



Yoga Therapy
for Chronic
Back Pain

By Helen Mikuska

Chronic non-specific back pain can be long lasting or recurring and by definition, is "non-specific" (cause is unknown or difficult to pin down). Various treatment options, from more-conservative to more-invasive techniques or combination of treatments are available. Because chronic non-specific back pain may result from several factors — physical, psychological and social — treatment often involves a multi-faceted approach or an approach using multiple interventions. 20-44% of clients will experience further episodes within one year and over 3/4 will have a reoccurrence at some points in their lives and 2-7% will develop chronic back pain.

Emphasis on Improving Function

The emphasis of the treatment isn't only on eliminating pain, but a focus to improve one's ability to function in daily life. Goals of treatment include teaching skills to self-manage pain and to avoid adverse side effects of treatment.

MEDICAL APPROACH - Starting with a Conservative Approach

Treatment options include a variety of conservative approaches such as medications, exercise and physical therapy, and counselling, or they include more aggressive approaches such as surgery. However, because non-specific back pain often improves on its own, clients work with their health care provider with conservative methods. Discussion of surgery or other more-invasive procedures are usually for later consideration.

Non-Invasive Treatments for Back Pain - The goal of non-invasive treatment for back pain is two-fold:

- Reduce but not necessarily eliminate pain.
- Improve function to resume normal routine of work and leisure as possible.

One or more of the following may be recommended as treatment options:

Back Brace. Many lumbar supports are available without a prescription or specific braces may be customized for the individual. Braces support the abdomen, improve posture and take some of the load off the lower back. However, they may also restrict motion and contribute to atrophy of muscles that support the spine through lack of use.

Back braces may also make transitional movements — such as from a sitting to a standing position — more comfortable during an episode of back pain. There's insufficient evidence that back braces are more effective at relieving back pain than no treatment at all. The best course of action may be strengthening your trunk muscles to be the primary support for your back.

Pain Medications. Non-prescription or prescription medications may be suggested to relieve discomfort until inflammation subsides and the body heals itself. Options include:

- **Over-the-Counter (OTC) analgesics.** Analgesics relieve pain. They include non-steroidal anti-inflammatory drugs (NSAIDs), counter-irritants and topical analgesics. NSAIDs, such as aspirin, naproxen sodium and ibuprofen can relieve pain and reduce inflammation. Counter-irritants are non-prescription and are applied to the skin as a cream or spray and temporarily relieve chronic pain. They stimulate the sensory receptors of heat or cold to cover up or counter pain. Topical analgesics, many of which contain salicylates, can reduce inflammation. NSAIDs appear to provide some relief for acute back pain, but evidence is still lacking regarding their effectiveness. Long-term use can have side effects, particularly effects on the gastrointestinal system and the kidneys.
- **Anti-Convulsants.** Low doses are sometimes used to help people who have low back pain in conjunction with leg pain. These drugs aren't usually useful in treating low back pain. Instead, they're sometimes directed at treating the leg pain component in people who primarily have back pain associated with leg pain.
- **Anti-Depressants.** Some anti-depressant medications, taken in lower doses may help in the treatment of low back pain. They may result in a higher level of serotonin in the brain and reduce anxiety and muscle tension. The evidence on the effectiveness in the treatment of low back pain is mixed. Medications called selective serotonin reuptake inhibitors (SSRIs) don't appear to be as effective as TCAs for back pain.
- **Opioids.** Certain narcotic medications (opioid analgesics) can be used to treat low back pain. They are not used as a long-term treatment. Side effects, as well as concerns about dependence, nausea and constipation can be severe. Other side effects include dizziness and sedation.
- **Cold or Heat Therapy.** Can relieve pain and muscle tension in the initial days after back pain begins. Some studies show that heat is an effective approach for acute non-specific back pain. As for chronic back pain, cold and heat may be helpful, but there isn't scientific evidence for this. Cold therapy can reduce inflammation and swelling by constricting blood vessels. It also acts to slow nerve impulses to make muscles contract less, in this way reducing pain.
- **Electrical Stimulation.** Transcutaneous electrical nerve stimulation (TENS) delivers a tiny electrical current to key points on a nerve pathway. It may stimulate release of pain-inhibiting molecules (endorphins) or block pain fibers

that carry pain impulses. It's unclear whether relief is from some direct effect on the nervous system or from the placebo effect. Clients use TENS to help them function with less discomfort, but this therapy has not been proved effective in relieving chronic low back pain.

- **Exercise and Physical Therapy.** Physical activity plays a strong role in recovering from back pain and particularly in helping to prevent future pain and loss of function. Physical therapy exercise programs can include any or all of the following components: flexing, stretching, endurance training, strength building and aerobic.

Supervised programs that include stretching and strengthening exercises, which don't specifically target the back, are more beneficial in relieving chronic low back pain and improving function. Exercise programs are individualized because people have different levels of pain and differing injuries that caused the pain initially. Exercise doesn't appear to increase risk of future back injuries and may help prevent back pain at work. Benefits of a physical activity program may include:

- Pain reduction.
- Strengthening of weak muscles.
- Stretching of contracted muscles.
- Decreasing mechanical stress on your back.
- Improving your fitness to prevent injury.
- Stabilizing your back.
- Improving your posture.
- Improving your mobility.
- Decreasing the rate and severity of recurring back pain.
- Allowing quicker recovery from future flares of back pain.

Some studies suggest that exercise therapy is more effective than are conservative or inactive treatments in people with chronic low back pain. Short-term, modest improvements were seen in such areas as pain, disability, strength and flexibility. Exercise should become part of the client's permanent routine at home. Improving the strength, endurance and function of the back helps minimize the chance of recurrence of back pain. The key is to start an exercise program at a low level to ensure comfort and proper technique, and then progress slowly as symptoms allow.

- **Cognitive Behavior Therapy.** This type of talk therapy combines attempts to identify unhealthy, negative beliefs and behaviors and replace them with healthy, positive ones. It's based on the idea that one's thoughts determine how one behave. Even if an unwanted situation hasn't changed, one can change the way one thinks and behaves in a positive way. The therapy may have a role in the case of chronic low back pain for which no specific physical cause is evident. It has been shown to be effective in relieving pain and improving function as one component of back care.
- **Multi-Disciplinary Treatment Programs.** A multi-disciplinary approach to treating chronic low back pain involves, as the phrase suggests, a variety of therapies. These may include a combination of exercise, physical therapy, education, cognitive behavior therapy, vocational counselling and other strategies.

Non-Invasive Treatments - Pros and Cons

Non-surgical, non-invasive approaches are usually prescribed first. Low back pain often improves on its own over time or with the help of conservative approaches. Clients with acute low back pain generally experience substantial improvement in the first month after initially seeing their doctor. When deciding on non-surgical, conservative approaches, consider these points:

Pros	Cons
Conservative approaches are less invasive than surgery and don't require the recovery time that surgery does.	Clients need to be patient. It may take a while to return to desired level of activity at work and at leisure.
Conservative approaches allow your body's own natural healing process to work, which is what happens most of the time with back pain.	For those who take pain medications, they may cause side effects.
Decide to try conservative approaches and always opt for a more-aggressive approach later.	Conservative approaches may require a change in habits, such as regular exercise to strengthen your back.
Other than the client's pain, the doctor may not have any physical findings on which to recommend surgery.	If client's pain is severe, persistent and disabling, they may struggle with feelings to move to a more-aggressive approach.
Conservative approaches cost less than surgery.	
You avoid the risks of surgery.	

Invasive Treatments for Back Pain. Surgery and other invasive approaches remain an option if less conservative approaches are ineffective. Even if magnetic resonance imaging or another diagnostic imaging technique doesn't show a potential source of pain in the vertebral joints or disks, but the pain appears to be originating in those locations, a more-aggressive approach to remove or reduce the pain and improve your function may be recommended.

- **Spinal fusion.** If the cause of back pain seems to be motion between segments of the vertebrae, spinal fusion may be a way to prevent motion and stop the pain. Spinal fusion involves permanently connecting — or "welding" — two or more vertebrae together. It has been used as a treatment for what's called discogenic pain — pain originating in the area of a particular disk and without involving leg pain (sciatica).

Spinal fusion surgery requires general anesthesia, takes from two to 12 hours, depending on how extensive the surgery is and the technique the surgeon uses. The type of healing that needs to occur after spinal fusion is comparable to recovery from a broken bone. Spinal fusion removes some spinal flexibility. This can be beneficial if movement and instability between spinal segments is what causes the pain. However, the fused spine needs to be kept in proper alignment and clients are taught how to move, sit, stand and walk in a manner that keeps your spine properly aligned. Physical rehabilitation programs can start as early as four weeks after spinal fusion surgery.

Beyond the immediate potential risks of spinal fusion surgery, the areas of the spine adjacent to the fusion will bear more stress. This makes those areas more likely to experience future wear and tear. Clients may need to undergo surgery again. 20 percent of those who have spinal fusion surgery need another operation within 11 years. Spinal fusion will not eliminate pain — just to improve it.

The effectiveness of these other invasive approaches to treating chronic nonspecific low back pain is mixed or unclear:

- **Radiofrequency neurotomy.** Also called radiofrequency lesioning, involves applying heat to certain nerve pathways to block the transmission of pain. Radiofrequency neurotomy isn't a permanent as the nerves will try to grow back, and pain may return in as soon as six months. Short-term side effects may include a burning sensation, pain, numbness and a slight loss of muscle strength. There is conflicting evidence of the effectiveness in relieving low back pain originating from the facet joints and even less evidence is relieving pain originating from the disks. More studies are necessary.
- **Interventional therapy.** This treatment refers to injection of anesthetics, steroids or narcotics into soft tissues, joints and other areas in and around the spine. Purpose is to block nerve conduction and relieve pain. It can be in the form of an epidural block, which means the medication is injected into the epidural space (near the spinal cord, but not in the cerebrospinal fluid). Or, the injection may be into a facet joint, which is a joint between two adjacent vertebrae. In some cases, the injection is into the sacroiliac joint, which connects the bottom of the spine with the hip, or into a trigger point, which is a painful knot in a muscle. Studies have found conflicting evidence regarding effectiveness of epidural steroid injections and the effectiveness of facet joint injections in relieving pain at various intervals of time from the injections.
- **IDET.** Intradiscal electrothermal therapy (IDET), or annuloplasty, is a treatment procedure that involves applying heat to the annulus, the ring of fibrous tissue that surrounds the jelly-like nucleus of the disk. The goal of the procedure is to relieve pain coming from the disk itself. IDET has fallen out of favour as studies have shown no benefit over placebos.

Invasive Treatments for Back Pain: Pros and Cons

Discussions of a surgical or other invasive approach will occur if conservative approaches haven't appeared to relieve the low back pain or improve function. The client's preferences, concerns and lifestyle play a large role in determining the best choice about these more aggressive approaches. Before deciding one needs to consider these points:

Pros	Cons
Invasive procedures to damage nerve endings can sometimes effectively block pain when other methods have failed.	Procedures that block pain may not be permanent; one may need the procedure repeated.
Invasive procedures may lessen pain considerably and allow client to fully participate in an active rehabilitation program.	Surgery and other invasive procedures don't always work. Some have good results; some show little change; and some may even experience more pain.
Spinal fusion can stop the motion and instability in the back	Spinal fusion removes some of the flexibility of the

that cause pain.

spine. One needs to learn some adjustments in how one physically moves after surgery.

A more-aggressive approach may make it possible for one to resume work and other activities that are important to one's lifestyle, and more quickly than a less aggressive approach.

Surgery involves recovery time, and it can have side effects; for example, some experience later degeneration in the area adjacent to the spinal fusion surgery.

Long-term outcomes may be as good with less invasive procedures, and less costly.

Complementary and Alternative Therapies for Back Pain

Many clients commonly use complementary and alternative approaches to conventional care for low back pain. These treatments can be used in conjunction with conventional medical treatments. Alternative generally refers to treatment that one might choose in place of conventional treatment. Below are the most common complementary and alternative approaches used for low back pain:

- **Spinal manipulation.** This treatment involves the application of sudden force to the joints in the back. It is mostly performed by chiropractors, but the technique is also used by osteopathic physicians, sports medicine doctors, physical therapists and others to treat restricted spinal mobility. The goal is to restore spinal movement and, as a result, improve function and decrease pain. Spinal manipulation is a low-risk procedure that may provide increased mobility and emotional and psychological benefits. Some studies report moderate to good evidence for the effectiveness of spinal manipulation for low back pain, but most positive results were in clients who did not have long-lasting symptoms.
- **Acupuncture.** An acupuncturist inserts hair-thin needles under the skin, causing little or no pain. The needles usually stay in for 15 to 30 minutes. You may need several sessions. Pain relief may come from the release of endorphins, your body's natural painkillers, but how this method works isn't known for sure. Several studies in clients with chronic low back pain showed that acupuncture provides definite pain relief in the short term and perhaps over the long term.
- **Massage.** Massage therapy manipulates the soft tissues of the body — muscles, skin and tendons. Massage can relieve muscle tension and stress, promote relaxation, and improve circulation and range of motion. Massage therapy generally is safe and doesn't have adverse side effects, but it's not completely risk-free. Massage isn't advisable for people with unhealed fractures, deep vein thrombosis, skin infections or open wounds, rheumatoid arthritis in the area to be massaged, or severe osteoporosis. Studies have found moderate to strong evidence of positive benefits of massage in treating chronic low back pain.
- **Biofeedback.** Chronic pain may be associated with a range of physical, social and psychological components. Biofeedback is used to address any associated changes in the patient's personality or mental health. This helps address one's state of mind and can help relax muscles. Electrodes and other sensors are applied to the body to monitor and give feedback on such items as muscle tension, brain wave activity, respiration, heart rate, blood pressure and temperature. Once electrodes are in place, the therapist uses relaxation techniques to calm the client, reducing muscle tension and slowing the heart rate and breathing. Clients are taught how to produce these changes themselves. The goal is to help one enter into a relaxed state to better cope with pain. Review of studies with clients with chronic low back pain show conflicting evidence regarding its effectiveness.
- **Traction.** Traction involves using weights, harnesses or gravity to apply a constant or an intermittent longitudinal force along the length of the spine. The goal is to stretch the muscles, ligaments and other parts of the spine to help align their back and to reduce pressure on the disks. Although clients may see some benefit with traction, there's little evidence that traction helps with chronic low back pain.
- **Ultrasound.** Delivers deep heat by using high-frequency sound waves. A conductive gel is applied to the skin and then, using a hand-held probe attached to an ultrasound machine, ultrasound vibrations are transmitted through the skin to deeper tissues. Reduced stiffness, muscle spasm and decreased pain is reported. Evidence is limited on the effectiveness of ultrasound in treating chronic low back pain.
- **Yoga.** Yoga involves the use of physical poses and controlled breathing to achieve a calm mind and relaxed body and to improve physical fitness. Yoga can help relieve stress. Its quiet, precise movements focus your mind on the moment as you move your body through poses that require balance and concentration. A study of adults with chronic low back pain found that a gentle yoga routine was as effective as pain medication in reducing pain, and that the benefits lasted for several months. Note that some yoga positions can be strenuous and difficult to master, and may produce back strain. Care should be taken in selecting a trained yoga instructor who can help one select the proper poses.

Emerging Therapies for Back Pain

Research continues into therapies that may effectively treat chronic low back pain and that may eliminate drawbacks of some of the current treatment methods. Here's one therapy that's receiving a lot of attention:

Disk Replacement Therapy. This method may be an alternative to spinal fusion to reduce pain without limiting the flexibility of the spine. The surgeon uses a device to replace all or part of a damaged or collapsed disk. The replacement disk may be metal, plastic or a combination of the two materials. By replacing a disk, the proper height of the disk is restored, as is the proper spacing between the adjacent vertebrae. The procedure may result in pain reduction by relieving nerve compression, allowing greater range of back motion and a higher level of functioning. Disk replacement has gathered attention in part because of some of the drawbacks of spinal fusion, which include less mobility and the possibility of degeneration of areas around the fusion. Some early studies have shown that results of disk replacement therapy compare favourably to those of fusion. But it's still too early to know the long-term outcomes of this procedure.

Other Emerging Therapies

Other therapies in the exploratory phase as a way of preserving back motion, relieving pain or being less invasive than either spinal fusion or disk replacement include:

- **Dynamic stabilization.** This surgical process uses flexible materials to stabilize an unstable segment of the spine without actually fusing one segment of the spine to another. This preserves greater motion.
- **Biological solutions.** This approach involves development of biological proteins, such as bone morphogenetic protein (BMP), that can help stimulate bone growth. This could make surgical procedures such as spinal fusion more effective.
- **Gene therapy.** Gene therapy involves the transfer of genetic material into target cells, such as those of a spinal disk. This procedure holds great promise as a new tool in the future treatment of disk regeneration.

Watchful Waiting

- Back pain is among the most common of medical complaints. But because one has back pain it doesn't necessarily mean one needs medical attention. If medical attention is required, it doesn't necessarily mean one will need an invasive treatment.
- Watchful waiting is an approach to dealing with low back pain, which doesn't mean that you simply do nothing and see what happens. If one has acute back pain, you allow the pain a chance to improve with conservative, self-care approaches. Even if one has chronic back pain, one should investigate what active self-care steps can be used before assuming that one needs a more aggressive, invasive approach. Most clients are able to deal with low-level, nagging or even annoying back pain using self-care, adjustments and other coping skills. Clients may not need any higher level of treatment unless the pain interferes with their work, leisure or sleep.
- Watchful waiting may not be the best option if one has "red flag" indications associated with chronic low back pain such as advanced age, disability, history of cancer, trauma, prolonged use of corticosteroids and osteoporosis, and other factors.

Considerations

- **What's your current level of pain?** Is your pain slight or moderate, or are you in severe pain? Are you in pain all of the time, or does your back pain come and go? And even more important than having some level of pain, how has low back pain affected your ability to function at work, at home and in your leisure activities?
- **Have you given non-invasive, non-surgical treatments a fair chance?** How long have you had low back pain? How much of a recurring problem is it? Have you tried an array of non-invasive treatments, and what kind of effect have these approaches had? Have you given enough time for these non-invasive treatments to work?
- **Is surgery a good option for you?** Do you have some sort of degeneration or instability that surgery can address? Even if you do, is it of such a nature and severity that it's time for surgery? After all, some degeneration in the back is common by middle age — and most people continue to work with conservative approaches to improve their function and reduce their pain.
- **What's the likely effect on your lifestyle depending on which option you choose?** If you avoid a more-aggressive approach, are you able to control your pain so that you can function the way you need to and want to most of the time? If you do take a more-aggressive approach, are you prepared for the weeks of recovery that may be involved and for adjustments in how you sit, stand, walk and move, in the case of spinal fusion?
- **Is your doctor's experience and training having undue influence on your treatment decision?** Make sure you and your doctor decide on the treatment that's right for you, not just the treatment that your doctor is trained in or has the most experience with.

- **Remember**, whichever approach you take, there's a chance that you'll benefit markedly from that approach but also a chance that you'll be dealing with additional low back pain. And the approach you take requires commitment on your part. A non-invasive, non-surgical approach demands careful attention to strengthening your back and being aware of situations or poor mechanics that may injure your back in the future. A more invasive approach requires you to make adjustments after your therapy, and you may face additional treatment in the future.

Summary

- Both a non-invasive, non-surgical approach and a surgical or other more-invasive approach can be appropriate treatment for chronic low back pain. It's possible that either approach will lead one to reduced or eliminated pain, and to a higher level of functioning than one has been experiencing with their back pain. However, a non-invasive, non-surgical approach is the far more frequent course of action. Which approach is best depends upon one's specific diagnosis, personal situation, current pain situation, the length of time one has been in pain, one's feeling about pain, and one's work and lifestyle factors.
- Whichever approach one opts for, it's understandable that one wants to deal with one's pain and move forward. The client should discuss their personal situation with their health care provider to decide which more invasive approaches are best for them, knowing exactly what's involved in any procedures and what to expect afterwards.

YOGA THERAPY APPROACH

- Yoga therapy teaches clients how to breathe correctly, to connect their breath with body movement, to deepen one's self-awareness and relaxation techniques to help to create balance in their hectic lives.
- Relaxation is a crucial healing tool for managing pain, improving flexibility and muscular strength and increasing body circulation.
- Awareness is crucial to the yogic approach to back pain. Good yoga asanas do not just improve the functioning of the physical body, they engage one's mind.

Assessment

- It is rare that one particular muscle is only responsible for one's low back pain.
- Muscles function with each other and can support integrity and balance or lead to dysfunction.
- If a muscle on the front of the body is tight, it will pull the pelvis forward and lead to compression on the back body.
- If the right side of a paired muscle group is tighter than the left, it can pull the pelvis to the right and create torsion on the sacroiliac joint.
- The primary function of the more exterior muscles is to mobilize or move the body.
- The more intrinsic muscles are intended to stabilize or hold the bones in place.
- When stabilizers are weak, the mobilizers are forced to perform both the stabilization and mobilization functions. Result is chronically tight muscles that don't move well and are unable to support us. The weak stay weak and the tight stay tight. This translates directly into chronic pain.

Common Back Problems

- Neck, shoulder & upper back – need stability in low back first.
- Pelvic girdle – elevation/rotation of hips.
- Congenital – relatively non-vascular (repetitive stress injury).
- Ligamentous Condition – lack of stability, hypermobility, increased chance of injury, short- low ROM.
- Alignment – bone, skeletal, intervertebral space.
- ROM – can be decreased because of bone shape.
- SI Ligament, ischial femoral ligaments hypermobile or anterior/posterior ligaments.
- Biggest Risks – disc herniations!

Movement Recommendations

- Movement – Muscles/neuromuscular patterns – don't stay in postures; move in & out of them.
- Not about form of Asana – Use as a tool, functional practice, adapt forms of postures, form follows function, not concerned that you master a pose.
- Breathing – Relationship of flow of breath & movement of spine. Functional, structural & neuromuscular benefits. Link breathing to movement – enable you to mobilize spine at intervertebral function – main focus.
- Vinaysis – sequencing, work holistically.
- Practice with lots of repetition, adaptation, notice as you move to feel the breath & the more you will feel the stretch.
- Home practice should be only 15 mins in length.
- CAREFUL with seated forward bends or seated postures – contraindicated for low back issues.

- Lift thoracic spine to reduce posterior compression of low back (forward bends) – lifting engages iliopsoas muscle.
- Back bends minimize anterior compression of low back. Back bends can be done in contract & release fashion. Increases circulation in body.
- GOAL FOR LOW BACK PAIN: a) strengthen erectors, gluteals, abdominals & hamstrings last.
- Psoas tight, erectors increase compression. Tight muscles – contract first, release then relax.
- Problem – identify what you are doing habitually throughout day & stop it if you can. What can you do to reduce pain, increase circulation, decrease inflammation, realign, stabilize, strengthen what’s weak, increase functionally, focus on breath & self- awareness.
- Breathing – breath & movement = adapt the way we’re breathing to support intentional movement. Control breath/respiration. Link breath to movement ~ closing is compressing = exhale; opening is expanding = inhale. No forward bends or twists on inhales – pushes diaphragm up & risky for heart issues.
- Pattern of contraction naturally occurs. For example, if we always elevate our shoulders we just do it out of habit & hard to break out of pattern.
- Use breath & asana to release tension & develop functional movement.

The Anatomy of Low Back Pain

- Erectors – run lengthwise along the spine and hold us erect. They can be locked long (chronic slump) or locked short (lumbar lordosis). Ideally the erectors are strong and supported by the transversus abdominis and the multifidus and the skeletal bones of the legs, pelvis and spine. Forward bends stretch the erectors and back bends strengthen them.
- Quadratus Lumborum – spans either side of the spine across the lumbar region, below the rib cage and connects to the sacrum. With any sign of strain or torsion in the lumbo-sacral region, the quadratus locks down to prevent any further damage. Often the quadratus on one or both sides has forgotten how to relax, which impedes circulation and prevents healing. Side bends, forward bends and twists stretch the quadratus,
- Gluteus Muscles – along with the hamstrings and quadriceps are responsible for the mobility and stability of the pelvis. Sitting and standing for extended periods of time tires them out. When weakened they lose their capacity to support the pelvis and contribute to problems in the hips, sacrum and lower back. If excessively tight, they can put pressure on the sciatic nerve.
- Hamstrings – include three muscles, one that sits towards the outer thigh, one to the inside line and one that runs down the centre of the back of the upper leg. They originate at the sitz bones and run down the thigh to the knee, where they morph into the calf muscles. When the back body is excessively tight, it inhibits movement of all parts as fascia holds everything together. Tight hamstrings create undue stress on the lower back by pulling the pelvic girdle down and restricting its ability to rotate easily, thus reducing the healthy curvature of the lumbar spine.
- Pelvic Floor – These muscles form a sling from the tailbone to the pubic bone and offer a foundation of support for the whole pelvic girdle. Healthy tone of the pelvic floor benefits the musculoskeletal structure but also benefits the urinary tract, prostate and reproductive organs.
- Transversus Abdominis – Is the deepest layer of the abdominal muscle which extends from the pubic bone to the navel. Toning the transversus is critical for maintaining stability in the lower back. When a contraction of the transversus is combined with the engagement of the multifidus, pelvic floor and diaphragm, they create the inner core.
- Multifidus – are zipper-like muscles that connect each vertebrae to the next, from the base of the lumbar spine, all the way up to the skull. They lie deep underneath the erectors and are integral part of the core. They are hard to access and work best with the transversus abdominis and pelvic floor. When the multifidi are strong, they provide deep stabilization for the lumbo-sacral spine and allow the erectors and other more superficial muscles of the back to relax.
- Iliopsoas – the iliacus and psoas together form the iliopsoas, which maintain healthy pelvic lumbar movement. The psoas runs from the top of the lumbar through the pelvis, where it merges with the iliacus and inserts into the inner thigh. These muscles are responsible for deep hip flexion and extension. When the psoas is locked short, it pulls the whole pelvis forward, creating lordosis. When the psoas is weak, it does not provide adequate support for the low back and pelvis. Then with the sacroiliac joint creates misalignment and instability, as one side of the psoas is hyper-contracted, creating torsion and discomfort around the sacrum.
- Adductors and Abductors – Muscles of the inner and outer thighs, which provide functional support for postural alignment. The adductor fascial line begins at the arch of foot and runs up the inside line of the leg ending at the pelvic floor. These muscles need to be well-toned and flexible to support balance and agility in movement. Pronation of the feet (collapsed arches) or standing with feet and hips “ducked out”, cause this inner foundation to sag and weakens the whole pelvic girdle. Excessive tightness in the abductors can create chronic sacrum instability and hip pain. These muscles which connect to the iliotibial band can be tight or weak from lack of use.

- **Hip Rotators** – responsible for moving the ball of the femur in the socket of the pelvis. These muscles are small and mighty. Under-utilization of the rotators makes them tight and weak, which can lead to sore hips and an unstable pelvis. It can also create impingement of the sciatic nerve, which weaves through these muscles (particularly piriformis). Asymmetrical tightness can also pull the sacroiliac joint and create misalignment of the pelvic girdle. Any movement that increases external and internal hip rotation, will help to exercise the hip rotators.

Instructional Inner Core Exercises

(Relationship of diaphragm, pelvic floor, transversus abdominus and lumbar multifidi).

- **Diaphragmatic Breathing** – Focus on your breath and observe where the inhalation comes into the rib cage. Then try to expand the rib cage evenly in all directions. The expansion should be even, front to back, top to bottom and including both sides. Goal is to practice 8-12 breaths at one session, anytime during your day and particularly when you are under stress.
- **Pelvic Floor** – Mula Bandha. Contract both the superficial and deep pelvic floor muscles on the exhalation. Visualize the muscles that line the bottom of the pelvis as a drawstring. Cinch them in and draw them together and up. Avoid contracting the anal sphincter and gluteals. Begin to release them while maintaining muscular contraction on the front side of the pelvic floor. Repeat for several contractions but stop prior to the onset of fatigue.
- **Transversus Abdominus** – Uddiyana Bandha. Slowly and gently pull your lower abdomen inward engaging the deep muscles. Imagine an elastic cord running between the prominent bony points on the front of the pelvis. Squeeze in as if cinching that cord. Placing your hands on your lower abdomen may help you access the transversus. Repeat for several repetitions but stop prior to the onset of fatigue.
- **Lumbar Multifidi** – To activate these tiny muscles create a forward tilt in the pelvis (tailbone out, back slightly arched) and think of hugging your spine 360 degrees or narrowing the sides of the body in towards centre. This contraction should be isometric, meaning you should feel the tensing of the muscles, but there's no discernible movement. Hold for 10 seconds and for several repetitions but stop prior to the onset of fatigue.
- **Complete Core Activation** – Take a deep breath from your diaphragm, allowing your ribs to expand to the front, back and sides. Allow the air to exhale naturally. Inhale then exhale and gently contract your pelvic floor, transversus abdominus and lumbar multifidi altogether as one unit. It should feel like you've created an inner girdle that deeply supports your lumbar spine.
- **Asana Activation** – Once you are familiar with these core exercises, you can begin to integrate them in your asanas like Seated and Standing Mountain, Ankle-Knee Pose, Cobra, Warrior and Bridge. The pelvic floor and transversus are also important to engage in Forward Bends, Twists and Lateral Bends, as they offer additional support to the low back.

Notes On Bandhas

Mula Bandha (PELVIC FLOOR):

- ⊙ Mula means root, source, origin or cause and basis, or foundation - located at the base of the spine.
- ⊙ Located in the perineum (soft tissue between anus and genitals).
- ⊙ Contracts muscles of this area and lifts them vertically towards the navel.
- ⊙ The lower anterior abdomen below the navel is pressed backwards and upwards towards the spine.
- ⊙ Draw energy through the muscles of the perineum toward a central point, creating an energetic lift through core of body (inward and upward movement).
- ⊙ It stops the downward flow of life force (apana) [gathers energy that is moving outward] so that it can be equalized with the upward flow (prana).
- ⊙ Women feel the sensation of lifting the anterior aspect of cervix and men the anterior perineal muscles.

Effects

- ⊙ Practice balances the sympathetic and parasympathetic systems.
- ⊙ Improves health of the reproductive system.
- ⊙ Said to have an effect on the psychic body by triggering the awakening of the kundalini energy.
- ⊙ It aligns your whole skeletal structure by evenly redistributing weight through your joints and over your feet.
- ⊙ Enhances the lift from the perineal floor into the core of your body extending from anus to crown, which encompasses all organs, blood vessels, glands and nerves.
- ⊙ Contraction of pelvic floor muscles.
- ⊙ Stabilizes the spine.
- ⊙ Stops the outward flow of energy.

- ⊙ Creates a reservoir of vital, healthy energy within us.
- ⊙ Over time this root lock can be used in all your poses.
- ⊙ The yogi attempts to reach the true source or mula of all creation. The goal is complete restraint or bandha of the chitta, which includes the mind (manas), the intellect (buddhi) and the ego (ahamkara).

Uddiyana Bandha (ABDOMINAL WALL):

- ⊙ Uddiyana means “flying upward, to lift up, into flight”. An abdominal grip.
- ⊙ This gate is located in the low abdomen and is performed by exhaling fully and drawing the lower abdomen in and up while simultaneously lifting the diaphragm.
- ⊙ It is a lifting of the abdominal muscles and organs.
- ⊙ The diaphragm is lifted from the lower abdomen up into the thorax, pulling the abdominal organs back and up towards the spinal column.
- ⊙ This bandha is intended to create further lift for the upward flow of prana in the sushumna, from the lower abdomen towards the head.
- ⊙ It frees up energies stagnant in the abdominal area to support your spiritual endeavours.

Effects

- ⊙ Firmly up the area between your hips not only stimulates the internal agni (fire) but also maximizes your breathing mechanism.
- ⊙ Can be felt when legs, hips and pelvis aligned.
- ⊙ Contracting abdominal muscles at the end of the exhalation and releasing them is encouraged to fully empty out lungs and the diaphragm lifts up.
- ⊙ Allows diaphragm space to drop on the inhalation by moving your ribcage during full-lung expansion.
- ⊙ The lift of the diaphragm gently massages the muscles of the heart, thereby toning them.
- ⊙ Tones abdominal organs, increases the gastric fire and eliminates toxins in the digestive tract.
- ⊙ This lock enables prana to be drawn upward.

Five Spinal Directions

(Include spinal extension, forward bending, back bending, lateral bending and twisting).

- Spinal Extension – an upward, intervertebral lift, moving us out our habitual slump. Practicing Mountain Pose is recommended as it requires support from the small intrinsic muscles. Brining this awareness into daily life takes practice and constant reinforcement.
- Forward Bending – stretches the back body, which requires forward flexion or rotation of the pelvic girdle. This movement is achieved with standing, kneeling, sitting and reclining poses and involve a “Mountain Pose” awareness
- Back Bending –stretches the front body and this is not a usual daily movement for most people. Back bends create more length along the front of the body and will also strengthen the back body if executed properly. Poses can rectify weakened and underdeveloped muscles that a sedentary lifestyle tends to promote.
- Lateral Bending – opens up the sides of the body and stretches into the shoulders, upper back and arms. When the side body is tight, it creates undue stress that can pull us out of alignment. Side bends help to stretch the intercostals muscles and greatly aid in the development of respiratory capacity. The challenge is to avoid torsion in the pelvis, by actively engaging the lower abdominals and stabilizing the lumbo-sacral area.
- Spinal Twisting – most of us do not live symmetrically in our bodies. Conscious twisting poses help to unravel this torsion and re-establish symmetry, eventually alleviating a good deal of back pain. Twisting postures can help to free us up to safely engage in recreational activities.

Working with Posture through Yoga

- Yoga practice works quite specifically with the pairing of muscles in order to bring about balance, integrity and freedom from unnecessary stress in posture. Those who are flat-backed would benefit from an emphasis on back-bending and those with kyphotic lower backs would benefit from an emphasis on forward bending in asanas.

Joint Freeing Series (Overall warm-up; Repeat six times each).

Benefits: Teaches one how to move steadily & rhythmically & in harmony with breath. Improve circulation of blood & eventually prana to enable muscles to be better prepared for change. Will increase one’s energy level. Improves the flow of lymph fluids through the thoracic duct, located anterior to the lumbar spine. This strengthens the immune system.

1. In Straight Rod Pose (**Dandasana**), legs extended together on floor, (FEET) point/flex feet; roll toes together trying to bring feet together; roll both ankles in circles together both ways.
2. As above, (KNEE) bend L leg to chest, R leg on floor, grab L calf (or under knee) & extend leg up in air 6 times, repeat other leg.
3. As above, (HIP), legs back on floor, turn R foot slightly towards R, lift leg off floor & bring leg to R, then return R foot to normal position & return back to floor, do 6 times; repeat with other leg. **Variation**: Legs spread wide first, lift R leg off floor as you turn R foot towards R & as you bring R leg towards L, lift R hip R off floor, then lower L hip back towards floor as R leg returns back to straddle position with R toes leading to R.
4. In Thunderbolt Pose (**Vajrasana**), (HANDS), in unison, point/flex hands 6 times; fist rotations both ways for 6; now extend hands to floor, arms along side body, palms down fingers pointing towards buttocks, lift up through forearms; next turn palms up, fingers pointing towards buttocks, press gently into floor, then lift up top part of hand, keeping fingers on floor.
5. Do cat/cow (**Marjaryasana**) 6 times (SPINE).
6. Tiger Pose (**Vyaghrasana**), Kneeling, bend R knee towards chest, inhale, extend leg out behind you exhale, 6 times, repeat other side.
7. Kneeling, knees closer together, drop hips as a unit down towards R towards floor as close as you can, 6 times, repeat other side. **Variation**: Same position, but this time go into a slight cow tilt then drop R hip back, back to centre, slight cow tilt & drop L hip back. You should feel a little stretch into lower back. Focuses on lower back.
8. Sitting in easy pose (**Sukhasana**), rest hands above knees & hold there, inhale, exhale then pull belly button towards spine rounding back, hold & lengthen, inhale coming back up & repeat.
9. Sitting in easy pose, bring R elbow down to floor at side of body just beyond knee, raise L arm in air laterally towards R side; repeat other side. **Variation**: This time keep hands on knees, bring R elbow towards floor, then lead with L ear stretching L side of neck & lead with crown of head, hold, & repeat on other side.
10. Kneeling (**Vajrasana**) or easy pose (**Sukhasana**), (rotator cuff), elbows to sides of waist, palms up, open/close arms, elbows to sides of body.
11. Kneeling (**Vajrasana**) or easy pose (**Sukhasana**), extend arms out at shoulder height, palms facing down, just move thumbs in, baby finger move away. Now turn palms up & do same thing.
12. Kneeling (**Vajrasana**) or easy pose (**Sukhasana**), with arms extended out at shoulder height, bring fingers to shoulders, extend arms straight out front again for 6; keep fingers at shoulders, open & close elbows in front of chest; keep fingers at shoulders, rotate forward, rotate backwards together for 6; put arms up in cowboy surrender, turn hands down & up for 6.
13. Kneeling (**Vajrasana**) or easy pose (**Sukhasana**), hands at sides on mat, lift both arms up together extending towards ceiling as much as you can then swing both arms behind you lifting both up as far as you can, still keeping spine long & tall.

Lower Back Sequencing

- Generally, beginning and ending with a symmetrical forward bend is a good idea. This stretches the spinal muscles evenly from the start and realigns them at the finish.
- Back bends, lateral bends and spinal twists all create a level of contraction of the back muscles (either symmetrically or asymmetrically).
- Interspersing symmetrical forward bends in between the other directions of movement, helps release back tension that may have been created.
- Therefore recommended to alleviate any potential imbalance created by the other postures.

Spinal Movement Series

- Tabletop position with neutral spine:
- One Leg Cat bringing one knee folded inward on exhale & extended on inhale.
- Cat Pose.
- Add lateral leg lifts with knee remaining flexed.
- Lateral Cat – shoulder towards hip & hip towards shoulder.
- Leg swing & fold inward with lateral bend.
- Barrel Rolls – rolling abdomen through spine.
- Tiger Pose – Lengthen opposite leg & arm off mat (challenges balance also).
- Puppy Pose – with circling hips in both directions.
- Shoulder Thread of the Needle. **Modification**: Folded blanket under head.

Recommended Standing Asana

- Standing Table Hip Stretch Pose [Tabletop/Rotation] (Nitambasana) - Go into tabletop forward bend, then walk both feet, turning feet & body towards R & hold stretch. Return back to tabletop, then walk both feet, turning both feet & body towards R side, hold. **Note:** Stretches piriformis.
- Standing Strap [Bound at Upper Shins] Hands to Feet Pose (Padahastanasana) – Place strap around upper shins to maintain alignment of lower legs. Place hands on hips & flex knees & lean forward slightly. Widen & retract your sitz bones from hips to knees. Lean forward from the hips, not the waist. Firm all thigh muscles & inhale as you lengthen spine. Exhale, push into hip creases to return upright. The resisted isometric movement will widen your pelvis, relieving compression in the hips & SI joints.
- Standing Chair Quadriceps Stretch – Place chair seat to wall & place mat over chair back. Face backwards to chair back, bend R knee & place top of R foot onto mat on chair back. Reach back with both hands & hang onto chair back. Stretch quadriceps, release & repeat on other side.
- Standing Wall Chair Lunge Pose [Chair Back to Wall] (Anjaneyasana) – Chair back to wall. Step R foot onto chair seat, bend R knee into a lunge & hang onto chair back. Inhale into torso, exhale lift pubic bone toward breastbone & tuck tailbone as you lengthen L leg back & go up on L toes. Keep knee over ankle.
- Standing Chair Hamstring Stretch – Chair seat to wall with blanket on it. Place foot on top of chairback at or below hip level, with leg straight, knee & toes facing ceiling. Make sure hip of raised leg is not lifted but rather releasing down. Hold for several breaths. Repeat to each side. **Intensity Increase:** Flex spine forward at hip crease with spine/leg straight & quadriceps firm.
- Standing Wall/Chair Upward Facing Dog Stretch (Urdhva Mukha Svanasana) – Chair seat against wall with folded mat on seat. Stand 1' away from chair. Hold top of chair back, keep legs firm, arch up & forward until tops of thighs touch top of chair back & you are standing on tippy toes. Press down on top of chair, arch & lift sternum & collar bones.
- Standing Wall/Chair Twist [Foot on Seat/Hands to Wall] (Marichyasana) – Place chair back against wall. Step L foot onto seat with L hip touching wall. Inhale, exhale slowly twisting torso toward wall. Keep trunk upright, so spine revolves on its axis. Place L hand behind you & R hand forward; both against wall. Turn hips, waist, ribcage & shoulders. Move thoracic spine & shoulder blades in. Lift front of body. If necessary step R foot closer to chair. Hold then release slowly & switch sides. Strengthens spinal rotators & abdominals
- Standing Pelvic Floor [Transversus Abdominis] – Standing, knees bent & hands at hip creases. On exhale, contract transversus abdominals by pulling navel to the spine. Hold 5 seconds while you breathe normally. Repeat 5-10 times.

Recommended Kneeling Asana

- Kneeling Two-Wooden Block Lunge Pose [Ardha Leg Split Pose] (Anjaneyasana) – In four point kneeling, place two wooden blocks under each hand. Step R foot forward between hands into lunge, but stay up a little higher & gradually work into a lower lunge. Lunge forward then come back into Arda Hanumanasana. Repeat several times back & forth gradually deepening the lunge & hamstring stretch. **Modification:** Place blanket under knee for extra padding. Top of L foot flat to mat. Avoid overarching low back or going too deep. Repeat on other side.
- Kneeling Two-Wooden /Foam Block /Blanket Lunge Pose (Anjaneyasana) Series – **Note:** Do after Extended Puppy or Dog Stretch to lengthen the psoas as well as stretch & strengthen the quadriceps & hip flexors. In four point kneeling, place two wooden blocks under each hand (palms on edge of block with fingers draped towards the floor). R foot forward between blocks. Follow exactly in this order:
 - a) Lower L knee to folded blanket on floor with L toes extended on mat. With support of hands lunge forward slightly to go deeper into the psoas & hip flexors (rectus femoris). If the R knee is directly over the shin, it stretches the quad, rather than lengthening the psoas. If the knee is a little past the ankle BUT NOT past the toes, the psoas is also lengthened.
 - b) Now straighten the L knee, lifting it off the mat, to strengthen the front of the thigh while stretching the front hip.

- c) Place foam block under L knee, toes turned under & come upright.
- d) Finally place a foam block under L knee, toes turned under & come upright, with hands on R knee to support upper body. This brings the stretch higher up. Experiment with shifting the hips forward. This series lengthens the lower fibres of the psoas.
- Kneeling Pigeon Pose [Therapeutic Piriformis Stretch] (**Kapotasana**) – Into regular pose with R knee flexed forward. Try to get R heel in line with L hip for a 45 degree angle. Keep foot flexed to protect knee. This will be a stretch to the R piriformis. Lean upper body forward, tuck L toes under & slide or walk leg back (this gets the R thigh to rotate out passively as your hip descends toward the floor). Keep hips level to floor & square to front of mat; don't let pelvis turn to one side. **Modification #1**: Support R hip with a folded blanket if it does not reach the floor. Remain in pose for several breaths to one min. Experiment with leaning your upper body forward over your shin & with bringing torso more upright to vary the stretch to the hip. Only bring yourself to the edge of the stretch, so you can remain there, breath & allow the piriformis to stretch. **Modification #2**: If too intense, do Table Pigeon Pose.
 - Kneeling Gate Pose [Both Knees Flexed/One Sole on Floor] (**Parighasana**) – Start in a high kneel position in centre of mat, facing long side of mat with hands on hips. Keep L knee to mat as you step R foot forward with toes facing front of mat. Get R knee in line with R hip & feel R groin open. Flex R elbow down to R thigh. Remove L hand from L hip, sweep in front of body as you laterally flex to R. Hold then to come out sweep L hand to L hip & return R hand to R hip. Return to high kneeling position & repeat on other side.
 - Kneeling [Middle/Upper Back] Back Release #1 – Kneeling with knees wide & up on toes. Reach through legs under groins & rest tops of hands on floor between feet. Rest head on floor or onto a foam block or folded blanket. Push hips slightly forward & pull shoulder blades towards each other. **Modification**: Use a strap around feet & bring hands to outside of body & hold strap. **Note**: Stretches paravertebrals, rhomboids, trapezius & levator muscles.
 - Kneeling [Middle/Upper Back] Back Release/Rotation #2 – Kneeling with toes together, tops of feet flat. Reach through legs under groins with R hand as far as you can, dropping R shoulder. Rest L hand on mat & bend L elbow as you rotate cervical spine to L. Release & repeat on other side. **Note**: Stretches paravertebrals, rhomboids, trapezius & levator muscles.
 - Tiger Pose (**Vyaghrasana**) – Kneeling, shift body weight to L side of body, extend R leg up behind you off floor, being balanced then extend L arm straight out front off floor, hold, then alternate between sides. Breathe into back body. **Note**: Strengthens paraspinal muscles, gluteals & muscles that stabilize shoulder joint.
 - Kneeling Cat Pose [Hip Stretch] (**Marjariasana**) – Kneeling, turn L hip towards front, as you turn head towards R, look towards R hip, then alternate with L side. Repeat several times alternating side to side.
 - Kneeling UnCat Pose [Therapeutic Series] (**Marjariasana**) - Regular pose with variations as below:
 - a) Exhale, round low back, drop chin, bring belly to thighs, but NOT hips to heels. It's about lumbar on exhale & thoracic on inhale.
 - b) Now perform regular Cat, but only move hips back half way.
 - c) Assume position, but move ONLY R knee 2" behind you. Perform cat/cow here. You will receive a deep stretch on R side of back (quadratus lumborum) & an upper trapezius stretch on L side. Repeat on L side.
 - d) As c) but now move R knee back 2/3 of the way; repeat Cat, then repeat on L side. Make sure you are rounding low back & pulling pubic bone up high.
 - Kneeling UnCat Pose [Therapeutic Series/Scapular Isolation] (**Marjariasana**) – Set yourself up for regular Cat. Inhale then exhale & round into cat. But this time focus on scapulae when you inhale, adduct & depress scapulae slightly & eternally rotate shoulders as you extend chest. Inhale return to neutral spine & repeat several times.
 - Bolster [Vertical] Child Pose (**Pranatasana**) – Into Child Pose with knees wide & big toes together. Place a vertical bolster to mid-thigh level at groins, which should be high enough to have torso parallel to floor & long enough to support head. Lower trunk to bolster with arms out to sides, elbows in line with shoulders & palms resting on floor. Turn head to R, rest for a few minutes & then turn head to L. **Modification**: Knee discomfort ~ place a folded blanket between buttocks & heels OR sit on a second horizontal bolster. Ankle discomfort ~ place a partially rolled blanket under ankles (B). Neck strain ~ place 1-2 folded blankets under head. Breathe into the lower back.

- Blanket Kneeling Puppy Pose (**Pranatasana**) – Kneel & rest chest on thighs & head towards floor. Folded blanket(s) can be under head, under buttocks or between abdomen & thighs if needed. Rolled blankets can be placed under fronts of ankles. Relaxing passive stretch for spinal muscles.

Recommended Seated Asana

- Seated Chair Hands to Feet Pose (**Padahastana**) – Sit in chair off seat slightly with legs parallel & hip-width apart. With both hands on one hip & thigh, manually turn in & broaden the hip to the side. Repeat on other side for a manual inner spiral. Lean forward & place hands on outside of legs just below knees. **Modification:** Shoulder or arm pain – place a strap below knees instead of using your arms. Widen & retract your sitz bones. Lean forward from the hips, not the waist. Firm all thigh muscles & inhale as you lengthen spine. Exhale, push hands strongly in toward the midline & press out equally strongly with thighs. The resisted isometric movement will widen your pelvis, relieving compression in the hips & SI joints.
- Seated Chair/Table Hands to Feet Pose (**Padahastana**) – Sit on edge of chair seat with chair at table. Fold arms & rest on table. Rest head on folded arms. Hold then re-cross arms & head position, if cheek turned to one side. Position allows spinal muscles to release & lengthen.
- Seated Chair Hip Stretch Pose [Intertwined Fingers/One Knee Pull] (**Samkatasana**) – Sit in chair & cross R knee over L. Intertwine fingers around R knee & pull R knee towards chest. Repeat on other side. **Note:** Inflexible hips (glut max & piriformis) can contribute to back pain.
- Alert Pose [Piriformis Stretch] (**Samkatasana**) – Start in **Dandasana** off of folded blankets or blocks if needed. Bend R knee & bring R leg over to cross L leg. Move L foot across midline to R (so L foot is in line with R hip). Using hands to floor, lift & wiggle your hips until knees are stacked, R knee above L knee. If L knee is off floor roll a blanket under it to support leg. Hold R foot in place with L hand. Inhale & lengthen spine. Exhale & flex spine forward, chest lifted & neck long. Will feel most stretch in straight leg at outer hamstring & calf. Keep quadriceps engaged to help hamstring to release. **Intensity Increase #1:** Turn chest slightly to R. On straight leg extend through mound of big toe & inner heel so that little toe side of foot draws slightly back, firming the outer shin. Keep toes of L foot pointing directly upward. **Intensity Increase #2:** Reach R hand to outer edge of L foot without pulling back too strongly to jam outer knee & hip. Hold several breaths to one minute or more.
- Seated Upper Back Release – Seated with knees bent & close to chest. Take arms to outside of legs & wrap around shins, bringing hands to feet. Grab a hold of feet pulling toes in, but pushing into hands also. Round lower back as in cat & feel upper back stretch out.
- Seated Upper Back/Neck Release [Newspaper] – Seated in Easy Pose or Thunderbolt. Place palms face up on knees. Exhale & raise both arms up to eye level, palms facing you & keeping elbows bent. Inhale, raise upper arms up, keeping shoulders down & follow hands with your eyes.
- Easy Pose ~ Turned Body (**Parivritta Sukhasana**) – Seated in Easy Pose, place L hand onto R thigh; inhale raising R arm up into air circling back & bringing hand onto floor behind you. Root sitting bones to floor. Draw from knees in toward core of pelvis to stabilize pelvis & sacrum. Inhale & lengthen spine. Exhale & twist gently towards R. Originate twist in core of pelvis, spiraling the twisting action upward through spine. The last part of the twist is your head turning to the R. Press L hand into R thigh for added leverage while twisting. Back off, inhale; exhale lift through chest & twist as far as comfortable. Try to press L hip down towards floor. Release slowly & repeat other side. **Modification:** For more comfort sit on a blanket(s)/off a foam block to get length through spine. Support your upper body with fingertips on floor if necessary.
- Seated Easy Spinal Twist [Hand to Knee] (**Sukha Matsyendrasana**) – In Straight Rod Pose, keep L leg extended, R foot cross over L thigh, gently pulling R knee towards chest with L hand & R hand placed on mat behind into twist. Lift up through chest & rotate. While you are here, concentrate on breath, breathe into L lung & feel L lung expand into L ribcage. Breathe into all internal organs, pancreas, liver & spleen. Hold & release & repeat on other side.

Recommended Prone Asana

- Serpent Pose (**Sarpasana**) – Prone, stretch arms straight back. Allow forehead to rest on floor, so back of neck is long. Soften front of body. Roll thighs inward as you press pubic bone towards floor. Inhale & simultaneously lift head, chest, arms & legs off floor. Elongate from the low belly upward through crown & root tailbone down. Lengthen

from core of pelvis & draw shoulder blades down the back. Tuck chin in toward chest a little to keep neck & shoulders soft & relaxed. Remain in pose for a few breaths & release. **Modification #1:** Lower back issues, don't raise arms & legs too high. Stretch shoulders back, keeping arms parallel. **Modification #2:** Alternately lift one arm & opposite leg at the same time. **Note:** Great for strengthening low back & for those with sciatica. Don't do with a hernia; only one leg at a time.

- Sphinx Pose (**Bhujangasana II**) - Prone with face down on floor with legs straight with inner thighs, knees & ankles touching. Extend arms overhead on floor with fingers spread wide. Extend from shoulders to elbows, then from elbows to wrists to each fingertip. Inhale as you lift your head & chest & slide arms back toward body until elbows are directly beneath shoulders. Roll shoulders back & pull them down, so they move away from ear lobes. As you extend spine upward, draw shoulder blades in closer toward lungs. Lengthen lower back by pressing tailbone down toward floor. Press forearms & palms into floor. Lengthen from elbows to armpits, as you "pull" chest forward toward fingertips so side ribs move through upper arms. Spread back arch evenly through back, so middle & upper back curve more. Release & rest.
- Warm-up Cobra Pose (**Bhujangasana I**):
 - a) Hands beside chest & turn head to rest L cheek on floor, inhale.
 - b) Exhale, head back to centre & hold in a gentle back extension keeping elbows on floor, hold for 2 breaths, exhale lower.
 - c) Turn head to rest R cheek on floor, inhale.
 - d) Exhale move head to centre & extend. Repeat side to side.
 - e) Extend arms overhead on floor & rest & inhale.
 - f) As you lift arms up, pull elbows back, keeping arms parallel & squeeze shoulder blades, exhale.
- Cobra Pose [Fingertips to Upper Trapezius/Forehead Salute] (**Bhujangasana I**):
 - a) Prone & bring fingertips to upper traps.
 - b) Inhale then exhale engaging abs & press toes & pubic bones into mat.
 - c) Inhale into Cobra then exhale as you extend R arm, flex elbow & salute forehead with fingers, palm facing down.
 - d) Inhale, depress R shoulder blade down.
 - e) Exhale look to R on floor beside you then lower R facial cheek to the mat.
 - f) Inhale raise head & exhale neck to neutral.
 - g) Inhale lower to mat, exhale move R fingertips back to upper traps.
 - h) Repeat on L side. Then repeat twice more on each side.

Recommended Reclining Asana

- Half Gas Relieving Pose [Leg Extended/Hip Rock] (**Pavanmuktasana**) – Leg extended on mat & R knee hugged into body. Hands remain on the floor. Rock side to side, across hips to massage back. Repeat for many repetitions. Release & repeat on other side.
- Gas Relieving Pose [Upper Body Hug] (**Pavanmuktasana**) – Reclining with both knees flexed in space. Cross R arm over L & hug yourself. Hold for a few breaths. Change to L arm crossed over R & hold for a few breaths.
- Gas Relieving Pose [One Leg] (**Eka Pada Pavanmuktasana**) – Start in full Gas Relieving Pose with hands to shins. Remove R hand from R knee to join L hand on L knee. Extend R leg up towards ceiling with R toes pointed. **Modification:** Tight hamstrings, flex knee more. Flex R toes as you lower R leg towards the floor & at the same time hug L knee into chest with both hands. Inhale point R toes as you raise R leg back up. Repeat 9 more times. Hug R knee in & transfer both hands to R knee & repeat series on L side.
- Reclining Sacral Rock #1 – Lying, knees bent, feet parallel. Place neck roll under neck & folded blanket under head. Keep knees together & feet ON floor. Move knees slowly to L 6-8" then back to centre. Move to R. Repeat 10 times.
- Reclining Sacral Rock #2 – Go into #1, but cross L leg over R & rock back & forth over the sacrum for 30 seconds. Then repeat on other side.
- Wall/Strap Gas Relieving Pose [Bound Ankles to Wall] (**Pavanmuktasana**) – Begin with Legs-Up-the-Wall after you bind ankles with a strap. Then bend knees, sliding heels down the wall to 90 degrees. Keep hips on floor & allow

knees to move toward armpits until feet are flat against wall. Rest arms alongside hips with palms facing up. Close eyes, leg go & breathe. Hold for 2-5 minutes

- Wall Reclining Ankle Knee Pose (**Bhadrasana**) – Reclining at wall, padding under neck/head as needed, knees bent & soles of feet together at wall. Heels as close to groins as possible. While breathing, rock pelvis slowly in a circle over the sacrum, pressing along its outer edges. This will massage the sacrum & strengthen the abdominals.
- Wall Reclining Strap Wing Pose (**Supta Paksasana**) #1– Reclining with 2 straps with feet pressed into wall. Place a buckled strap around L upper thigh & bend R knee slightly to place other end around R foot & place R foot back against wall. Raise L leg towards ceiling & place second strap around L foot & hold onto in both hands. Tighten strap around hip, so that when you lengthen L leg you will create traction in L leg & hip. Continuously press R foot into wall. Release & repeat other side. **DO NOT PULL TOWARDS BODY – KEEP STRAIGHT.**
- Moving Easy Bridge Pose (**Setu Bandhasana**) – Reclining with knees flexed, feet hip distance apart & arms lengthened on floor. Inhale & raise buttocks off floor just as high as you can with NO effort. Exhale as you return to the mat. Repeat several times, then hold posture at your comfortable height. Keep chest open by moving breastbone towards head. Strengthens gluteals, hamstrings & abdominals. Stretches hip flexors & corrects both feet & increased lumbar curve.
- Bridge Pose [Therapeutic Series A] (**Setu Bandhasana**) – Bridge Pose as follows:
 - a) Pose with knees together.
 - b) Pose with knees 3” together. Roll up & down spine.
 - c) Pose with knees 6” together.
 - d) Pose with knees 9” together. Feel difference in hips.
 - e) Pose with knees 12” together. Feel impact on hips.
- Bridge Pose [Therapeutic Series B] (**Setu Bandhasana**)- Start first in Corpse Pose:
 - a) In **Savasana**, legs extended. Raise both arms overhead then return arms beside hips to floor. Repeat a few times.
 - b) Inhale raise R arm overhead to floor.
 - c) Exhale flex R elbow a bit.
 - d) Inhale & extend R arm. Stay here & feel R ribcage extend for two breaths.
 - e) Repeat b) to d) on L side. Then repeat twice more on each side.
 - f) Flex knees, soles to mat & up into Bridge Pose. At same time raise R arm overhead with pelvis high. Repeat on L side. Repeat twice more on each side.
 - g) Next – exhale, extend R arm overhead (to previous ROM with last Bridge). Inhale then exhale into Bridge Pose. Inhale hold. Exhale then lower spine to mat keeping R arm still extended overhead. When buttocks to mat, then lower R arm to R hip on floor. Repeat this on L side. Then repeat twice more on each side.
 - h) Now unison – Exhale, extend R arm overhead then add L arm overhead & hold. Inhale, stretch arms away from body. Exhale up into Bridge Pose. Inhale & hold. Exhale, lower spine **ONE VERTEBRAE AT A TIME VERY SLOWLY** to mat, keeping arms both extended overhead. Exhale, lower R arm to hip followed by L arm to hip.
- Bridge Pose [Therapeutic Series C] (**Setu Bandhasana**) - Set up for Bridge Pose:
 - a) Inhale, bridge pelvis up & R arm overhead.
 - b) Exhale, lower pelvis down, keep R arm extended.
 - c) Inhale, rotate neck to L; look L.
 - d) Exhale, neck to neutral, lower R hand to mat.
 - e) Repeat on L side & repeat several times to each side.

Reclining pelvic tilts – Lengthen tailbone to lift sacrum off ground while keeping lower back connected to the earth. Repeat 5-10.

Reclining Ankle Knee Pose [Moving with Breath] (**Supta Bhadrasana**) #4 – Reclining with soles together. Slowly (over 10-20 breaths) draw your knees together. Keep pelvis neutral & connect with inner core. If shaking occurs at any point through the movement, pause & breathe here. If uncomfortable release momentarily. **Note:** Pose also releases tension from pelvis, low back & core area.

Reclining Spinal Twist [Slowly Lowered Knees] (**Parivartanasana**) – Reclining, knees bent with arms out to sides. Roll bent knees to R side & hold 30-60 seconds. Inhale then exhale & return to centre & twist to L. Then to intensify slowly lower knees, but don't rest on floor. Hold for 3-10 seconds & twist to L. Repeat 3-5 sets. **Note:** Stretches paraspinal & abdominal muscles.

- Reclining Abdominals [Hands to Lumbar Curve] - Reclining, flex knees with soles to floor. Move hands & place palms down under low back. Inhale into rib cage to expand lungs. Exhale & pull navel towards spine to contract the transversus abdominus. Repeat for several repetitions.
- Reclining Foam Abdominals [Block to Thighs] – Place horizontal block between upper thighs with knees bent & arms out to sides resting on floor. Lower legs to R as a unit, contracting abdominals & inner thighs, lowering as close to floor with no strain in back & alternate side to side.

Reclining Double Bolster [**Viparita Dandasana**] Chest Opener – Passive Back Arch – Place two bolsters vertical one ahead of the other & place one folded blanket on floor ahead of bolsters where your head will rest. Fold the other blanket & place on bolster that you will sit on. Sit on bolster knees bent & lower yourself down. Shoulders & head rest on blanket floor. On exhalation slide L foot out to a lengthened leg. Inhale then exhale & slide R foot away. Return to both knees bent position if any back distress. Stretches pectorals, iliopsoas & quads.

Sequence for General Back Pain #1

1. Chair Seated Twist – Regular pose.
2. Chair/Wall/ Foam Standing Twist (**Utthita Marichyasana**) #1 – Place chair back against wall with a block horizontal on the chair seat. Stand facing the chair with R side of body next to wall. Keep L leg firm on floor. Put R foot up on block on seat & L hand on R knee. (May also put a horizontal block under L heel, which increases the rotation of your pelvis). Inhale, lift chest. Exhale & rotate whole torso to the wall placing hands on the wall. Stretching up on the inhalation & turning torso slightly more on each exhale. Hold then release slowly & switch sides. Strengthens spinal rotators & abdominals.
3. Chair/Strap Standing Big Toe (**Utthita Hasta Padangusthasana I**) – Regular, chair back against wall, Stand facing wall, leg on chair back, strap around foot. Press foot into wall. **Modification:** Back discomfort – Place foot on bolster onto chair seat.
4. Chair/Strap Standing Big Toe (**Utthita Hasta Padangusthasana II**) – Regular, chair back against wall, Stand sideways to wall, leg on chair back, strap around foot. Press foot into wall. **Modification:** Back discomfort – Place foot on bolster onto chair seat.
5. Angle Pose (Parsvakonasana) – With wall & vertical wooden block for hand at leg.
6. Standing Wall/Chair Upward Facing Dog Stretch (**Urdhva Mukha Svanasana**) – Regular.
7. Reclining Knee-to-Chest Pose (**Eka Pada Supta Pavanmuktasana**) – One knee to chest at a time, other leg lengthened on floor.
8. Wall Reclining Strap Big Toe Pose I (**Supta Padangusthasana I**) - Regular pose.
9. Legs Up the Wall – Regular pose.
10. Twisted Stomach Pose (**Jathara Parivartanasana**) – Regular pose.
11. Legs Rest on Chair Seat, back on floor.

Sequence for General Back Pain #2

1. Foam Block/Blanket Easy Pose (**Sukhasana**) – Sit off a foam block with a rolled vertical blanket under ankles. Focus on breath.
2. Reclining Blanket Neck Rotation – Reclining with knees flexed & soles on floor. Place a rolled blanket in neck curvature.
 - a) Rotate head side to side for a few rotations.
 - b) Then tilt top of head to L & turn head to R. Repeat on other side & repeat twice.
 - c) Holding b) but when tilting to L, reach L hand up & apply gentle pressure to turn head slightly, hold & feel neck release. Repeat on other side.
3. Half Gas Relieving Pose (**Ardha Pavanmuktasana**) – Reclining, roll blanket & place under low back for support, knees flexed & soles on floor. Let tailbone & sacrum rest over blanket. Bring R knee into chest & hold. Repeat on L side. Repeat three times on each side.
4. Strap Reclining Big Toe (**Supta Padangusthasana**) – L knee flexed & sole on floor. Strap around ball of R foot & extend leg towards ceiling stretching hamstrings (too tight – flex knee more) & relaxing back. Release & repeat on other side.

5. Reclining Blanket Arm Movements – Place blanket roll under upper back, knees flexed & soles on floor:
 - a) Inhale & raise R arm overhead then exhale back to floor. Repeat on other side & repeat several times.
 - b) Inhale & raise both arms overhead then exhale back to floor.
 - c) Holding b) then extend legs out on floor into Reclining Tadasana. Stretch arms & legs apart from each other. Open chest, collarbones lift & elongate waist.
6. Blanket Corpse Pose (Savasana) - Reclining, knees flexed, soles on floor & place rolled blanket under pelvis. Place hands on belly. Rest body & allow spine to release. Relax all tension from abdomen. Work with diaphragmatic breathing. Remove rolled blanket.
7. Reclining Leg Series – Reclining, knees flexed & soles on floor:
 - a) These two poses are a moving series focusing on the flow of breath. Inhale & extend R leg towards ceiling for hamstring stretch. Flex knee as needed. Then immediately exhale & flex R knee & rest R heel on L upper thigh for Hip Thread of the Needle. Repeat three times on R side then followed by L side.
 - b) Back to Hip Thread of the Needle & hold pose now, threading arms if possible to intensify stretch. Repeat on L side.
8. Easy Pose Spinal Twist (Matsyendrasana).
9. Easy Pose Hip Stretch (Nitambasana).
10. Easy Pose (Sukhasana) – Spinal flexion with folded arms to floor. Rotate to R & fold sternum over R knee. Hands to floor to either side of knee. Release & repeat to L side.
11. Cat Pose (Marjariasana).
12. Dog Stretch (Svanasana) – Up on toes & press sitz bones up, lengthen spine, full traction of spine with reaching of arms.
13. Baby Cobra Pose (Bhujangasana) – Ground toes & pubis. Move chest forward & lengthen neck.
14. Serpent Pose [Folded Arms] (Sarpasana):
 - a) Prone, fold arms & rest head to them. Keep head down through pose. Lift R leg & alternate with L for a few repetitions.
 - b) Regular pose, elbows to mat, fingers spread & extend spine.
15. Lunge Pose (Anjaneyasana) – Basic standing lunge. Press sacrum forward, chest lifting & hips square.
16. Hands to Feet Pose (Padahastanasana) – Hands to body for support as needed.
17. Chair Pose (Utkatasana) – Extended arms.
18. Standing Back Arch (Pritha Vakrasana) – Hands to buttocks, hips or extended.
19. Mountain Pose (Tadasana).
20. Wooden Block Triange Pose (Trikonasana) – Use wooden block for support.
21. Wooden Block Angle Pose (Parsvakonasana) – Use wooden block for support.
22. Chair Tree Pose (Vrikshasana) – HAND to chair back for support.
23. Chair Lunge Pose (Anjaneyasana) – Hands to chair back for support.
24. Chair/Two Blanket Corpse Pose (Savasana) – Reclining, rolled blanket at lumbar spine, knees flexed & feet resting to chair seat on blanket.
25. Reclining Abdominals – Reclining, knees flexed & cross R ankle over L. Extend both arms to R diagonally. Press R knee to outer arm. Flex feet. Lift head & torso. Bring L armpit to R. Draw knee into body.
26. Ankle Knee Pose (Bhadrasana) – Regular, elongate spine while pushing soles together.
27. Two Chair/Bolster Child Pose (Pranatasana) – Two chair seats facing each other, sit on one & place a vertical bolster from you to the other chair. Pull bolster to belly, flex over bolster, rest forehead to bolster with elbows flexed & hands on chair seat. If comfortable rotate neck to one side then the other. **Modification**: Neck issues – place folded blanket on top of bolster for head to rest.

Sequence for General Back Pain #3

- a) Standing Chair Chest Opener – Chair back against wall. Face backwards to chair & grip chair back. Squeeze shoulder blades towards each other & open chest.
- b) Feet Exercises ~ i) Ankle Stretch Pose (Malasana), ii) Squat Pose (Avasvastikasana) – up on toes & iii) Supine Thunderbolt Pose (Supta Vajrasana) – hands behind buttocks, bend elbows & open chest.
- c) Truck Stabilizer – Kneeling Tiger (Superman) Pose.
- d) Straight Rod Pose (Dandasana) – but with rolled towel under knees with feet off floor.
- e) Strap Half Bow (Ardha Dhanurasana) – Perform Half Bow using a strap to anchor ankle. Repeat on each side.
- f) Bolster/One- Leg Supine Thunderbolt Pose (Supta Vajrasana) – bend R leg back, hands to floor & lower body to bolster & open chest. Repeat on other leg.
- g) Chair/Blanket Easy Pose (Sukhasana) – Chair back against wall. Sit in Easy Pose, off blanket in front of chair. Bring hands to chair seat, fold them & rest in the forward bend.

- h) Sacroiliac Joint Release Series – i) Foam block under buttocks, lower body to reclining either with legs extended or soles to floor. ii) Hug one knee to chest at a time. iii) Now replace block with a bolster at buttocks & take a strap & bound upper thighs. Lie down on bolster. iv) Bend knees back to chest. v) Standing, take hand to chair back for support. Stand on block & swing one leg off the edge of the block. Turn around & repeat on other leg.
- i) Chair Lunge (**Anjaneyasana**) – Chair back against wall. Kneeling in front of chair seat & take hands to chair seat. Extend R leg behind you into a lunge & resist body forward into chair, hold. Release & repeat on other side.
- j) Reclining Spinal Twist (**Matsyendrasana**) – Regular.
- k) Chair Traction – Put chair sideways close to wall & sit on it. Hands on lap, push skull into wall engaging neck muscles & lifting chest up.
- l) Chair Back/Shoulder Stretch – Place chair back against wall. Kneel in front of chair. Bend elbows & take hands behind neck into namaste with fingers pointing down back. Forward bend to chair seat bringing elbows to chair seat.
- m) Bolster Half Shoulderstand (**Ardha Sarvangasana**) – Use wall with bolster. Bring buttocks to bolster & into pose. Feet can use the support of the wall or free standing.
- n) Bolster Plough (**Halasana**) – From Half Shoulderstand (above) go over into Plough Pose. May also use chair & bring feet to chair seat in Chair Plough if preferred.
- o) **NOTES**: Standing & Seated Forward Bends with straight legs – too difficult. Bend knees in both cases. Seated – bend knees & grab toes. Standing – bend knees & use hand support on upper thighs. **AVOID**: Camel & Bow Poses.

Sciatic Focus

If the source of your sciatica is a herniated or bulging disc, gentle poses to basic foundational asanas like standing poses & dog stretch will align, lengthen & strengthen your lower back. *This ONLY occurs in 10% of the students with sciatica.*

In general, sciatic pain is helped by poses that passively stretch the hip with the thigh externally rotated, but NOT Supta Bhadrasana, which actively rotates thigh outward & thus tighten the deep hip rotators. *90% of students with sciatica have tight a piriformis as their source of pain.*

- Tight muscles can compress the sciatic nerve, which runs from the lumbar spine down the back of the leg to the toes. Helpful poses – Reclining Thread of the Needle & Pigeon Pose (will not help if sciatica is caused by a low back or disc injury). Avoid standing & seated forward bends. Recommend that students contract transversus abdominus consistently throughout pose so SI joint pain will be less when these muscles are engaged.
- Pigeon-Toed Walking for Sciatica – Walk forward for 10 total steps pigeon-toed. As you turn feet in only take in as far as you feel it in your hips (not knees). This will stretch the piriformis muscles of the hips. Then immediately after walk for 10 complete steps normally. Repeat for several repetitions.
- Chair Pigeon Pose (Washboard Motion for Sciatica) – **Note**: Confuses the nervous system & piriformis releases its grip. BEST exercise to do if someone has current sciatica. Seated on edge of chair seat. Cross R knee over L thigh with R ankle beyond L knee & R toes flexed. Keep both thighs relaxed so wherever the legs are leave them there. Take R hand & press from hip crease towards knee. Press down hard & firm & as you head towards the knee. Lift hand quickly just before knee & let knee kind of spring up by itself. Repeat several times then repeat on other side.
- Seated Piriformis Stretch – Sit on corner of folded blanket 4-6” high with knees bent & feet flat. Take R foot under L knee & place on floor next to L buttock. Then place L foot on floor next to outside of R thigh. Feel weight on both sitting bones. Allow spine to lengthen upward, lifting breastbone. Hold knee with both hands. Hold 20 seconds to 3 minutes. Repeat other side. **Modification #1**: If L foot doesn’t touch floor or buttock stretch too intense, place L foot next to it or in front of R knee instead. **Modification #2**: If total stretch too much then raise height of buttocks with more folded blankets.
- Wall One Leg Up/One Down (**Limited** – Can only use wall corner!) - You need to be able to stretch one leg up wall & other leg lengthened on floor. Support neck with roll/blanket under head. Adjust leg so that it is straight & sacrum on floor. If you have back pain when you lengthen floor leg, put rolled blanket under that knee. **Modification**: If bothers sciatica more, move away from wall more.
- Table/Two Strap/Weight Hamstring/Sciatica Stretch – **Note**: In this pose the quadriceps & femur bones are grounded, which allows blood to circulate into hamstring, which promotes healing of hamstring injuries & sciatica problems. Combine two yoga straps together & feed through a 25# weight place (hole in centre). Stand facing a table with mat

on it; must be height of hips & leg distance from table. **Modification:** May have a chair to side of you for balance if needed. Shift weight to non-injured leg. Lift injured leg & place through straps & place heel directly on table. Adjust straps so that one strap is at the hip crease & the other is about 2" above knee. The weight will hang in centre of leg. Keep low back & lower abdominal muscles lifted. Keep standing leg firm & toes of extended leg flexed toward you. **Note:** Should be performed twice daily, holding pose for 5 minutes & uninjured side for 2 ½ minutes only.

- Wall Chair/ Strap Big-Toe Pose (**Padangusthasana**) – Place chair to wall (chair back if more flexible in hamstrings. Less flexible chair seat faces out. Place strap on floor & step on it with L foot & hold pieces of strap. Lift R leg off floor & place R foot onto chair back/seat. Your foot should be at or below hip level with leg aligned & quadriceps engaged. Micro bend L knee if it tends to hyper-extend. From here bind strap around L mid thigh, holding strap still under L foot & draw thigh bone down. Make sure hip is not lifted, but rather releasing downward. Hold for several breaths. **Intensity Increase:** For a deeper stretch, flex spine slowly, hold & release upward. You can alternate legs or just complete on the affected side.
- Reclining [Thread of the Needle Rock & Hold] Hip Stretch – **Note:** External rotation of hip targeting the piriformis muscle. Reclining, knees bent, feet on floor. Place R foot on L thigh making sure R ankle is beyond knee with toes flexed & let hip open by itself. Reach through legs (thread the needle with legs) & pull buttocks off floor with knees towards chest. Feel lower back off floor. Then bring lower back to contact with floor, push R elbow into R thigh & pull L knee towards chest at same time. From here slightly rock 1" to the L & then 1" to the R to find where you are the tightest & where you can obtain your optimum piriformis stretch. Once you find it, hold it & breathe. Repeat other side.
- Kneeling [Sciatica] Back Release Series:
 - a) Kneeling, move hips back & rest weight on L leg. Bring R foot forward so that you balance on front of foot. Swing hips gently from L to R, or make small circles with your R knee. Repeat on affected side. **Note:** Avoid this step if pain is acute.
 - b) Kneeling, move weight toward hands. Slowly raise R leg off floor slightly, keeping knee bent & hips level. Bring R knee forward & make small circles at floor level with knee. Keep foot relaxed & breathe evenly. **Note:** Use to prevent & relieve the pain.
 - c) Kneeling, keep L knee bent & let R leg extend, sink to floor & relax it completely as you drop R hip. Shake R leg loosely from hip to toes. Breathe deeply & shake for 2 minutes, expanding your exhalation to release pressure on the sciatic nerve. Voice your exhalation with a deep "Aaah" sound if this helps. **Note:** This action relieves acute sciatic pain.

Pranayama

- Breathing Awareness (Complete Breath):
 - a) Draw your senses inward so you can focus on the physical sensations in your body. Notice how your body responds to your breath. Place your hands on your abdomen & take a couple of deep breaths. Observe how it raises when you breathe in & sinks when you breathe out. Then consciously relax the belly, so the pumping action of the stomach becomes less extreme as you continue to breathe slowly & softly.
 - b) Now place your hands on your lower rib cage, middle fingers touching. Relax your abdomen & watch how the lower ribs expand to the sides, moving the fingertips away from each other when you inhale & back toward each other when you exhale.
 - c) Now place your hands at the top of the ribcage, with the middle fingers touching. Deliberately deepen your inhalation, so the breath moves higher up into your chest. Notice how the in-breath not only moves the hands away from each other, but also moves the hands up toward the throat, as the lungs fill with air & the chest expands.
 - d) Watch the movement of the ribs as you exhale; just as they rise when you inhale, they fall when you exhale. Now exhale in such a way that the rib cage does not sink but remains firm & lifted as the air is expelled from the lungs. Keep the abdomen relaxed throughout.
 - e) Shift your focus to the back ribs. With your arms resting now to the floor by your sides with upper arms turned out, bring your awareness to the back & sides of your torso as you breathe steadily & softly. Inhale & feel the sensation of the back ribs expanding. Observe how the side ribs expand out to the sides on the inhalation & return back to normal when the exhalation is complete. Allow your breath to touch the entire inner circumference of the rib cage.
 - f) Do not allow your shoulders to move up. You can readjust them after your exhalation if they have crept up toward your neck. Roll your shoulders away from your neck; draw your breastbone & sides of your upper chest to lift toward your head. Then inhale a little, exhale & empty the lungs & start again with your inhalation.

- Cylinder (Complete Breath) Breathing – Think of your chest cavity as a cylinder. You can increase the volume of the cylinder in three ways: extend the floor of the cylinder down, expand the walls out & move the top of the cylinder up. When you inhale in a complete breath, as oxygen flows into the bottoms of your lungs, your diaphragm muscle pushes down on the abdominal organs & your abdomen expands. When you fill the middle parts of your lungs with air, your rib cage expands, increasing the volume of the cylinder of your chest. When you finish the breath by filling the top parts of your lungs, your collarbones, or clavicles, rise slightly to lengthen the cylinder of the chest & accommodate even more air. You know you are breathing the complete yogic breath when you can feel all three of the movements: belly expanding, ribs moving out & clavicles rising. When exhaling, you reverse the process & finish by using your abdominal muscles to press in on the internal organs in order to push up the diaphragm & expel the breath fully. A deep inhalation always starts after a full exhalation.
- Reclining Corpse “Find Your Breath” Full Complete Breath (**Savasana**) – In corpse:
 - a) **Lower Belly** ~ Place hands on base of your belly. Begin to breathe through your nose. With your next inhale, draw the breath deep into your low belly. Feel your hands rise with the breath & then exhale completely. Repeat several times, softening the muscles of the belly & back to allow the lower pelvis to fill completely with breath & prana. Use the inhalation to create space & your exhalation to release stress, tension & emotions that may be stored in this area. If you can breathe deeper, imagine touching the breath, to the soles of your feet. Notice how breathing deeply makes you feel. Breathing this way helps to ground us emotionally. We nourish the first & second chakras when we breathe this way.
 - b) **Middle Ribs** ~ Now gently shift your hands to the middle ribs. Breathe into this area, the solar plexus, feeling the ribcage as it expands from side to side & from forward to back. Again use your inhalation to create space & use your exhalations to release tension, stress or to settle your emotions. Breathing into the solar plexus helps to nourish the third chakra, often the receptacle of anger & frustration.
 - c) **Upper Chest** ~ Now shift your hands to rest just below your collarbones. Breathe up into your upper chest. Feel the breath move into your heart centre & notice any physical sensations of tightness or tension, either in the front or in the back, between the shoulder blades. As the breath becomes fuller in the upper chest, you can begin to move the breath upwards into the throat, to the brow, to the crown of your head. Notice how breathing into the heart centre helps to make space around anxiety that may be lodged in the heart centre. As the breath moves upward into the throat & head, feel it clear obsessive thoughts & create clarity.
 - d) **Full Yogic Breath** ~ Now, begin to take slow, full breaths that sequentially fill the lower belly, middle ribs & upper chest. Exhale the same way, emptying out from the chest to the abdomen. Keep your breath equal, even & light with no effort.

Mudras for Healing

- **Back Mudra** - **Note**: This mudra is primarily effective for someone who has strained their back & is having tension. Continuous mental strain, fears, heavy meals, too little sleep or exercise are other causes of pain. Very effective to practice with Chair Corpse. **Right HAND**: Bring together the thumb, middle & pinky fingers with index & ring extended. **Left HAND**: Thumb joint on nail of index finger. **Visualization**: In your mind, you are at a place that does you good-where you feel well. Simply observe your breath & pay attention so your thoughts don't drift away. **Affirmation**: My backbone is strong, my back is wide & I am protected & supported both inside & outside.
- **Middle Spine Mudra** - Fists out of both hands with thumbs extended towards the ceiling & rest baby-finger side down on knees. Concentrate on your thumbs & send healing energy to the middle of your back. **Chakra**: Solar Plexus-3; Heart-4. **Mantra**: OM; God in his Absolute State. **Affirmation**: I am sending healing power to my back; I can sit straight & feel strong & rested.
- **Lower Spine Mudra** - Fists out of both hands with thumbs extended towards each other & resting palms down on knees. Keep the fists strong & feel the energy pulsing in your palms. **Chakra**: Root-1; Sacral-2. **Mantra**: OM; God in his Absolute State. **Affirmation**: Mother Earth is recharging my body.
- **Bedtime Mudra for a Good Morning** : Index fingers to thumbs, other three fingers straight with R fingers on top of L fingers. Inhale 6 puffs in, then exhale 1 long breath out. The way we feel in the morning affects our entire day. Waking up positive and rested, full of energy and inspiration, will help us live a happier, healthier and more fulfilled life. As you practice visualize a white ball of light above your head. You will start the next day protected and surrounded by white light.
- **Breath Mudra Moving Series #4** - In easy pose (**Sukhasana**):
 - a) Hands in lap, L hand on top with thumbs touching. Promotes mental & physical stability & clears the mind.
 - b) Index fingers to thumbs. Promotes self-confidence & lessens anxiety.

- c) Middle fingers to thumbs. Promotes vitality & creative forces.
- d) Ringer fingers to thumbs. Promotes emotional clarity & releases pressure.
- e) Baby fingers to thumbs. Helps you appear as you truly are.
- f) Rest hands back in lap, R hand on top with thumbs touching.

Mantras for Healing

1. Om Gum Ganapataye Namaha

Pronounced: **Om Gum Guh-nuh-puh-tuh-yei Nah-mah-hah**

“Salutations to Ganesha, he who removes all obstacles”. This is a Ganesha mantra. Lord Ganesha is the elephant-headed God of the Hindus and Ganesha is considered to be bountiful and eternal. He is the endower of joy, the God of knowledge, wisdom and success. This mantra has proved invaluable in removing unseen obstacles which seem to be standing in the way of progress or achievement, either specifically or generally. Many people have had success in turning things around in their life by using this mantra.

2. Om Shrim Maha Lakshmiyei Swaha

Pronounced: **Om Shreem Mah-ha Lahk-shmee-Yei Swah-hah**

“Om and salutations to She who provides abundance.” This mantra will focus on the kind of wealth you wish to manifest in your life. This mantra invokes the abundance of the universe of which healing is a part. Lakshmi is the anthropomorphized feminine principle that represents all kinds of abundance. **NOTE:** Use “**Namaha**” for age 29 and younger.

3. Om Shri Dhanvantre Namaha

Pronounced: **Om Shree Don-von-trey Nah-mah-hah**

“Salutations to the being and power of the Celestial Physician”. This mantra can increase your effectiveness as a healer OR help guide you to a remedy or treatment path appropriate for an affliction or condition you may have.

4. Om Ram Ramaya Swaha

Pronounced: **Om Rahm Rah-mah-yah Swah-hah**

“Om and salutations to that perfection in the physical realm that was Rama, whose attributes exist in me also. Kindly manifest”. This short healing mantra can relieve pain and ease suffering.

5. Om Hraum Arkaya Namaha

Pronounced: **Om Hrowm Ahr-kah-yah Nah-mah-hah**

“Om and salutations to the Shining One who removes afflictions.” Giver of energy. One of the 12 gifts of the sun, this Arkaya mantra is powerful in relieving afflictions.

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