

THE IMPORTANCE OF THE NECK AND UPPER BACK POSITIONING IN OVERALL HEALTH

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A person's health and well being have numerous determinants. To live well you eat well, get enough sleep, stay active, control stress, act responsibly and have good posture. It is no surprise that good posture is key to maintaining a good health.

Did you know?

- Back pain is second only to the common cold as a cause of primary care office visits and direct medical costs exceed \$25 billion per year?
- There is a 90% incidence of low and upper back pain in our lifetime? We cannot ignore our posture as it affects our overall health.
- Poor posture is a direct cause of back pain and it affects our overall health and quality of life by restricting range of motion and proper organ function.

Good posture means that your bones are well aligned and your muscles, ligaments and joints can function the way nature intended. Also your organs are in the proper position and can function optimally. Without good posture your overall health and total efficiency can be compromised. Someone with poor posture may be often tired and unable to live life to the fullest. Studies have proven that athletes with poor posture are more prone to injury, chronic pain and have decreased peak efficiency.

Poor posture can develop as a result of falls and injuries, but can also develop from bad habits. In the latter case, you have control to prevent posture related problems before they compromise your health. Even 15 minutes of reading, typing, sitting, standing in a wrong position exhausts your neck, shoulder and upper back musculature. The "forward head" is the source for most neck and upper back pain. Forward head refers to the chronic forward bending (flexion) of the spine or letting the neck and head tilt forward instead of maintaining the neck in a straight vertical line. A forward head can eventually damage neck and upper back structures. The posterior neck and shoulder muscles become elongated, overstretched and weakened while the chest and anterior shoulders muscles become shorter and tight.

Poor posture can result in:

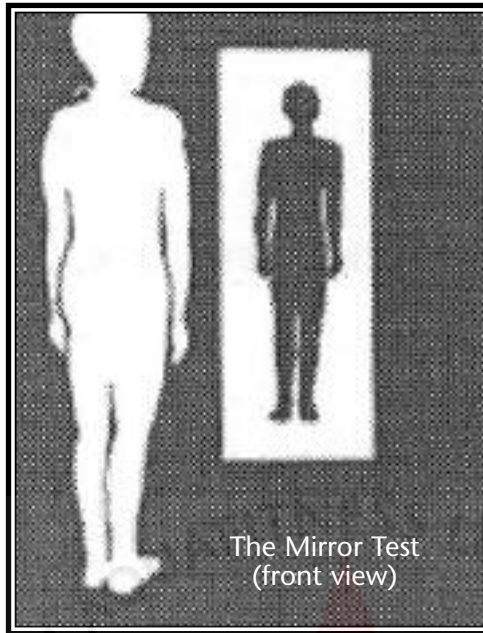
- Pushing vertebral discs posteriorly and causing herniation, pressing on nerves sending pain down the arm (impingement)
- Tight muscles pressing against nerves also sending pain down the arm
- Disc degeneration
- Tension headaches
- "Numb" shoulder
- Rotator cuff impingement (due to rounded shoulders)
- Rotator cuff muscle tears/strains
- Upper and low back pain (due to muscle fatigue, excessive forward curvature)
- Shoulder pain (due to rounded shoulders and reduced range of motion)
- Decreased neck range of motion
- Increasing breathing effort (by pushing rib cage down, thus increasing the tidal lung volume)
- Increasing risk of temporomandibular joint injury

Overall poor posture cannot only cause chronic pain and decreased mobility, but also reduce overall biomechanical efficiency and hinder the proper functioning of most organs thereby decreasing quality of life.

Proper postural alignment: Is the earlobe over the acromion process of the shoulder, over the hip joint and over a point about one inch in front of the ankle joint. From the front view, the head is erect, not slumping forward or back or tilted to the side, shoulders are not drooping forward or pulled back, hips are level and knees are at the same height.

To test your posture do the Wall Test: Stand near a wall, with your back to it, but not touching the wall. Slowly back up until a part of your body touches the wall? Did your gluteals touch first? You may be standing flexed at the hip. Did your upper back touch first? You may be standing slouched backward, with hips pushed forward. Now, stand with heels, hips, upper back and the back of your head against the wall. Bring the back of your head against the wall without raising or dropping your chin or arching your back. If you can't keep your heels, hips, upper back and the back of your head comfortably against the wall or if you have to crane your neck then these muscles and connective tissue are too tight to stand up straight.

Our role as fitness leaders has expanded over the years. We help people build better looking bodies, but also improve their performance of activities of daily living (ADL's). We help people become more functional in their every day tasks and chores. Tasks such as pulling, pushing, walking, reaching, standing, sitting, climbing, running, lifting and many others require that we impose a demand on our bodies. To produce movement the body requires balance (static and dynamic), proprioception (kinaesthetic awareness of our bodies in space), stability, postural alignment, strength and flexibility. All of these components work in unison. When any of the components is affected by injury or disease it results in a lack of functionality.

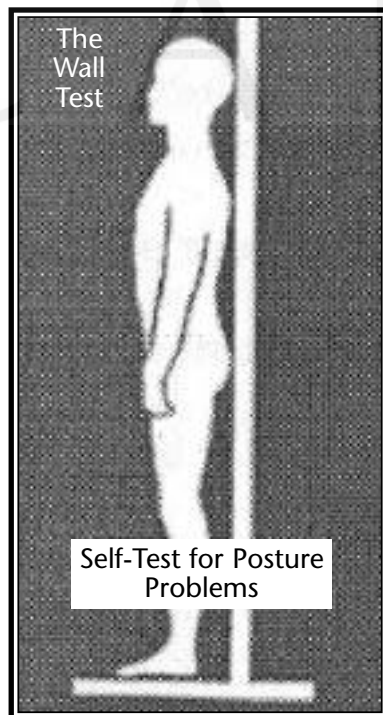


The Mirror Test
(front view)

Poor posture is something that can be practiced and taught. As instructors, we can influence people to do what is best for their health. Exercise prescription should be functional and part of functionality is maintaining proper posture while performing exercises. Another trainer and I were recently discussing how the upper back is becoming the new "abs", meaning that it is the muscle group to target if we want to improve our overall health and body appearance. We constantly obsess about abdominals not realizing that some of the exercises encourage poking the chin forward and bringing the head and neck forward while pulling on the structures. With all the forward bending we do all day in front of a computer, watching television, being sedentary at a job, driving and sitting improperly the last thing we need is more upper back and shoulder rounding.

Following are two important stretches to release tension and tightness in shortened muscles:

Pectoral Stretch: With the shoulders held back and down, arms horizontally abducted at shoulder level, thumbs up, pull the arms back until a comfortable stretch is felt, hold for a minimum of 8 seconds.



The Wall Test

Self-Test for Posture Problems

If you have a participant with poor posture you can also encourage this deeper stretch to be done at home or at work: Face a wall and lift one arm up, elbow bent out to the side and behind you then turn away from the wall, using the wall to gently brace your elbow back as you turn away, make sure you keep your head and back posture in line, hold for at least 8 seconds, 30 seconds is preferable and then switch arms.

Trapezius Stretch: Tip one ear toward your shoulder while maintaining good posture (chin retracted), slowly slide your hand down the side of your body toward your knee. Hold for 8 seconds and release, switch sides. This stretch can be also be done sitting in a chair and used as a break when typing, sitting, watching television, etc.

"Release shoulders and increase the distance between the tips of your ears and shoulders. Imagine a gentle waterfall cascading off the shoulders helping you to release the tension. Imagine a set of curtains between the shoulder blades. Now close the curtains gently as you activate the muscles in the middle back, the rhomboids. Now anchor the bottom tips of the shoulder blades into the back, setting the scapula. Avoid allowing the shoulder blades to "flyaway" from the back like wings." C. Kopansky

Instructors can also help participants maintain the important positioning of the neck by using cues such:

"Chin Retraction: Visualize a pony tail at the top back portion of the head, imagine someone gently pulling the pony tail up and slightly back, allow the chin to retract to a comfortable position. Avoid craning the neck or poking the chin forward to look up." C. Kopansky

Good posture alone will slowly correct muscle imbalances. Adding stretching exercises and increasing the flexibility of the tightened muscles of the shoulders and chest will further help correct posture. Exercises to retrain and strengthen the →

upper back and posterior shoulders are crucial to maintaining good posture and begin healing if you suffer from upper back, neck and shoulder pain.

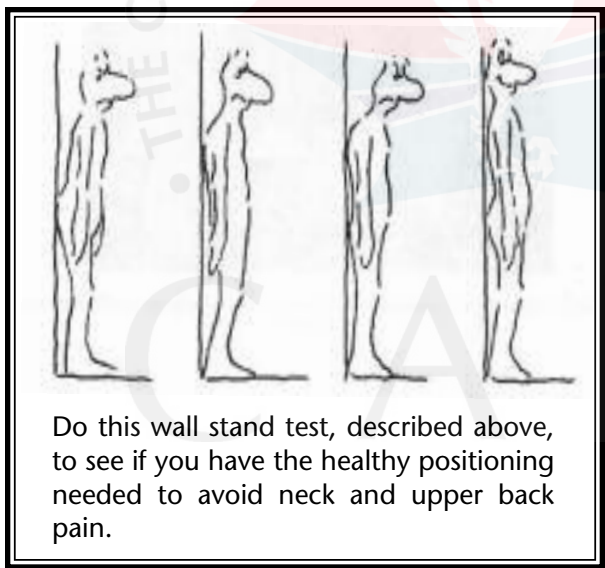
Upper back extensions, double chin exercises, arm and leg reaches, bridging, external rotations, high row, bent-over flys are all great land exercises.

In the water using High Chest hug and blade squeeze, unison or alternating Breast Stroke arms while focusing on the scapular retraction are great exercises to include in every class. Rotator cuff arms (Flasher arms) are also a complementary exercise to offset the effects of poor posture on the rotator cuff.

Everyday Habits: There are things we can do every day to prevent forward head and rounding of the shoulders:

- Don't let your head droop forward when sitting and standing. Posture is a voluntary exercise!
- When standing hold your head high, chin retracted, shoulders back, chest out and abs tucked in.

Exercises to retrain and strengthen the upper back and posterior shoulders are crucial to maintaining good posture and begin healing if you suffer from upper back, neck and shoulder pain.



- Raise your computer monitor up so you don't have to bend your head forward to work.
- Move your keyboard and mouse so that while typing your shoulders are relaxed, wrists are flat, and elbows are bent at 90 degrees and resting at your side.
- Move your television up higher, don't allow your self to curl forward to watch it.
- Move your desk and car seats closer in, so that your knees are higher than your hips
- Take a break from your computer every 20 minutes and stretch (place a reminder on your monitor and pictures of beneficial stretches).

As fitness instructors we need to check our own posture and correct it if necessary. Cue proper posture while exercising and also teach participants the rewards of good posture and how it needs to be maintained through all of our daily tasks. We can also notice poor posture in our clients and advise them on stretching and strengthening exercises that can be done during class and also at home.

Lastly, we can design exercise programs which are functional, include stability exercises and focuses on building posterior neck and upper back strength and increasing flexibility in the chest and anterior shoulders.

References:

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POWER POSTURE SEQUENCE

- *Chin retracts*
- *Core activates*
- *Shoulders relax*
- *Hips level*
- *Scapula retracts*
- *Gluteals tighten*
- *Chest opens*