

Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

Yoga Therapy is an effective integrative complementary alternative for alleviating symptoms of sciatica. This paper will explore what sciatica is, what it feels like, causes, current treatments, therapeutic applications of yoga therapy, assessments including referred pain patterns, myofascial planes, energetic qualities, and finally implementing Yoga Therapy protocols with Case Studies as a therapeutic adjunct.

What is Sciatica?

Sciatica is a blanket term used to describe pain along the sciatic nerve pathway.

According to Web MD Sciatica is a common type of pain affecting the sciatic nerve, a large nerve extending from the lower back and down both legs. Some use it to mean any pain starting in the lower back and going down the leg.

Sciatica as one of the most common, yet misunderstood, types of pain. As as many as 40% of people will get it during their lifetime, and it becomes more frequent as we age. Note that sciatica is a symptom and not the cause of pain. (*Harvard Health Publishing*)

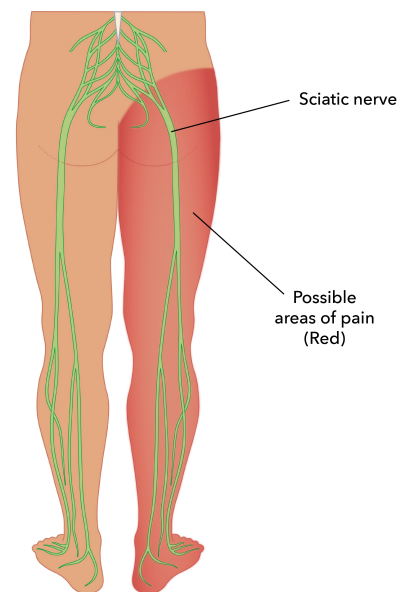
Sciatica can be acute or chronic. An acute episode can last from one to two weeks and generally resolves itself in a few weeks. It's fairly common to experience a little numbness for a while even after the pain has resolved. It's also common to experience acute sciatic episodes a handful of times a year. Acute sciatica can eventually lead to chronic sciatica. This means the pain exists pretty regularly. Pain from chronic sciatica is often less severe than the acute version. Chronic sciatica can be a life-long condition that does not typically respond well to treatment.

Risk factors:

- Sedentary lifestyle
- High impact running, walking or jogging
- Manual labor: Heavy lifting or twisting
- Pregnancy and Diabetes
- Obesity
- Age

What does Sciatica pain feel like?

- Shooting pain from buttocks down.
- Tingling or numbness down the leg.
- Pain is typically limited to one side
- Pain may present more acute during 'flare ups'
- May also present as a dull pain isolated to a single area usually in the gluteal region.
- Pain makes it difficult to walk.
- May have trouble sitting, standing, or walking for long periods of time.
- Studies reveal many experiencing sciatica also suffer from symptoms of depression or anxiety.



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Causes of Sciatica Pain

No one knows for certain what causes sciatica, and there are many conditions that are associated with its cause. Therefore, it is always in the best interest of the case study/client to seek a full evaluation from their primary care physician to determine the specific cause of sciatica related symptoms.

In one study of 70 patients seen for sciatica pain, 55 of the patients sciatica was of a muscular origin, commonly from the gluteal region. (*Myofascial Pain and Dysfunction*) In a 1996 study, under 20% of 1.2 million sciatica related MRIs revealed significant spinal problems suggesting 80% of sciatica symptoms resulted from a muscular origin. (*Sciatica Solutions*)

According to *Sciatic Solutions*, the following are typical causes of sciatica related symptoms.

- Nerve entrapment of muscular origin (The most common example is Piriformis syndrome)
- Muscle spasms, sprains, and strains (According to Dr. Fishman this is the most common types of back pain.)
- Inflammation and swelling from arthritis, strains, bone spurs, joint slippage, (such as sacro iliac joint slippage) or infection
- Compression of the sciatic nerve by a herniated disk or some other type of radiculopathy or pinching of the nerve root along the spinal column.
- Spinal stenosis: A narrowing of the spinal column.
- Spondylosis: Degeneration or stress fracture in the vertebrae.
- Vascular problems such as in the late stages of pregnancy or poor blood supply in the legs.
- Aneurisms, Conditions of Multiple Sclerosis and Stroke, Tumors.

Treatment and Yoga Therapy as an adjunct therapies.

It is always in the best interest of any integrative complementary alternative therapy Clinician to request that a case study/client submit a letter of clearance for Yoga Therapy from their primary care physician. It is also helpful to the clinician to have copies of MRI reports as well as any other personal documentation relating to the condition.

Here is a list of current traditional and complementary integrative treatments for sciatica ranging from conservative to more invasive treatments noted by *Myofascial Pain and Dysfunction and Sciatica Solutions*.

- Pain Medication: nonsteroidal anti-inflammatory drugs, analgesics, and or muscle relaxants.
- Antidepressants: Antidepressants are sometimes found to minimize the brains experience of pain. Studies reveal many experiencing sciatica also suffer from symptoms of depression or anxiety.

Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

- Research show depression, anxiety and stress related symptoms are a significant risk factor for decreased improvement and disability in surgically treated and non-surgically treated patients with sciatica.
- Exercise: Self stretching exercises for hip extensors, abductors, and adductor muscles and general posture improvements are often recommended.
- Physical Therapy: Physical therapists often use heat, ultrasound, laser therapy, physical therapy exercises, and gait training to treat sciatica pain.
- Massage/Manual Therapy: Manual therapy in the lumbar, hip and leg region has been shown to reduce sciatica pain.
- Acupuncture: In some studies, shows to be more effective than conventional pain medication.
- Corticosteroid Injections: Calms inflamed joints. Reduced pain can be experienced for 1 week to 1 year. Cortisone can begin to break down tissue around the injection site so injections are limited to 3/4 a year. Injections do not always work.
- Botox Injections: A relatively new treatment for pain. Relaxes hyperactive muscles. Reduced pain can last for a few months. Injection treatments are typically ongoing until they do not work anymore. Results vary depending on accuracy of injection site. A recent study, found that BoNT injections were better than injections of corticosteroid plus lidocaine, or traditional acupuncture or placebo in patients with sciatica attributed to piriformis syndrome.
- Surgery: According to Web MD, around 5-10% of people with sciatica pain will end up having surgery. The two main surgical options for sciatica related to a spinal impingement of the sciatica nerve are a discectomy and laminectomy. A discectomy removes whatever is pressing on the sciatic nerve like a bone spur. The goal is to remove only the piece that's actually causing the sciatica. A laminectomy removes the lamina which is part of the ring of bone that covers the spinal cord along with any tissue pressing on the nerve that's causing you pain.

Yoga Therapy is an excellent adjunct therapy for sciatica. Research supports the use of yoga therapy as a complimentary adjunct therapy for relieving symptoms of sciatica.

According to Dr. Fishman in *Yoga for Back Pain*, yoga helps sciatica symptoms by:

- Stretching muscles to reduce spasm
- Increasing flexibility
- Strengthening muscles and bones
- Increasing range of motion
- Sharpening focus, increasing reaction time, and balance
- Offering heightened self awareness, proprioception, and postural awareness
- Producing calm and decreasing anxiety

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- Prevention

According to Singh et al. of India, sciatica symptoms have close resemblance to Grudhrasi. Grudhrasi is noted as a type of vata dosha disorder in classical Ayurveda texts.

Intro to Ayurveda: Understanding the Three Doshas states Ayurveda translated means knowledge of life and dates back 5,000 years to the ancient Sanskrit texts, the Vedas. Vata translates to air or wind from Sanskrit and represents the elements of air and ether. Dosha translates from Sanskrit as that which can cause problems. Vata is one of the three doshas. According to Ayurveda, everything is composed of universal life force energy or prana and manifests as three different energies, known as vata, pitta, and kapha.

VATA

The harmonious union of air and space. Just like air and space, vata is light and mobile.



PITTA

The harmonious union of fire and water. Like fire, pitta is hot, sharp, and light. Like water, it is oily and spreading.



KAPHA

The harmonious union of water and earth. Like water, kapha is soft and cold. Like Earth, it is heavy and stable.



beYogi.com

In one study from Singh et al. of India, 60 participants showing classical symptoms of sciatica or grudhrasi between 18 and 65 years of age found that yoga asanas play a statistically significant role in improving signs and symptoms of sciatica. This study Bhujangasana and Salabha sequences. The two postures were not held for prolonged periods but were repeated four times each and mediated by guided deep breathing and relaxation.



In another study conducted by Manish Arora et al. in India of 30 diagnosed patients of sciatica or grudhrasi between 30 – 60 years of age and chronicity of less than 3 years, carried out over the period of 30 days showed 76.8% relief in pain, 80% relief in stiffness, 79.5% relief in pricking sensation after one month of practicing yoga. The study included ardhha matsyendrasana and pawanamuktasana along with one to two minutes of warm ups, one to two minutes of omkara or AUM chanting and ten rounds of each posture.



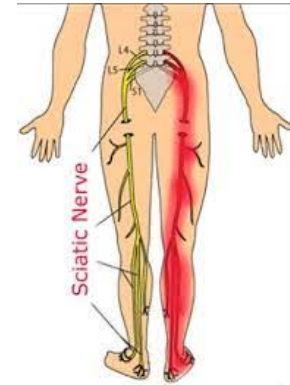
Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

Monroe et al. conducted a study in England of 61 adults aged 20–45 with sciatica or grudhrasi, and disc extrusions/herniations or bulges practiced a yoga course over 3 months. The program was designed to ensure safety for disc extrusions. The study found that yoga therapy can be safe and beneficial for patients with sciatica, accompanied by disc extrusions/herniations and bulges. This study did not indicate postures used.

Assessing, Pain Patterns and Yoga Therapy Applications:

The causes of sciatica pain can range from spinal stenosis to one of muscular origin, a physicians diagnosis and clearance is crucial to safely employing yoga therapy.

Radiculopathy describes a range of symptoms produced by the pinching of a nerve root in the spinal column. The sciatica nerve originates from L4, L5, S1 in the lumbosacral region of the spine.



The graphs below show the load impact to the lumbosacral spine in various positions. The load is decreased substantially by shifting position of the torso from slouched to neutral posture in bending, standing and seated positions. This shift in posture recruits the

The biomechanics of low back injury

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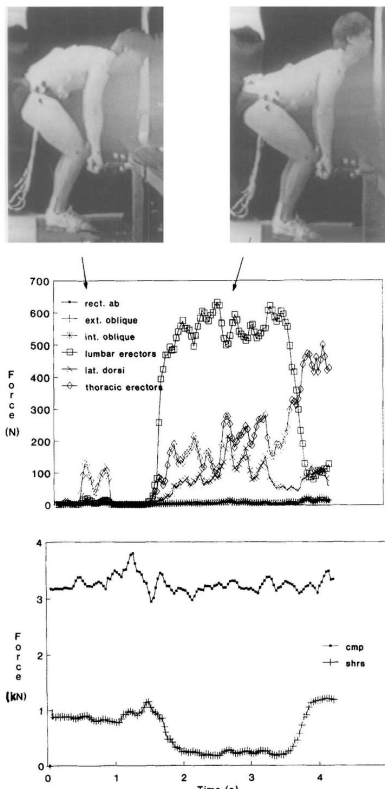
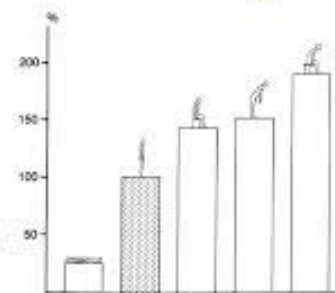


Fig. 7. The fully flexed spine is associated with myoelectric silence in the back extensors and loaded posterior passive tissues, and high shearing forces on the lumbar spine. A more neutral posture recruits the shear supporting pars lumborum extensors, disables the shear imposing interspinous ligaments, and reduces the net shear on the spine.

Spinal loads during daily activities: the problem with slouched sitting

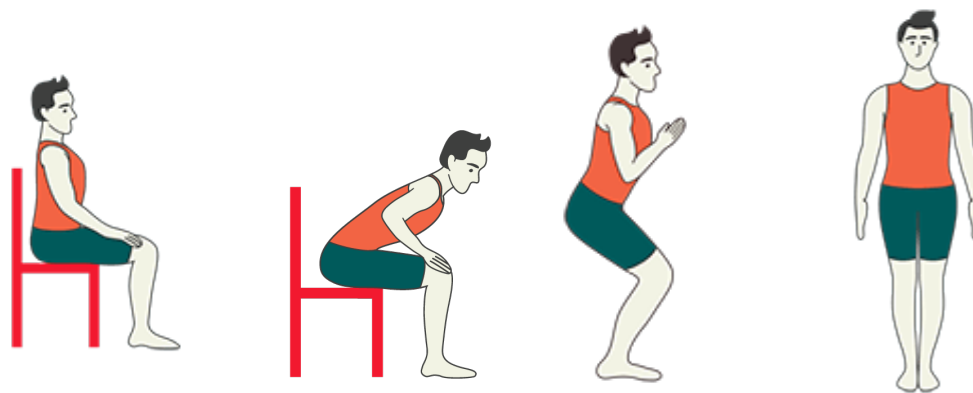
- the graph on the right shows compressive forces between the L3/L4 vertebrae for various activities, as a percent of the L3/L4 load during standing (shaded bar)
- lying creates the least force, while slouched sitting creates the greatest force



abdominals and gluteal musculature and reduces the load to the low back.

Applying the practice of Chair Pose, Tadasana, Chair Tadasana, and postural alignment within postures and movements may prevent excess load on the low back. (*Biomechanics of Lifting and Lower Back Pain*) (*The biomechanics of low back injury: Implications on current practice in industry and the clinic.*)

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The following are some additional things to keep in mind regarding possible diagnosis and postures or shapes recommended by Dr. Fishman in *Yoga for Back Pain*.

Keep in mind it is important to ease slowly into and out of the shapes. It is also important for the case/client to become curious of how it feels for them. If it hurts, the case/client should move out of it slowly or find a range or alternate shape that is more comfortable. (*Yoga for Back Pain*)

According to mayoclinic.org, Spinal stenosis is a narrowing of the spaces within your spine, which can put pressure on the nerves that travel through the spine. Spinal stenosis can present in the lumbar, thoracic or cervical spine. According to Dr. Fishman, stenosis of the lower back usually feels better in back extensions and feel worse with forward bends. Forward bends are contraindicated. The following are postures recommended for spinal stenosis. (*Yoga for Back Pain*)



University of Michigan Health explain's spondylosis is typically caused by age-related change of the bones (vertebrae) and discs of the spine. These changes are often called degenerative disc disease and osteoarthritis. Spondylosis can also present as a stress fracture of the spine without degeneration as the cause. Dr. Fishman also notes back extension are contraindicated and may be painful. Twisting is also contraindicated and may hurt. The following are postures recommended for spondylosis. (*Yoga for Back Pain*)

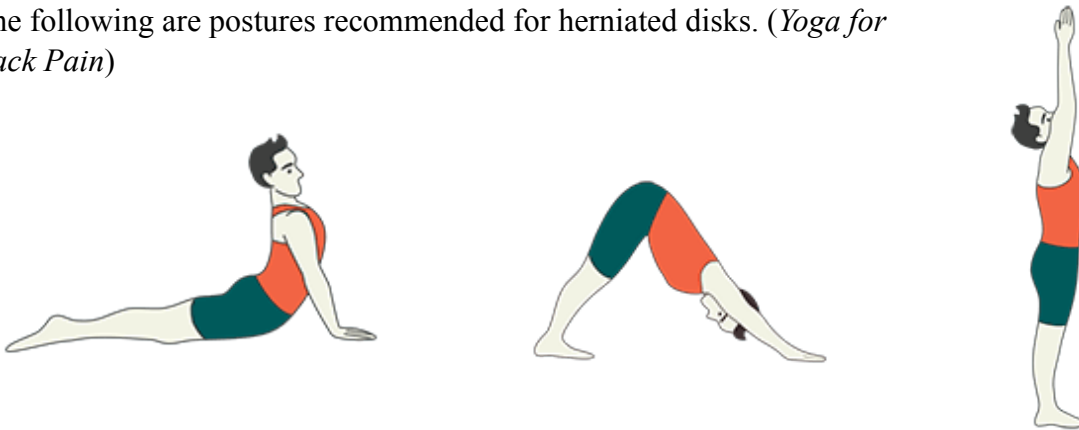


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According to mayoclinic.org, a herniated disk occurs when a portion of the nucleus pushes through a crack in the annulus. Symptoms may occur if the herniation compresses a nerve. According to Dr. Fishman, herniated disc presentations can make bending forward hurt and twisting to one side or the other hurt. Bending forward and twisting are contraindicated especially if it hurts to do so. Extension of the spine can generally be helpful.

As cited by *Sciatica Solutions*, herniated or bulging discs on their own do not equal pain. Many present with herniation or bulging discs and do not present with pain while many others presenting with herniation or bulging discs do present with pain. Some doctors attribute this to perpetuating postural factors, a triggering or traumatic event, and or symptoms of depression.

The following are postures recommended for herniated disks. (*Yoga for Back Pain*)



According to mayoclinic.org, bone spurs are bony projections that develop along bone edges. Bone spurs often form where bones meet each other, in the joints. They can also form on the bones of the spine. The main cause of bone spurs is joint damage associated with osteoarthritis. Bone spurs can make it painful to move your hip, although you might feel the pain in your knee. Depending on their placement, bone spurs can reduce the range of motion in the hip joint.

Sacroiliac joint derangement can present pain on one side or both sides of the hips, but it is usually more intense on one side. Pain typically does not radiate down the leg. Pain is felt when going from sitting to standing especially when getting out of the car. Twisting to one side usually hurts more than twisting to the other side. SI Joint Derangement is not identifiable on X-rays, EMGs or MRI's. (*Sciatica Solutions*) The following are postures recommended for sacroiliac joint derangement. (*Yoga for Back Pain*)



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True piriformis syndrome presents when a shortened piriformis muscle swells and grows in diameter causing compression on the sciatic nerve where it exits the greater sciatic foramen (sciatic notch). This opening is located deep in the buttock, just below the piriformis muscle. Piriformis Syndrome often occurs concurrently with sacroiliac joint derangement. It is typically painful to walk and sit. (*Myofascial Pain and Dysfunction*) The following are postures recommended for piriformis syndrome. (*Yoga for Back Pain*)



Musculoskeletal imbalances that contribute to sciatica symptoms:

(*Coaching the Body, Lower Body Protocol for Thai Bodywork*) (*Myofascial Pain and Dysfunction*) (*Yoga for Back Pain*)

- Biomechanics such as Pelvic torsion or tilt, Leg length discrepancy, Morton's foot syndrome, Hyperpronation or supination
- Poor posture
- Muscle Imbalance such as tightness in leg or gluteal musculature
- Over use or under use of musculature
- Extended sitting, standing, or running

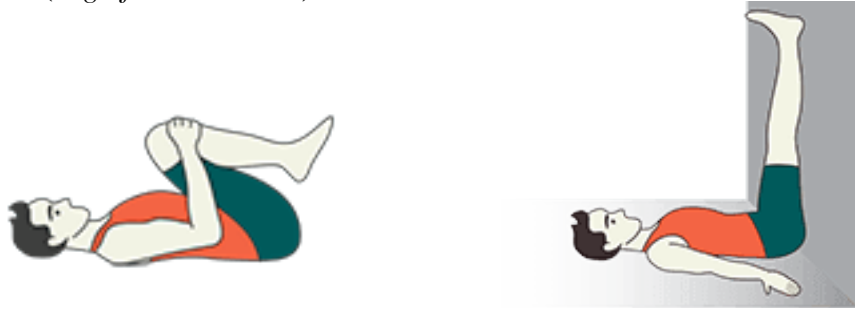
Trigger points in the muscle fibers will prevent the muscle from shortening and lengthening and can cause muscle spasms and or dysfunction in muscle groups. A myofascial trigger point is a hyperirritable spot, usually within a taught band of skeletal muscle or in the muscle's fascia. The spot is painful on compression and can give rise to characteristic referred pain, tenderness, and autonomic phenomena. Posture imbalances, under use of musculature or over use, accidents, injuries, surgeries, or trauma to the fascia or musculature can cause trigger points in the fascial system. (*Myofascial Pain and Dysfunction*). The following are examples of postures that can be helpful for some of the listed musculoskeletal imbalances. (*Yoga for Back Pain*)



Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

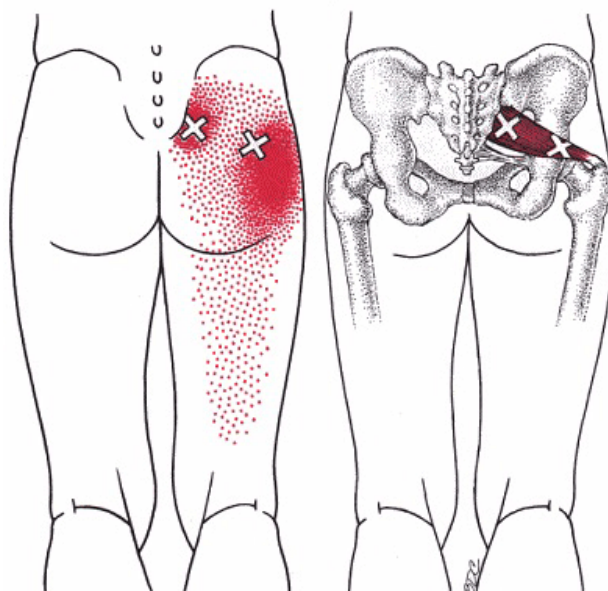
According to Dr. Travel, breathing deeply, slowly, and concentrating on relaxation during exhalation can reduce fascial irritability and release muscular tension. Self massage, foam rolling and stretching techniques such as active stretching, proprioceptive neuromuscular facilitation are also helpful in releasing fascial trigger points.

Dr. Fishman recommends holding each shape for 15-30 seconds combined with deep breathing during hold. The two postures below are generally safe and helpful for *all* of the above mentioned causes. (*Yoga for Back Pain*)

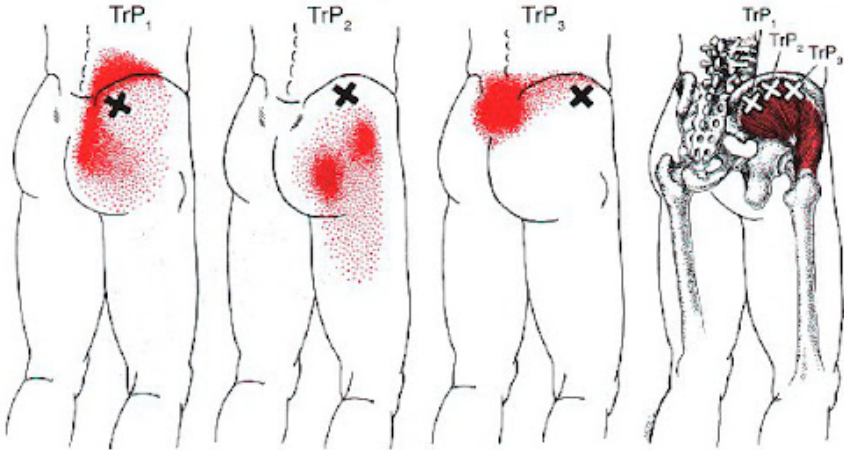


Myofascial Pain and Dysfunction sites referred pain patterns from irritable trigger points. Pain patterns related to sciatica pain and their related musculoskeletal origin are listed below. This is not an exhaustive list. It is helpful for yoga therapy clinicians to become familiar with referred pain patterns. According to Dr. Fishman and Dr. Travel, most sciatica like pain is caused by muscle strains and spasms and or musculoskeletal imbalances.

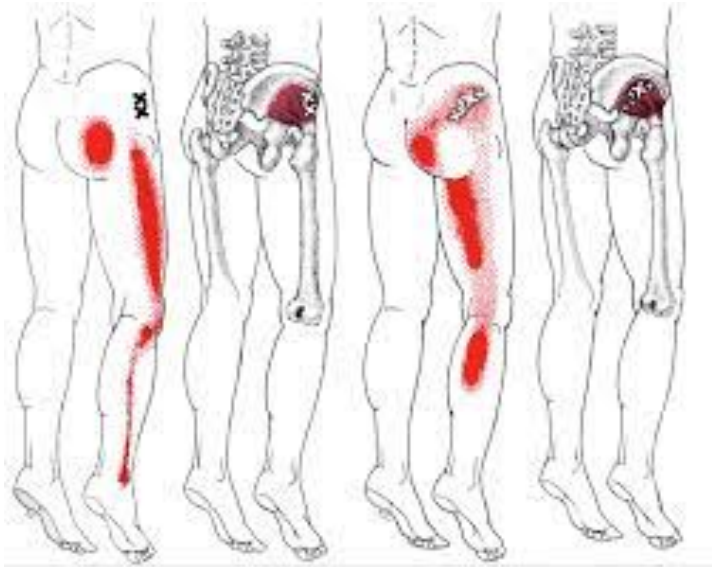
Piriformis:



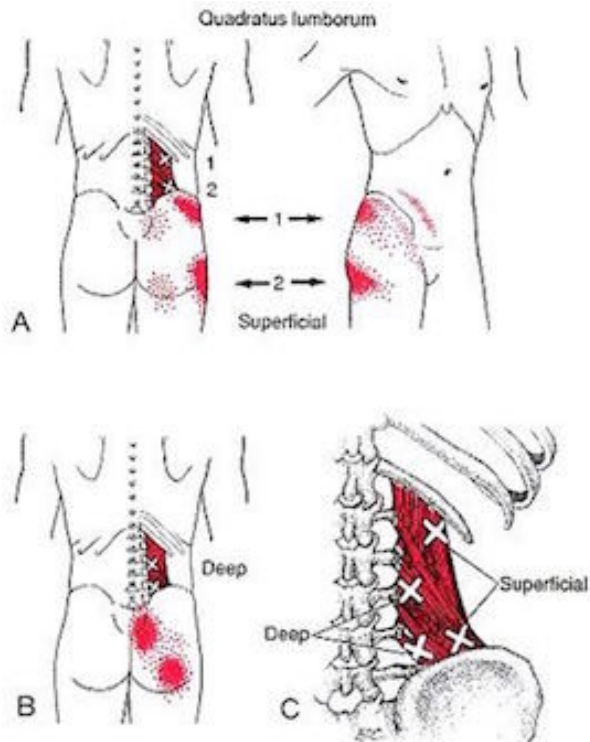
Glute Medius:



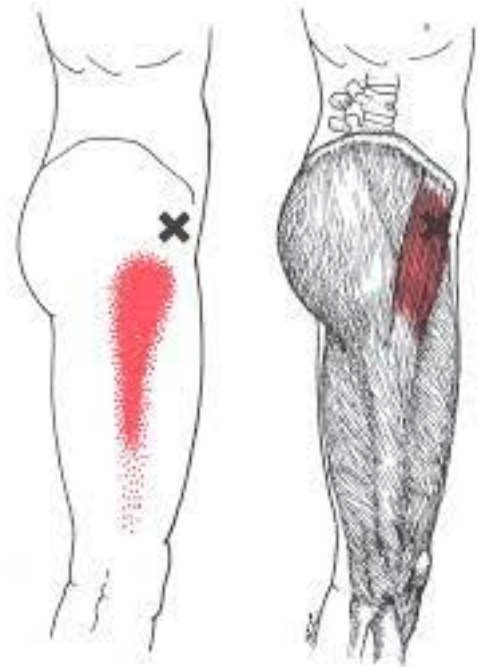
Glute Minimus:



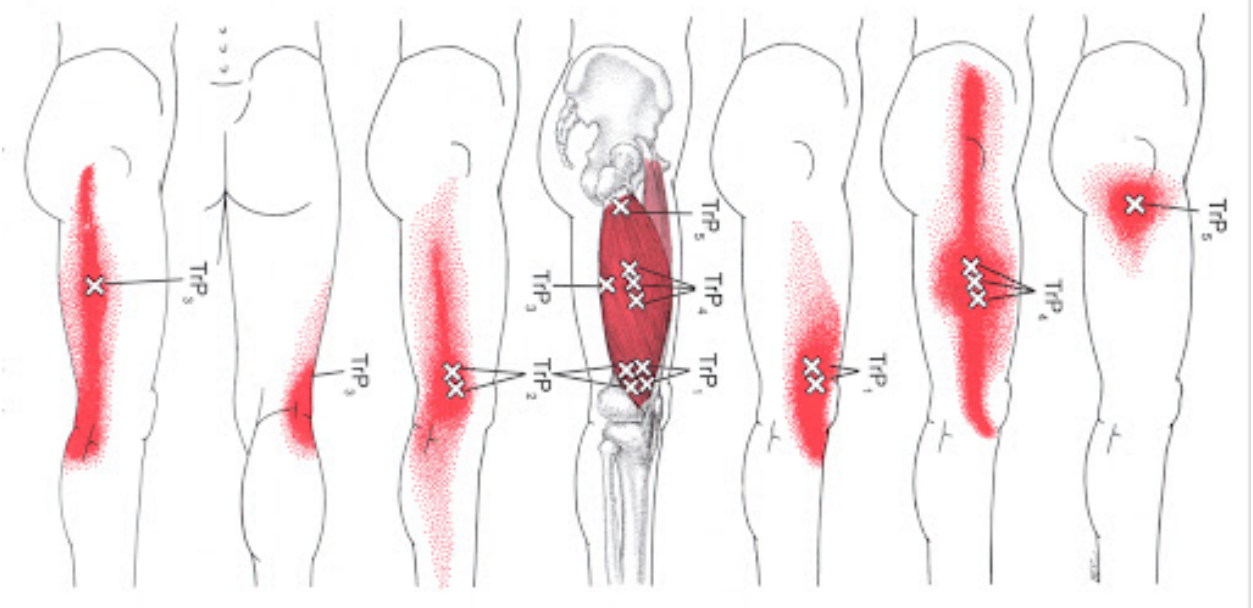
Quadratus Lumborum:



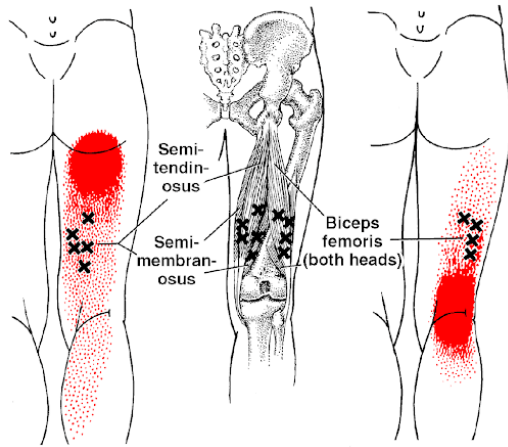
Tensor Fascia Lata:



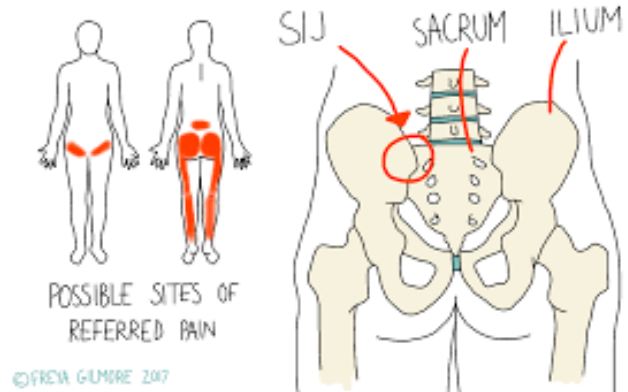
Vastus Lateralis:



Semitendinosus and Semimembranosus

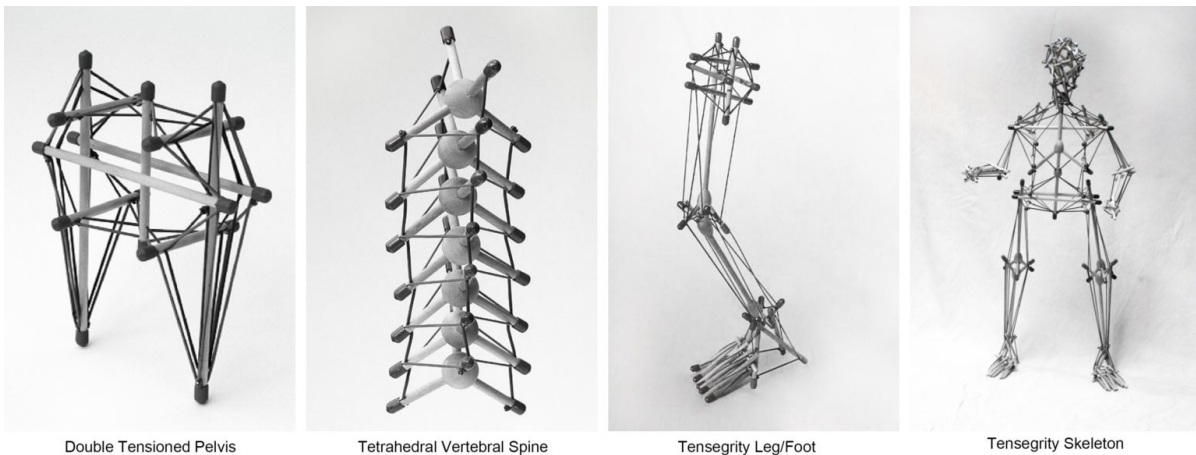


Sacro Iliac Joint Dysfunction



Myofascial research from Tom Meyers of *Anatomy Trains* indicates layers of fascial form a continuous connection or chain or line or meridian or train in the body. These meridians work as a matrix whereby an imbalance in one part of the meridian or train creates an imbalance along the whole meridian or other parts of the line.

Meyer argues the body works in a tensegrity fashion in that an imbalance or distortion in one fascial meridian creates an imbalance in the others. According to Meyers, “Where will a tensegrity structure break under strain? At its weakest point. If we are a tensegrity structure, the ‘load’ that is causing pain or strain in the low back may be sourced in the foot or the shoulder – so we have to be able to see the pattern to know where to intervene.”



The following are a few of the dissected myofascial meridians that seem to be involved in sciatica symptoms.

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The Superficial Front Line:



The Superficial Back Line:



The Lateral Line:

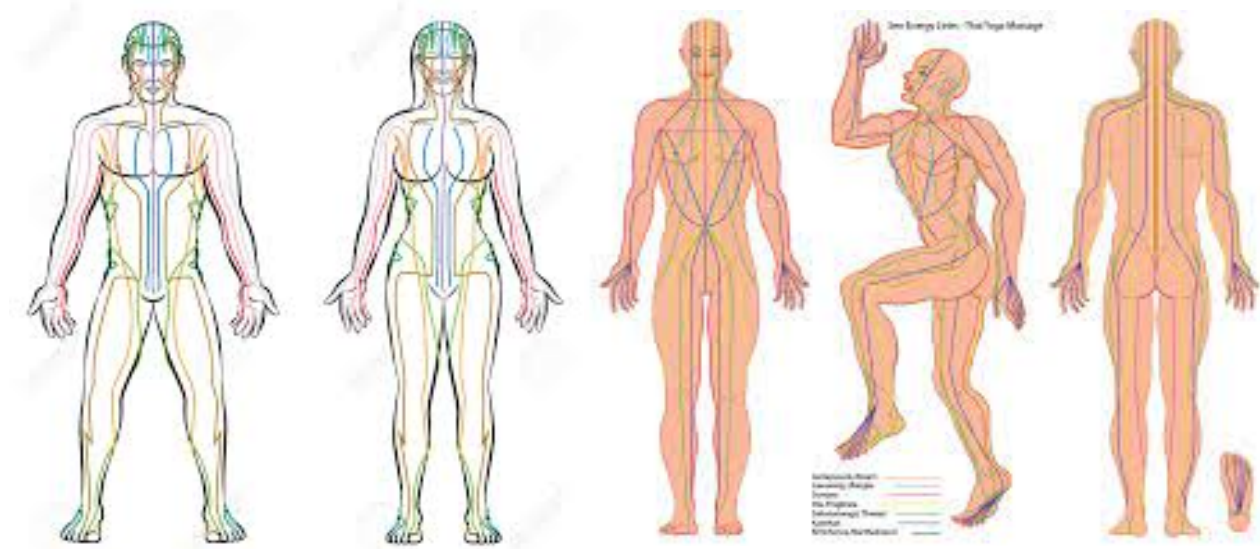


The Functional Line:



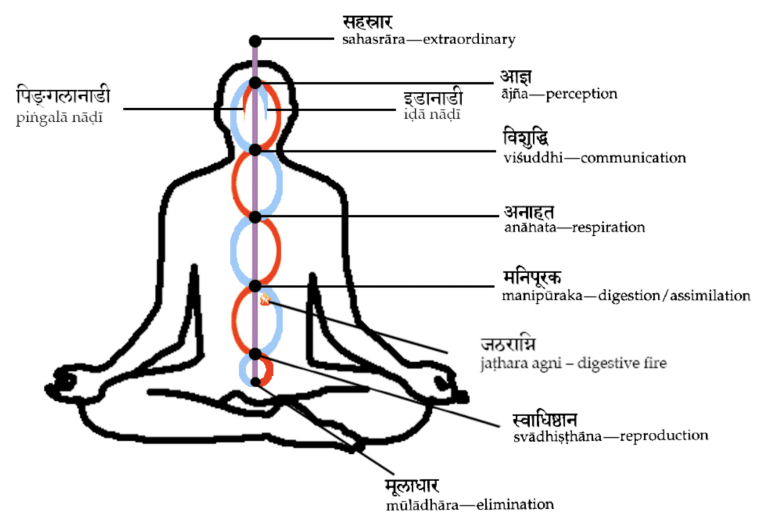
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Interestingly, Anatomy Trains notes myofascial meridians have similar patterning when compared to Eastern Medicine’s Chinese meridians and the Thai sen system. Meridian and sen translate to mean lines or channels. Both of these systems are believed to be channels through which prana or life force energy flows similar to the yoga’s nadi system. Nadis is the Sanskrit term for channels or tubes. *Theories of the Chakras*, sites ancient yogic text descriptions of the yoga nadis and finds distinct similarities between the descriptions of the nadis and the Chinese meridians.



The nadis are said to be energetic pathways that carry prana or life force energy throughout the human body. There are many nadis throughout the human system and three are considered most important. The pingala originates at the right nostril, the ida originates at the left nostril, The two run up through the forehead, then down along the back body near the spine to the base of susumna which runs up through the crown. The prana in the pingala is called the “ha” prana and the prana in the ida is called the “tha” prana.

A goal of yoga is to facilitate movement of prana from the pingala and ida nadis into and up the susumna nadi. Ancient yogis believed there is a blockage or mala at the base of susumna nadi preventing the ha and tha prana from entering. Mala translates to something impure in Sanskrit and indicates something unhealthy in the body that should



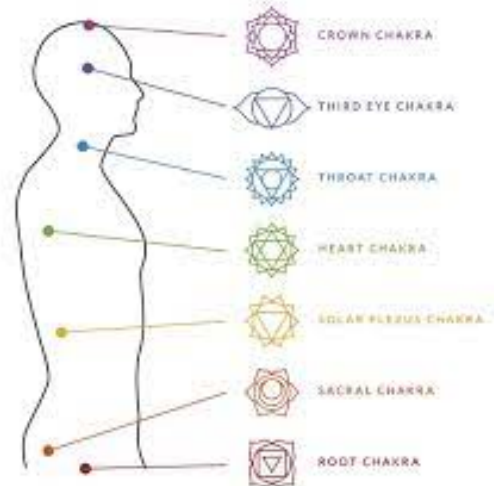
Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

be eliminated. Yoga is the process by which this blockage is destroyed and the ha and tha prana can freely flow into susumna nadi. (*Yoga Bodies, Yoga Minds: How Indian Anatomies Form the Foundation of Yoga for Healing*)

Chakras represent energy centers within the nadi system. The word chakra means wheel or disk and represent energetic hubs of prana or life force energy.

According to ancient yoga texts, there are seven major chakras or energy centers in the body. Each in a specific location along the spine which runs along the three main nadi channels. Each chakra is said represented with specific energetic qualities.

Root chakra (Muladhara) Elimination
Sacral chakra (Svadhithana) Reproduction
Solar plexus chakra (Manipura) Digestion
Heart chakra (Anahata) Respiration
Throat chakra (Vishuddha) Communication
Third eye chakra (Ajna). Perception
Crown chakra (Sahasrara) Extraordinary

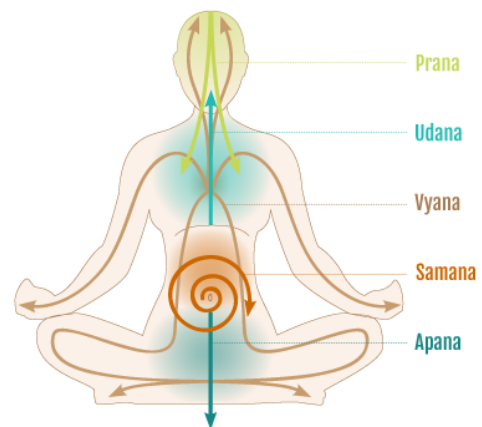


Sciatica manifests at the root chakra which represents elimination and the sacral chakra representing reproduction.

Yoga philosophy further distinguishes prana or life force energy into energetic components or Vayus (winds that flow). Like the chakras, the five Vayus of prana all have very subtle yet distinct energetic qualities, including specific functions and directions of flow. These five primary currents of prana are prana-vayu, apana-vayu, samana-vayu, udana-vayu, and vyana-vayu.

When we assess sciaticas manifestation on the model, we find it in the area of apana vayu which rules downward and outward movement in our body. Apana vayu may indicate an imbalance in letting things go. Interestingly, Bossart also mentions, it was noticed that the apana region responds to breathing ratios with an emphasis on exhalation.

The vayu systems is related to the pranayama sheath in the pacamaya model shown below and outlined in the Upanishads. Panca means five in Sanskrit and maya means something pervading. The term pancamaya



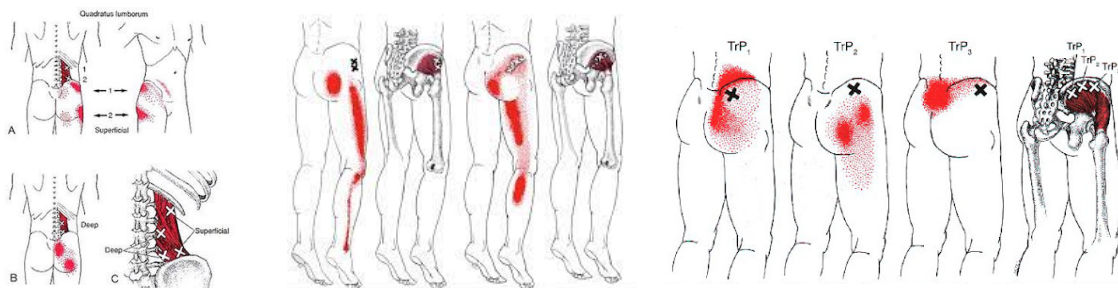
Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

outlines the human system as composed of five fundamental dimensions which are the physical body, the breath/prana, the intellectual, the personality, and the emotional body. Each of these dimensions is completely interconnected and interrelated or pervading. When one changes, all the others will also change. This is the heart of how yoga therapy works as a holistic system of healing and health. (*Yoga Bodies, Yoga Minds: How Indian Anatomies Form the Foundation of Yoga for Healing*)



Implementing Yoga Therapy protocols with Case Studies as a therapeutic adjunct:

Case study One (CS1) is a 58 year old female. CS1 complained of overall tightness especially in low back and sciatica with pain radiating on right side from glute medius to glute max and piriformis and lateral gastrocnemius spasms. CS1 sits for long periods of time and experiences sciatica pain when standing. Glute musculature is sensitive to touch. CS1 had back surgery at L4/L5 in 1990 for a herniated disk with no fusions. CS1 wants to work on breath, decrease low back pain, and increase flexibility.



This was my first yoga therapy case study applying trigger point patterns. I was trained to work with common musculoskeletal imbalances, trigger point referral patterns and muscular adhesions

Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

alongside isolated assisted yoga stretching and PNF stretching in clinical Thai Yoga at Coaching The Body Institute. I was also trained to work along the energetic sen lines to create more balance along the fascial plane through the The Thai Yoga Center . Working this way is very helpful and successful in my manual bodywork practice. I applied the same principles and protocol to yoga therapy applications.

1. Apply yoga therapy intervention to decrease pain and discomfort at at the pain complaint identified through the referred pain pattern charts.
2. Assess biomechanical or postural imbalances such as pelvic torsion, pelvic tilt seated and standing, leg length imbalance, hyperpronation.
3. Assess muscular imbalances.
4. Apply yoga intervention to balance biomechanical, postural or muscular imbalances.
5. Apply yoga therapy intervention to balance myofascial planes with focus on the central pain complaint.

Pain Scale: 0 = No Pain or Great - 10 = Pain or Bad

CS1 Before/After completion of seven weekly yoga therapy sessions.

- Overall Tightness: 8/10 to 5/10
- Sciatica/LBP: 8/10 to 4/10
- Mid back pain: 6/10 to 4/10
- Comfort with Breath: 7/10 to 4/10
- *Breaths increased from 3 second inhale/3 second exhale to 5 second inhale/ 5 second exhale*
- Post Gastrocnemius Pain 0/10

CS1 found notable relief in Seated Reversed Pigeon, Neutral Hips, and all versions of Legs up the Wall.



Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

CS2 presented with much of the same sciatica pain patterns noted in the images from CS1. Case Study Two (CS2) is a 54 year old male teacher and tennis professional presenting with sciatica, thoracic outlet syndrome symptoms, shortness of breath, hernia. CS2 states sciatica pain radiates at right glute medius, glute minimus down lateral leg to toes. CS2 states all toes go numb. Sciatica pain is 9/10 when flares and 5/10 regularly. CS2 experiences thoracic outlet syndrome symptoms at left shoulder musculature from mid thoracic trapezius up to cervical spine with tingling down back of arm to pinky and fourth finger. CS2 experiences tightness in bilateral quadratus lumborum to coccyx including sacral and sacroiliac joint musculature/fascia. CS2 states it always feels stiff/tight. Some days tightness is 10/10. Tightness is 6/10 regularly. CS2 experiences pain constantly. CS2 noticed pain years ago. CS2 would also like to strengthen core and learn to manage stress.

Pain Scale: 0 = No Pain or Great - 10 = Pain or Bad

CS2 Before/After completion of seven weekly yoga therapy sessions.

- Sciatica: 5/10 to 0/10 - CS2 reported no pain at post assessment. CS2 reported it still flares up occasionally but he can 'make it go away'.
- Rate LB: 6/10 to 3/10
- Rate TOS: 5/10 to 0/10

CS2 found notable relief with Legs up the Wall, Cat Cow, and Reversed Pigeon and included these in his daily yoga practice.



CS3 presented with much of the same sciatica pain patterns noted in the images from CS1. CS3 is a 61 year old yoga teacher presenting with low back/sciatica and foot pain. She noticed it more than 10 years ago when she fell and hit right side. Chiro said pelvis shifted. Feels like its a little ball and shooting pain. Pain shoots down lateral leg to foot. Not tingly. CS feels 'crackling' in low back at glute medius. Pain started about 7 years ago when she started doing yoga. Worse in the morning when she wakes up. Better when she does yoga and stretching. Over stretching makes it worse.

Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

Pain Scale: 0 = No Pain or Great - 10 = Pain or Bad

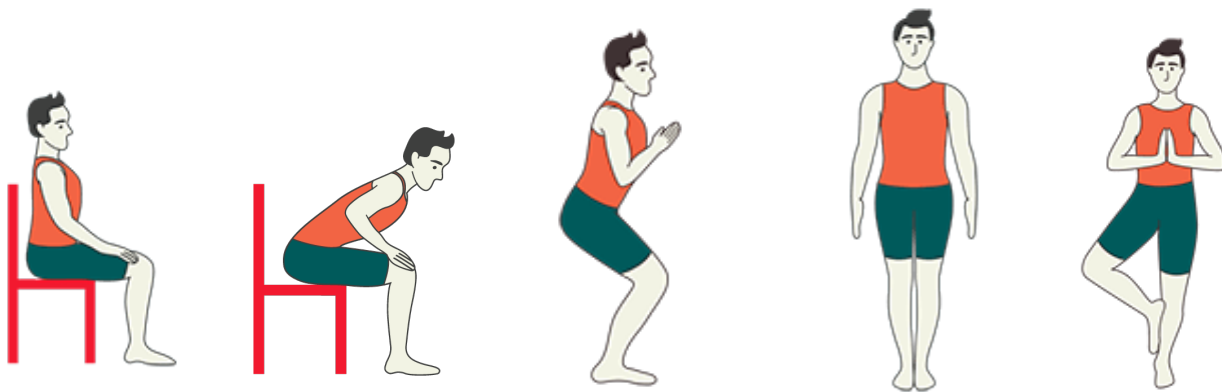
CS3 Before/After completion of seven weekly yoga therapy sessions.

- Sciatica: 8/10 to 0/10 and 2-3/10 at night (CS reports when sciatica pain first starts she learned to apply neutral posture and pain decreases.)
- Rate Foot Pain: 8/10 to 1-3/10

CS3 found notable relief with Standing side stretch with crossed legs, Tadasana with neutral posture, Knee circles, Supine twist.



Each case presented with various biomechanical and muscular imbalances. The practice of neutral posture, core engagement, balance, and foot engagement was central and relative to each case of sciatica.



Prior to this research, I was not aware depression and anxiety symptoms were a symptom of sciatica pain. I also did not assess for the energetic indications of the chakras or prana vayus. The chakras affected by sciatica indicate letting things go. The vayu prana also indicates supporting the case or client in letting go may be important. Looking at this piece in retrospect, I find it interesting that of the four yoga therapy case studies I worked with presenting with sciatica pain, all four also presented with shallow breathing and/or depression and anxiety

Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

symptoms. Three of these cases specifically asked to work on breath and or stress along with their pain symptoms. Dr. Osman's *Yoga Therapy and Mental Health Training* indicates adding opportunities for grounding through postures, cues, and lengthening the breath to cases or clients presenting with depression and or anxiety symptoms.

Grounding meditation in shavasana and pranayama to lengthen the breath was central to each case. The breathing technique found most useful by each CS for it's calming quality was alternate nostril breathing.



In conclusion, sciatica is a sharp pain that radiates down the leg that 40% of the population suffer from. No one knows for certain what causes sciatica, there are many conditions that are associated with its cause. Causes of sciatica pain can range from spinal stenosis to one of muscular origin. Current traditional and complementary integrative treatments for sciatica range from conservative to more invasive treatments. Yoga Therapy has been shown to be a viable Complementary Integrative adjunct therapy for helping to ease symptoms associated with sciatica pain.

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Guru Kula 2021: Unraveling Sciatica with Yoga Therapy

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