

Spanda® Yoga for Back Care: Major Causes of Low Back Pain

People with back pain often have more than one thing going on: sciatica, also piriformis syndrome could be precipitated by sacro-iliac imbalance. So even though we don't diagnose, we do have and can develop eyes to see these types imbalanced in observing our clients and students carefully. WHAT DO WE SEE?

When addressing back care we need to first rule out any serious conditions causing back pain! Then as we progress in a program of care or back care class, we need to keep well aware of any injuries or issues of class participants as we slowly and steadily progress throughout the class span, paying close attention and adjusting to any and all changes, for the good or bad.

Red flags on back pain to refer to doctor:

- More than 2 weeks
- Progressive pain that is getting worse
- *Numbness
- *Change in bowel function, organ function
- *Unbearable and/or high pain level
- *If activity produces numbness, shooting or stabbing pain, tingling, muscle weakness

*Possible neurological cause, needs to be examined by a doctor.

A Note on Muscle Weakness:

Muscle weakness can be caused by nerve issues however it can also be caused simply by lack of strength as well as tight or spasmodic muscles.

Common Causes of Back Pain & Injury

Numerous variables affect our backs, many back issues go undiagnosed or are incorrectly diagnosed, and at times back issues result from a combination of issues. Here are some common causes below:

General Musculo-skeletal Pain

Pain not due to anatomical abnormalities but rather to our use of our body in terms of incorrect use and incorrect posture, general and emotional stress. The types of injuries can be categorized as: sprains, strains, and muscle tightness or muscle spasm. These are due to:

A. Incorrect Use and Misaligned Posture

Incorrect body use and/or misaligned posture can be the culprits for a great many instances of back pain and stiffness. Each can cause muscular imbalance: weakness/tightness.

B. Strain

A muscular tear caused by a muscle/body part being over extended beyond its range of motion. Bounced stretches like in the old aerobics classes create strains. A sudden fall, sudden unexpected weight shift or catch, or a quick movement done beyond one's range, like a fast swan dive into forward fold in a power yoga class when one is not warmed up, out of shape, tired, etc.

Cases of Muscle Strain = when too much force is applied to fibers of muscles, ligaments, tendons, joints. Cailliet (from: *Soft Tissue Pain and Disability*)

1. Undue force on a normal structure (lifting something too heavy)
2. Normal force on an abnormally frail joint, muscle, tendon or ligament
3. Normal stress on a normal but unprepared structure (shovel snow first time of season)

4. Performance of awkward weight-bearing activity (putting pile books on a high shelf)

C. Sprain

An injury caused by a joint ligament being stretched beyond its capacity. In cases where either ligament or muscle tissue is torn, immobilization and surgical repair may be necessary. Ligaments are tough, fibrous tissues that connect bones to other bones. Sprains typically occur when the joint is overextended. This can cause tearing of the ligament.

1. First degree sprain - is a tear of only a few fibers of the ligament.
2. Second degree sprain - is a tear of part of a ligament, from a third to almost all its fibers.
3. Third degree sprain - is a complete tear of the ligament.

The symptoms of both a strain and a sprain are pain, swelling, bruising and decreased ability to move to area of the body.

D. Muscle Spasm

A muscle spasm is an intense prolonged involuntary contraction of a muscle or muscle units. Tiny blood vessels (capillaries) run through muscles nourishing the cells with fuel and O₂ (cellular breathing) and removing waste. In a spasm, the vessels are squeezed significantly when muscle units are in spasm around them. They then have difficulty doing their job. The vessels can't remove lactic acid so it builds up in the tissue. The acid itself is irritating and can produce more involvement of fibers going into spasm, so a vicious cycle ensues.

Quick stretching can cause worse pain in a muscle spasm!

Relief for musculo-skeletal pain is the domain of yoga!

Pain drugs, anti-inflammatories, massage, heat, heat and cold, movement, yoga can be remedial treatment elements. Circulation and gentle stretching is paramount. RoM movements that are not too fast, percussive, or big! They coax a muscle into length.

1. Slow easy movement and short holding 15 seconds at a time at first, does the job in helping fibers to release.
2. Some activating yoga poses do the work of the muscles in spasm in its line of pull. Then the muscle releases to some degree on the way back.
3. Activating antagonists if possible can produce release from spasms.
4. Vinyasa movements that contract and gently lengthen 20 percent or less of capacity in smooth, sustained rhythmic actions are also very useful.

Subluxation & Dislocation

Joints can also be out of balance. When bones are out of place, or out of their joint spaces this is called subluxation. The joint itself can be slightly misaligned, this is often true for the spinal vertebrae. When excessive or unusual force on a joint happens, and when muscle weakness is accompanied by lack of adequate connective tissue integrity, like for bed-ridden, elderly, sedentary people, a bone can slip out of its correct position.

Small amount = subluxation (partial dislocation)

When bone surfaces in a joint are entirely separated = dislocation – ouch!

Stress, Emotions & Psychological Factors

Levels of stress and emotional upheaval can be contributing factors as well. Conditions like depression, Seasonal Affective Disorder, PTSD, as well as normal feeling of anger, fear, anxiety, emotional pain, etc. can be significant causative factors in back pain and improper back alignment, tension and use. Also, repression of emotions with little to no outlet can as well contribute.

Herniated Vertebral Disc (Pinched Nerve Root)

Herniated discs are when the contained nucleus pulposus escapes its fibrous covering (annulus fibrosus). A ruptured disc is a deflating of the disc, with the gelatinous material escaping. Both cause inflammation and swelling that compress nerve roots as they exit the spinal cord. Pain can be local or referred. It is one scenario of sciatica. Symptoms or herniation are: pain, numbness, crawling, tingling or burning feelings. Feeling of electric shock. Muscle weakness.

Arthritis

Osteoarthritis = degenerative joint disease [had by @40 million Americans] Also called the wear and tear disease. Caused by factors of heredity, nutrition, and lifestyle. Occurs in any joint, most common are: fingers, knees, hips, ankles, feet, back. Osteoarthritis occurs when the cartilage that cushions the ends of bones in a joint deteriorates over time.

Rheumatoid Arthritis = (RA) is an autoimmune disease that results in a chronic, systemic inflammatory disorder that may affect many tissues and organs, but principally attacks synovial joints. It can be a disabling and painful condition, which can lead to substantial loss of functioning and mobility if not adequately treated.

The process involves an inflammatory response of the capsule around the joints, swelling of synovial cells, excess synovial fluid, and the development of fibrous tissue in the synovium. The pathology of the disease process often leads to the destruction of articular cartilage and ankylosis (fusion) of the joints. RA can also produce diffuse inflammation in the lungs, the membrane around the heart (pericardium), the membranes of the lung (pleura), white of the eye (sclera), and also nodular lesions, most common in subcutaneous tissue. Although the cause of RA is unknown, autoimmunity plays a big part, and RA is a systemic autoimmune disease. Yoga decreases immune system's attack of joint inflammation, and makes for balanced joint space in the joints!

Fibromyalgia = "Arthritis-related condition". The central symptom of fibromyalgia is widespread pain resulting from neuro-chemical imbalances including activation of inflammatory pathways in the brain that result in abnormalities in pain processing.

Spinal Stenosis

A narrowing of spaces in the spine that result in pressure on the spinal cord and/or nerve roots. This disorder usually involves the narrowing of one or more of three areas of the spine:

1. the canal in the center of the column of bones (vertebral or spinal column) through which the spinal cord and nerve roots run
2. the canals at the base or roots of nerves branching out from the spinal cord, or
3. the openings between vertebrae through which nerves leave the spine and go to other parts of the body.

There are many reasons for spinal stenosis such as age, trauma, scoliosis, lack of movement, bad posture. heredity, etc.

Piriformis Syndrome

When the piriformis muscle causes pain, tingling and numbness in the buttocks and/or along the path of the sciatic nerve descending down the lower thigh and into the leg.

Pregnancy

Pregnancy is not a disease! However, the extra weight in the front lower body can cause back pain. Symmetrical stretches, supported forward bends, pelvic tilts, and side lying...

Sacroiliac Joint Derangement/ Dysfunction

Sacroiliac joint dysfunction is improper movement of the joints at the bottom of the spine that connect the sacrum to the pelvis. It can result in pain in the low back and legs, or inflammation of the joints. Pain occurs in the SI joints when there is either too much or too little movement.

Hypermobility, or too much movement in the sacroiliac joints, is a result of loose ligaments. This can be the result of pregnancy or direct injury to the ligaments. When SI joints overcompensate for problems in nearby joints, they may become painful. For example, many lumbar spinal fusion patients have SI joint pain due to reduced motion in lumbar spine segments.

Hypomobility, or too little movement in the joint, can be caused by degenerative joint diseases such as arthritis.

Sacroiliac joint pain usually manifests as pain in the lower back or buttocks, but can spread to surrounding muscles that spasm in response to joint dysfunction.