Head Forward and Antalgic Postures are Accumulative Injuries

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With the increased use of computers, tablets, cell phones and other hand held devices combined with our sedentary lifestyles and poor posture habits at work and at rest, we are seeing more and more people developing what is commonly called “Text Neck”, “Computer Neck”. These are just new names for Head Forward Posture, and if not corrected can cause an antalgic posture, stance and gait. This results in pain in the low-back making standing, walking and sitting difficult.

The spine is a closed kinetic system. It is a physical structure, it has to follow Newton’s third law of motion. The third law states: “For every action, there is an equal and opposite like reaction.” Therefore, when one loses the cervical lordotic curve, forcing forward head posture, they become unbalanced within their environment of gravity.

This forces their musculoskeletal system to react in an attempt to re-align with gravity, resulting in a head forward, pelvis back posture, stance and gait.

As the head extends forward relative to the line of gravity it puts strain on the neck and shoulder muscles thus putting strain on the thoracic spine and low back as well. Pain can show up in any or all parts of the spine; however if not corrected over time it can settle in the low back and pelvis.
Text neck and antalgic postures are caused by poor postural habits one has developed over time. Forward flexion of the head, neck and back while operating computers, cell phones, and other hand held devices and gravity all contribute to this problem.

The Psoas major and minor muscles originate from the front of all lumbar vertebrae and the lower ribs then insert through the pelvis and attach to the upper femur. When these muscles spasm they contract holding the body in the painful antalgic bent forward posture, stance and gait.

In order to correct these accumulative injuries you need to follow a system for reversing the damage, beginning with the psoas stretch.

Psoas stretch procedure:

The Psoas stretch block is 6 inches high and 17 inches wide so that the user can stretch and twist the psoas in 2 or 3-dimensions at the same time. The stretch should be held for 40-45 seconds on each side, working up to for 5 stretches on each side.
To begin the stretch, the patient may lie on a table or the floor.

- They elevate the hips on the Psoas Stretch Block.
- The patient flexes one knee while straightening and rotating the other leg lateral.
- Stretching is performed by forcing the straight leg down laterally while increasing the upward and lateral flex on the opposite leg.

People who sit most of the day are encouraged to perform this exercise daily before spinal molding and before bed to insure a pain free restful sleep.

Correcting the cause of “Text Neck” and antalgic posture require the following rehabilitation procedures in addition to the psoas stretch.

- To bring the head back into the gravity line the head weight is needed to engage the righting reflexes. **Daily use of the Adjustable Headweight Harness with the Cervical Posture Strap and/or forward / lateral head weighting with cervical posture strap and shoulder weights. Hip weight may also be added if needed.**

- **Daily use of the 6-way stretch strap to exercise, stretch and strengthen the atrophied multifidus muscles.** Jowett et al, found that the fast twitch phasic muscle fibers in the multifidus, as well as other involved muscles, changed into slow twitch postural fibers on the convex side of displacement in the lateral and A-P spine while the fibers on the opposite concave side atrophied because of disuse. It is also necessary to rehabilitate the muscles that have atrophied due to disuse on the concaved side of the angle.
Muscle changes from:
Fast twitch to slow twitch at obtuse angle side of displacement.
Muscles atrophy on the opposite acute angles.

Multifidus muscle origin: The back of the sacrum, mammillary processes of the lumbars, transverse processes of the thoracics, and articular processes of the lower four cervicals. Insertion: spinous process above vertebra of origin.

Kader DF, Wardlaw D, Smith FW, published research titled: Correlation between the MRI changes in the lumbar Multifidus muscles and leg pain in the Journal of Clinical Radiology. A retrospective study of 78 patients, aged 17–72, presenting with low back pain (LBP) with or without associated leg pain was undertaken. The study showed that muscle atrophy was present in 80% of the patients with LBP.

This correlation between MF and involved muscle atrophy and leg pain was found to be significant. Nerve root compression and herniated nucleus pulposus were statistically not significant.

- To keep the thoracic spine supple, stretched and moving freely. **Daily use of the Thoracic Exercise Roll may be used.**