- Utthita Hastasana
- Vrksasana
- Virabhadarasana I
- Virabhadrasana II
- Virabhadrasana III
- Uthita Parsvakonasana
- Trikonasana
- Parsvottanasana
- Parivrtta Trikonasana
- Parivrtta Parsvakonasana
- Prasarita Padottanasana
- Utthita Padangusthasana

Supine

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- Eka Pada Apanasana
- Supta Padangusthasana
- Savasana

Seated Poses

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- Janu Sirsasana
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Backbends

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- Ustrasana
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- Dhanurasana

Forward Bends

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