



One size does not fit all Low Back Pain

Among health care professionals there is consensus that exercise is important in the prevention and management of low back pain. However, there is disagreement as to what is the best type of exercise.

In the 1950's noted physician Dr. Paul Williams professed all individuals with low back pain should perform "flexion exercises". Flexion is bending the spine forward, rounding out the back. Examples of flexion exercises are pulling knees to chest, abdominal curl ups, posterior pelvic tilt, hamstring stretching. His recommendation was to avoid positions, activities, and exercises that extend or arched the spine backward. Dr. Williams is the originator of commonly held belief that it is bad for you're back to sleep on your stomach.

In the 1970's Physical Therapist Robin McKenzie introduced a contradictory concept, that for some individuals with low back pain they should avoid positions and exercises in which the lumbar spine moves in the direction of flexion. He proposed some individuals should seek positions and exercises which move the spine in the direction of extension or arching the low back backwards.

Recently Physical Therapist Shirley Sahrmann Phd. proposed a systematic evaluation to determine which individual patient should avoid flexion of the spine and which individuals should avoid extension of the spine. The assessment involves identifying positions and motions, which elicit or intensify the symptoms. In addition she recognizes the spine moves in the direction of side bending and rotation and that motion in these directions need to be addresses as well. In an effort to keep things simple Dr. Sahrmann recognizes that the mechanics of the spine dictate that rotation of the spine can not occur without equal amount of side bending, as well as, side bending of the spine can not occur without equal amounts of rotation. Therefore when classifying movement she combines side bending and rotation together and labels the direction of motion rotation.

If excessive or faulty movement occurs it can lead to injury and pain. If the direction of the excessive or faulty movement can be identified,

movement than that direction can be minimized and avoided, and this should facilitate the healing of injured tissue.

If the low back moves in the three directions (flexion, extension, rotation), and movement leads to pain than movement in one direction or combination of directions need to be avoided or minimized in order to avoid pain. The challenge is to identify which directions of motions need to be avoided.

Careful systematic clinical examination of what directions of movements elicit pain provides answers to the questions about which direction of movement should be avoided or minimized.

Dr. Sahrman's research has been able to identify which directions of motion(s) are most frequent when it comes to leading to back pain. Rotating and extending the spine is the most frequent direction of motion, which contributes to back pain. The next most frequent is straight extension, followed by straight rotation. Proceeding down the hierarchy of frequency flexion with rotation is less frequent. The least frequent direction of motion, which leads to back pain, is straight flexion.

Corrective Actions

If movement in the direction of extension leads to back pain, than it is better to sit than it is to stand. It is better to lie on your side with hip and knees bent and avoid lying on your stomach. It is better to avoid exercises, which involve extension of the spine, and to do exercises, which lead to flexion of the spine. "Williams Flexion Exercises" are indicated for an individual in which movement in the direction of extension leads to back pain.

If movement in the direction of rotation leads to back pain, than it is better when sitting to avoid crossing legs, avoid leaning towards one side, avoid standing on one leg. It is better to avoid side lying, or be sure to have a pillow under the waist to prevent the spine from sagging into a relative side bent position when side lying. If the back pain is distinctly worse on one side of the body vs. the other it is likely that movement in the direction of rotation will lead to back pain. It is tricky deciding whether rotation left verses right should be avoided or encouraged. If left rotation leads to pain, than exercises in the direction of right rotation should be pursued

If movement in the direction of flexion leads to back pain it is better to stand rather than sit. When you must sit, sit erect, with a lumbar support or cushion. It is better to lie on stomach rather than your side. It is better to

avoid exercises, which involve flexion of the spine, and to do exercises, which lead to extension of the spine. McKenzie extension type exercises are indicated.

As in most situations one size does not fit all. Exercises should be individualized for based on the individual's specific needs.