Neck Stiffness & Pain: Why Stretching Isn't the Answer

By Shara Ogin, OTR/L, GCFP®, CEAS



So many people have neck tightness, stiffness, and pain and the common approach for most physical therapists is to address this issue with neck stretches.

Yet, I'll be the controversial voice that says: neck stretches and exercises will do very little to alleviate this type of pain — and in many cases, they can even reinforce the underlying dysfunction.

It's ironic that I would be the one to state this as I'm in the gym working out almost daily and teach a weekly strength and toning class!

The Real Culprit: A Frozen Thorax

In my clinical experience, the primary cause of neck pain and stiffness isn't isolated to the cervical spine — it's a lack of coordinated movement and support from the thoracic spine and ribs below C7.

Many people today are walking around as if they're wearing an invisible straightjacket around their chest. Their upper thoracic spine (particularly between T2–T8) is rigid, locked down, and cut off from functional movement.

This lack of mobility is often exacerbated by chronic stress, anxiety, poor postural habits, and even environmental factors like poor air quality which impact respiratory function. As thoracic mobility decreases, we gradually lose proprioceptive and sensory awareness in the area between

the shoulder blades. The scapula needs to work harder to glide, potentially distributing the work of this region to the arms and neck.

Try This: Feel It for Yourself
Place the palm of one hand softly on your sternum or mid-chest. Now gently turn your head to one side.

Do you feel any subtle movement under your hand?

If not, that means your thoracic spine isn't participating in the rotation — it's leaving all the work to your cervical spine. Biomechanically, that's a problem.

The deep musculature of the neck is not designed to be the sole driver of rotation, flexion, or extension. Think of your spine as a chain: when you twist the bottom link, the ones above it turn in a coordinated, sequential motion. Your spine should behave similarly during movement — but for most people, the middle links are locked, and the top ones (i.e., your neck) and the bottom ones (your lumbar vertebrae) are overcompensating.

This forces the surrounding muscles — such as the upper trapezius and scalenes (shoulders and neck) — to work far harder than they need to.

The Truth About Cervical Rotation #1
When someone turns their head and neck as if to look out the rearview mirror when driving, very little of the neck musculature is actually required for this motion until the end of the range (at which point the upper cervicals take over). The reason for this is that most of the rotation should be distributed through the thoracic spine (all the way down to the sacrum).

Unfortunately, for many adults, these structures below the neck aren't properly assisting the turning of the neck resulting and additional muscular effort as well as more torque at each individual vertebral segment occurs.

Each of us has the ability to inhibit our chest and thoracic spine while we turn our heads. Doing this a few times a day is not at all a problem. The problem occurs when this is the norm…and a person turns their head in this way hundreds of times a day. Over time, this will result in stiffness, strain, and possibly even pain.

To resolve such an issue, each vertebra must regain its ability to move independently while still responding to the vertebrae above and below it, and the coordination of this motion must also extend far below the neck to the lower vertebrae, ribs and associated musculature. This applies not only to rotation, but also to lateral flexion, flexion, and extension.

For instance, when you side-bend your neck to the left (aka bring your left ear closer to your left shoulder), the left ribs should compress slightly, and the right ribs should open — like an accordion. That's what intelligent, biomechanically efficient movement looks like.



The Static Neck and the Overworked Extensors
Let's talk about posture.

Ideally, the head should be carried passively by the spine during walking or sitting — without activation of the external neck musculature. But in many people, the head leads the movement, and the cervical extensors (muscles on the backside of the neck), are then required to continuously fire to stabilize the load.

Also, for so many adults, the "S" shaped curve of the spine becomes altered (as a result of years of poor postures and stress) — resulting in a structurally forward head posture. In response, the upper back and neck "extensors" must contract continuously to counterbalance the weight of the head. The same dynamic may occur with someone with a scoliosis, where the head may be more off to one side requiring the muscles on the opposing side to work harder.

This is not an efficient system — it's a compensation.

The important point is that these individuals are *working their neck and back muscles 24/7* — and they don't even realize it. Eventually, this can lead to complaints of pain, stiffness, or even diagnoses like spinal stenosis. At an elementary level we can at least help the client find a proper pillow height to support the spine into neutral as best we can (for improved breathing during sleep).

But these symptoms are not the root issue. They're the downstream effect of habitual postural patterns and movement inefficiencies.

How Traumas affect the Neck
Many clients habitually over-engage the posterior muscles of their neck throughout the day without any conscious awareness of doing so as a means of self-protection.

Such a habitual posture was most often learned in early childhood as a physiological coping mechanism to deal with a world around them that felt scary.

Traumas, which I'm going to only briefly mention here and rather, dedicate an entirely different article to discussing as the topic is too vast, lie at the root of this habitual posterior neck over-activation (as described in the paragraph above) and go hand-in-hand with the over-engagement of other fight-or-flight musculature such as the platysma, scalenes, and the sternocleidomastoid.

Hence, the nervous system has coded this protective physiology as "safe," and over time it becomes the "norm," aka one's homeostatic "set-point."

It's also important to note, after injuries or surgeries in the neck/shoulder region, the body will instinctively guard and protect above, below and all around the injury site which actually presents very similarly.

As a result of traumas (mostly in the individual's younger years) in addition to injuries, the person has "coded" the engagement of this protective musculature as "safe." So when these same people go to turn their heads, not only do their cervical (neck) muscles need to work harder to compensate for the lack of assistance from the chest or thoracic musculature (as discussed at the start of this article), but they also need to work harder due to the resistance of the self-protective musculature which are metaphorically speaking saying "STOP" while the muscles that are trying to turn your head are saying "GO," creating an uncanny resistance.

After treating hundreds of clients with neck pain over the years, I can readily detect this trauma induced guarding simply by observing and palpating their necks.

It's difficult to describe, yet the soft tissues of the neck will be thicker and less pliable and mobile, the synovial fluid will feel less vicious — any passive movement of the head will initially be met with resistance. A soft tissue massage approach will be minimally effective at most in such cases.

With experience (as well as the client's subjective narrative), I have learned to detect if the guarding is due to injury vs trauma, yet regardless, my treatment approach is more-or-less the same.

Until the individual's nervous system learns to relax the excessive contraction of this extraneous musculature and "recode," this relaxed state as "safe," stretches will be also be only minimally effective at most.

Rather, effective treatment must go beyond surface-level interventions like stretching or strengthening. We need to re-educate the neuromuscular system to restore coordinated, segmental movement throughout the spine, ribs, and clavicle.

The Truth About Cervical Rotation #2 + a Mini Exercise
During everyday motions such as standing, walking, and turning, the cervical muscles aren't meant to do very much — especially if the bones of the vertebrae below the neck are stacked properly, then the neck can just rest and be carried through the world.

Unfortunately, in today's day and age, most people's weight when standing and walking is more towards the back of their feet, as opposed to through the center (or ball of the foot), which then, due to the natural pull of gravity, requires the muscles on the back side of their neck and upper back to over-engage.

Try this for yourself, Stand up and lean slightly backwards so your body weight shifts through your heels and see if you can feel the muscles behind your neck and upper back engage.

As an exercise, now shift your weight forward so your weight shifts through your toes. Then rock your weight back and forth a few times until you feel your weight through the center of your feet. See if you can find the point where the muscles on the back side of your neck and back are no longer engaging.

When a client comes to standing after a session with me, this shift almost always occurs without conscious effort — upon standing from the bodywork table, their weight automatically is positioned over the center of their feet without them even having to think about it. Their center of gravity is optimized, resulting in improved balance, stability, and alignment.

The magic of our work together occurs when the patient no longer has to "think" about where to position their weight in standing and walking.

Why Neck Stretches Miss the Mark
Stretching tight neck muscles in isolation often yields minimal results — because it fails to address why those muscles are overworking in the first place.

In fact, traditional stretching may actually reinforce the very same dysfunctional patterns we're trying to resolve.

The issue isn't that the neck muscles are inherently "weak," "short," or "tight." The issue is that they're being *recruited constantly* due to postural habits and the lack of movement elsewhere in the body. Until we restore proper thoracic mobility, scapular coordination, and spinal segmental movement, we're just chasing symptoms.

So, What's the Solution?
The solution lies in re-patterning the neuromuscular system — teaching the body how to move differently. This includes:

- Restoring thoracic mobility and segmental vertebral differentiation
- Reconnecting the ribs, spine, and scapula as a unified system
- Cultivating proprioceptive awareness in the mid-back, clavicle and sternum

- Reducing excessive muscular co-contraction, especially in the posterior cervical spine

Education can begin with teaching the patient to first become aware of when they are over-contracting their neck musculature and secondly to then learn alternative ways of moving.

I've created a series of FREE open-source short videos on YouTube **@sharaogin1,** that demonstrate how to facilitate these changes. These techniques support the body in offloading the neck and redistributing effort throughout the system.

A Gentle, Nervous-System-Led Approach
When I treat manually, my touch is soft, gentle, and precise. This isn't just stylistic — it's what the nervous system responds to best. A nervous system that feels safe can begin to release excessive muscular holding.

Under the right conditions, tissues soften, and new movement possibilities emerge. I often begin by softly holding the base of the head gently in my hands — you will be amazed by how fast this evokes the parasympathetic response and helps the muscles to let go and the client to take a deep breath. Also great for releasing Headaches!

From there, I work — often without words — to facilitate the brain's awareness of relationships among each individual vertebra, scapula, and the surrounding musculature. Each rib and vertebra must be differentiated so the brain can refine its internal map of the body.

Improved sensory awareness leads to more efficient motor control.



A New Direction for Pain Management

As Occupational and Physical Therapists and many others is the health field, we are in a unique position to shift the narrative around pain — away from local symptom-chasing and toward holistic, system-wide coordination.

By bringing more attention to the thoracic spine, breath mechanics, and neuromuscular awareness, we can help our patients not only reduce pain, but also move through the world with greater ease, balance, and resilience.

For more about the author see: Holisticpainrelief.org

Beyond the Symptoms: A Whole-Body Perspective on Overuse Injuries
By Shara Ogin, OTR/L, GCFP^{cM}, CEAS

Is Carpal Tunnel Syndrome truly an isolated issue at the wrist, and tennis elbow truly an issue of the lateral elbow?

After more than 27 years as an Occupational Therapist — including 15 years specializing in outpatient therapy — and working with hundreds of clients presenting with overuse conditions, I'm here to share an alternative perspective. I've witnessed, again and again, that these diagnoses tend to describe *where* symptoms appear rather than *why* they developed in the first place.

This isn't a departure from standard practice so much as an invitation to widen the lens. The volar wrist is a valid and important site to assess and treat — but in my experience, it's often the place where symptoms (and edema) surface, rather than the place they originate.

Where the Real Problem Lies
More often than not, these problems originate far from the site of pain — within the pelvis, spine, ribs, scapula, and neck. I have observed that many clients with chronic neuropathic pain or distal symptoms (such as paresthesias, numbness, or bilateral hand and arm discomfort) are moving through the world as if wearing an invisible straitjacket, limiting the movement around their thoracic spine.

This means the mid-thoracic region, between T3 and T10, often lacks the segmented, differentiated movement needed for effortless fluid motion. When the ribs and vertebrae move as one rigid unit, the lumbar and cervical regions must compensate — twisting and rotating beyond what is biomechanically efficient. Given today's stress and anxiety levels, along with less-than-ideal workstation setups, these poor movement patterns are becoming increasingly common.

For context, consider a simple movement: sliding your left hand down your left thigh or bending to pick something up by your left foot. In a well-organized system, the vertebrae and ribs on the left compress slightly while those on the right expand. But when the thoracic spine and ribs are restricted — or, metaphorically "glued" together, this coordinated movement is greatly reduced. The same principle applies to bending, reaching, and rotating.

As another analogy, imagine holding a metal chain vertically in the air and twisting the bottom link — ideally, each link above would rotate incrementally. That's how the spine should move during turning or twisting. Unfortunately, in many clients, the cervical and lumbar regions over-engage to pick up the "slack" of the mid and upper back region, creating strain, excess effort, and inefficiency.

As a result, the larger muscle groups and core stabilizers become unavailable to properly assist arm and hand movements. When the shoulders and neck are slightly rounded forward, this compounds the issue, impeding the proper glide of the scapula and forcing the smaller muscle groups of the distal extremities to do more work than necessary. The result is increased strain on tendons, ligaments, and other distal structures — a direct pathway to overuse injuries.

The Role of the Scapula

Proper scapular function is a foundational element of upper extremity mechanics. The scapula should glide fluidly and synchronously with the gleno-humeral joint, clavicle, ribs, and spine. Yet often, I observe the inferior angle flaring away from the thorax — or, in other cases, a scapula so restricted that it appears almost fused to the thoracic wall.

Both scenarios reflect a breakdown in coordination, often resulting in chronic over-activation of specific musculature such as the scalenes and upper trapezius. This occurs because the larger proximal structures are unavailable to properly assist with arm and neck movements — resulting in the "wrong" muscles working more than they should. Raising the arms, even to a functional height of 70-80 degrees, takes more effort.

Over time, the arm becomes increasingly "disconnected" from the rest of the body. The outcome is heightened stress and strain on distal ligaments, tendons, and muscles, which may ultimately cause swelling and contribute to pain, fatigue, and reduced functional efficiency.

Tennis Elbow

In my clinical observation, tennis elbow often presents due to a person performing dexterous tasks (or activities involving vibration such as tennis or using power tools), with their arms either abducted or flexed forward from their torso a few degrees more than is optimal. Sometimes, this occurs simply as a result of their arm bones (humerus or forearm) being biologically longer.

The resulting weight of this lever arm adds additional work around the region of the upper trapezius, upper back, and posterior neck, which can, overtime, lead to the inferior border of the scapula flaring off the thorax. In rarer cases, the inferior border of the scapula will appear to be "glued" against the thorax due to an excessive amount of bracing required to perform such arm motions. Regardless of which of these two movement strategies the individual chooses, the proper glide and movement of the scapula will be negatively impacted.

The other culprit in diagnoses such as tennis elbow is an overuse of the finger extensors. People are often unaware they are doing this hyperextension pattern at all — for example, constantly lifting their fingers off the keys when typing and holding them statically in the air. I also want to point out that this extensor pattern is rarely isolated to solely the fingers. Rather, it becomes a habitual global issue, affecting what is known in the therapy world as the extensor chain.

Such bio-mechanical inefficiency — combined with poor wrist postures and the hyperextension of the digits — creates the perfect storm for forearm strain, tendonitis, or tennis elbow to develop.

If we treat solely at the site of symptoms, our therapy will be inherently sub-optimal, as the true sources of the client's issues remain unaddressed.

The Low Back and Neck

Let's discuss further this habitual over-contraction of the back, thigh, and neck musculature — a topic I explore further in my companion article, "*What Causes Neck Pain."*

Traditional therapy approaches may focus on stretching or strengthening the back and neck, yet these interventions often fail to address the underlying issue. In most cases, the neck is overcompensating because the thoracic spine, ribs, and related structures are not contributing adequately to movement.

It is crucial that treatment for most neck and overuse injury cases prioritize neuromuscular re-education — helping the nervous system to relearn how to move in a more coordinated, efficient way — and teaching the larger muscle groups how to take over more of the work.

Parasitic Patterns of Movement
Nearly every client with chronic pain I see is caught in unconscious movement habits that perpetuate strain and fatigue. Common examples include:

- Restricted or shallow breathing and diaphragm inhibition
- Hypertonicity of the paraspinals and over-reliance on the posterior chain muscles
- Co-contraction of finger and neck extensors
- Overuse of the toes and leg adductors as well as extraneous muscles around the hips

Parasitic movement patterns show up in everyday actions — standing up, walking, or reaching into the cabinet for a teacup — without conscious awareness. I use the term “parasitic” because such patterns drain energy and create unnecessary strain, as the “wrong” muscles are being recruited for the task at hand.

Such habitual patterns often emerge as a result of the continual over-engagement of the "fight-or-flight" musculature (a topic I will explore further in a separate article on the role of trauma in the physiology of pain).

A Gentle, Nervous-System-Led Approach
When I treat manually, my touch is soft, gentle, and precise. This isn’t just stylistic — it’s what the nervous system responds to best. A nervous system that feels safe can begin to release chronic muscular holding. Under the right conditions, tissues soften, and new movement options emerge.

From there, I work — often without words — to facilitate the brain’s recognition of functional relationships among the ribs, vertebrae, scapulae, and pelvis. Each rib and vertebra must be differentiated so the brain can refine its internal body map. Improved proprioception and sensory awareness lead to more efficient motor control and movement.

Awareness Is Key
Equally important is helping clients cultivate awareness of their own movement patterns — how they may unconsciously overuse certain muscles or move inefficiently. The encouraging news is that these patterns, often learned during times of stress or trauma, can indeed be unlearned. With practice and guidance, clients begin to move with greater ease, coordination, and intentionality.

Lasting Change Without Chasing Symptoms
At times, distal upper extremity symptoms — such as neuropathic pain or paresthesias — begin to resolve even before I directly touch the hand. Still, I typically include gentle, intentional touch to this region towards the end of treatment to help the brain integrate new movement patterns and to restore proprioceptive awareness of each part and its relationship to the whole.

The results are often profound — extending beyond pain relief into a transformation of self-awareness, body image, and self-concept. Clients frequently report feeling more "put together," aligned, and at ease within themselves.

A Call for a Whole-Body Approach
As Occupational and Physical Therapists, we are uniquely positioned to view the body as an interconnected whole. When we treat diagnoses in isolation, we risk chasing symptoms rather than addressing root causes.

By expanding our lens beyond the immediate site of pain — to include the thoracic spine, pelvis, scapular motion, and breathing — we can then facilitate true recovery and prevent recurrence.

Carpal Tunnel Syndrome, Tennis Elbow, and similar overuse injuries are not isolated mechanical problems; they are messages from the body, inviting us to restore coordination, awareness, and balance.

When therapy supports this whole-body integration, healing becomes not just physical but holistic — transforming how clients inhabit their bodies and their lives.