

Yoga and Spondylolisthesis

Compiled by: Trisha Lamb

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International Association of Yoga Therapists

P.O. Box 2513 • Prescott • AZ 86302 • Phone: 928-541-0004

E-mail: mail@iayt.org • URL: www.iayt.org

The contents of this bibliography do not provide medical advice and should not be so interpreted. Before beginning any exercise program, see your physician for clearance.

Meeks, Sara. Post on spondylolisthesis to Kin-yoga mailing list, 14 Apr 2005. (Sara Meeks is a P.T. who specializes in working with geriatric populations, especially those with osteoporosis. She teaches “Safe Yoga” workshops to educate Yoga teachers on spinal and bone density issues. URL: www.sarameekspt.com)

“Stenosis is similar to spondylolisthesis for which flexion is usually recommended and extension contraindicated.

“The problem with all of this, as I see it, is that, although the back is the symptom, it is not the cause of the problem and we are treating symptoms and not causes. Complicating the issue is that a significant number of people with stenosis, spondylolisthesis, or any of it will also have osteoporosis. NOW, what are we to do? Flexion contraindicated in one and extension in the other and the person has both conditions. Not only that, but in a significant number of people, ALL of these conditions are “silent,” and we do not know if they have any pathology in the back at all.

“One of the ways that I have dealt with this dilemma is to work on hip mobility. Almost to a person, most people, including some very young ones, will have limited hip mobility, especially hip extension and internal rotation. Because the muscles of the hips are connected to the pelvis and the lower back, restriction in various muscles causes a change in back alignment that may be manifested as an increased lumbar lordosis (in standing), stenosis, spondylolisthesis, herniated discs, and so on. I have found clinically that if I can relieve the hip restriction, the alignment of the back is improved, frequently the person is now asymptomatic, and then I do neither flexion nor extension exercises but concentrate on lumbar stabilization—strengthening of the transversus abdominis and back extensors primarily during all movement, including Yoga—general strength, flexibility, and balance.

“Now, how to deal with these issues on a practical basis. What I would recommend is don’t teach your students anything you are unsure of. When in doubt, don’t. Err on the side of caution. It takes just one movement, sometimes very slight, to cause an injury from which the person will need several months to recover. I, and other PT’s, can tell you that our clinics are full of such people. For persons with known osteoporosis, spinal stenosis, spondylolisthesis, or other back pathology, I would like to suggest that you send them to a medical professional (usually a PT) who is a geriatric specialist and who can assess the person on an individual basis so that whatever exercises they are given are more likely to be safe and therapeutic. As I say that, I know that there are many PT’s who are not aware of contraindicated movement for osteoporosis, so that is not necessarily the answer either.

“I might suggest that you read an article just published in the April 2005 IDEA Fitness Journal, ‘Designing a Yoga Program for Active Seniors by Leigh Crews.’ She addresses arthritis, hypertension, and osteoporosis as conditions about which to be aware.”

Raman, Krishna. Spondylolisthesis of the lumbar spine. In Krishna Raman, *A Matter of Health: Integration of Yoga and Western Medicine for Prevention and Cure*. Chennai, India: Eastwest Books, 1998, pp. 461-463.

Spondylolisthesis is the forward displacement (toward the front side of the body) of one vertebra over another and occurs when the pars interarticularis of the vertebral body is broken.

Dr. Raman gives etiopathology, symptoms, diagnosis, medical management, and yogic management, and under yogic management, he says:

“In medicine, the exercises prescribed are not logical. They do nothing to achieve stability of the spine. Moreover, irrationally, forward bending is prohibited for listhetic patients. Ironically, it is a good forward stretch, not a bend, that works to push the spine in the backward direction for stability. A forward bend is harmful to the spine, a stretch is not. Even though a listhetic patient may naturally achieve a forward stretch without training, unless proper training in the techniques is given, the capacity is of no use. Moving forward of the muscular forces which increase the listhesis is along the line of the natural gravitational pull. Backward movement of the spinal muscles constitutes an ‘antigravity’ action which prevents slippage of the spine forward. This backward movement is available in all forward stretches done standing or seated.

“In forward stretches, the lumbosacral region is pushed upward and backward. This can be felt as one performs the pose. All standing poses are good for the listhetic patient as the upward lift of the spinal muscles serve to provide a vertical pull of the spine (in the direction of the head) and this capacity when used every day prevents downward and forward slippage of the spine. Particularly useful are uttanasana, prasarita padottanasana, parsva uttanasana. Props may be used. Pain is relieved rapidly. In the seated poses, all poses are invaluable, particularly kurmasana. Poses like urdhva mukha paschimottanasana, ubhaya padangusthasana and krounchasana are very helpful to reverse the spinal curve. Practising paschimottanasana from the wall ropes is very beneficial for the patient. Without strain, the spine is pushed back to position. This method is excellent for listhetic problems. The eka pada sirasana cycle is also useful. As the lumbar lordosis is increased in these patients, constant practice of convex movements along with forward stretches reverses the curve. Excellent anti-gravity strength is obtained. Whatever angle of slippage the patient has when yoga is instituted, this can be maintained throughout life without aggravation. With intense practice, even a reversal is possible. Twice daily practice is a must for some time. As the spinal muscles are made convex in forward stretches, the benefits are immediate.

“Shoulder stand is very helpful as the spinal muscles are made convex and there is an upward stretch of the body. Seated twists which make the spinal muscles convex, like ardha matsyendrasana, marichyasana, are valuable to relieve pain. Inversions can be safely practiced. Balancing poses are invaluable due to the compressive forces which make the spinal muscles convex. Initially, backward bends are taboo for the listhetic patient as the lumbosacral angle is increased by these asanas and, as the patient already

has a listhesis, the slip can be aggravated. After years of practicing forward stretches, back bends can be learned under skilled supervision. Again, a back bend is not really a bend, but a stretch. It can be performed without increasing the lumbar curve.

“It is illogical to operate on a listhetic patient unless there is impending pressure on the nerves supplying the bladder and bowel. As this does not happen in the majority of cases, surgery is not necessary. Manifestations such as low back pain, nerve root entrapment, sciatic pain and claudication pain can easily be managed conservatively using yoga, as the asanas not only decompress the spinal nerves and strengthen the muscles, but physically move the forces that push the spine in the healthier direction . . . After surgery it is difficult to exercise the spine as fusion has occurred and if the patient has no relief from pain, it is very difficult to rectify the situation. The patient has to be sensitive to learn the methods of forward stretches and subtly push the spine backwards. A crude force will achieve little.”

Schatz, Mary Pullig. Spondylolysis and spondylolisthesis. In Mary Pullig Schatz, *Back Care Basics: A Doctor's Gentle Yoga Program for Back and Neck Pain Relief*. Berkeley, Calif.: Rodmell Press, 1992, p. 58.

“Spondylolysis and spondylolisthesis are two closely related disorders of the lumbar spine in which the connections between the vertebrae weaken and break. In spondylolysis, the vertebrae separate on just one side. This fracture allows the bones to move too much, grinding down the intervertebral discs.

“In spondylolisthesis, the connections break on both sides of the vertebra, and the vertebral body slips forward over the next lower one. The disc at the slippage site rapidly degenerates. At first, the condition may be without symptoms. When symptoms do occur, they are related to nerve or spinal cord compression, which can produce leg, buttock, hip, or foot pain, or numbness or weakness on one or both sides.

“Gymnasts, bowlers, and rowers often experience these conditions as a result of trauma, since these sports encourage the upper part of the body to slide forward over the lower part.”

“If you have [either condition], practice the Home Base [poses] (supine pelvic tilt, yoga sit-ups with legs propped on chair, supine knee-chest twist, crocodile twist, passive back arch, easy bridge pose, one leg up/one leg out, kneeling lunge, all fours, mountain pose, standing twist) and Moving On poses (triangle, revolved triangle, half-moon, warrior, extended warrior, wall push, one-legged wall push, downward-facing dog) in Chapters 6 and 7, observing the specific cautions given for people with these conditions (note: props are used for almost every pose). In general, observe several basic principles when exercising:

1. To prevent the upper vertebrae from slipping forward over the lower ones, do not hold the trunk forward of the pelvis. Do not allow the arch in the lower back to increase.

Avoid high heels, forward bends, and such exercises as rowing, bowling, gymnastics, and cycling.

2. Do movements that encourage the upper vertebrae to move backward over the lower ones, such as lying on your back and hugging your knees to your chest.

3. Strengthen muscles that can provide support for the lower back area, including the paraspinals (the muscles on either side of the spine), hip rotators, abdominals, and the leg and buttock muscles.

4. Increase flexibility elsewhere to avoid excessive demands for motion in the lumbo-sacral area. Increase the flexibility of the shoulder girdle, arms, and hip joints. Increase rotational flexibility in the upper back.”