

UNRAVELING BACK PAIN

- THE UNTOLD TRUTH -

*Providing Long-Term
Recovery Solutions that Work*

Presented By Dr. Corey Burt



So you've had it up to here with **chronic back pain** that is not improving.

Does the pain affect your work, hobbies, relationships, and bank account?

Have you been told you need massage, physical therapy, exercise, chiropractic, or even medication?

You've likely tried multiple solutions that left you **frustrated with the results.**

We understand your pain and frustration.

You can specifically treat the low back area for years, but may only experience temporary relief until you **correct the root cause of the problem.**

We can almost guarantee nobody has shared the following information with you.

We hope you find value in this guide, enjoy!

6 Interesting Facts

Back pain is the **#1** Leading cause of disability worldwide

50% Of American workers admit to having back pain symptoms each year

54% Of Americans suffering with back pain spend the majority of the day sitting

6 Interesting Facts

Back pain is the **3rd** Most common reason for visits to the doctors office

The cost of back pain treatment plus the cost of lost wages from back pain is **\$253 Billion**

The **#1** Treatment for back pain is Medication

WHAT CAUSED IT?

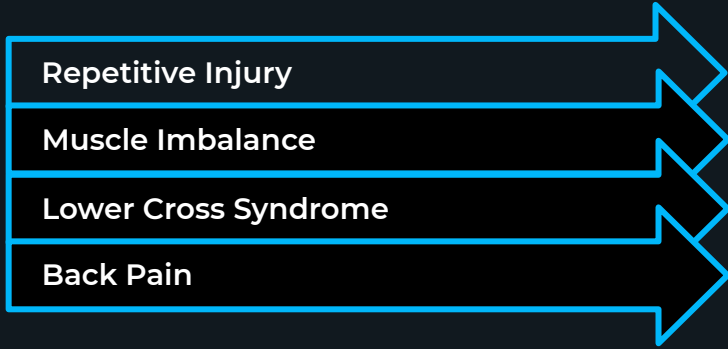
Most **COMMON** cause:

→ Repetitive motion injury



*“Most people spend **23 of the 24** hours in the seated position”*

Simple Neurological Cascade



Repetitive Injury

Muscle Imbalance

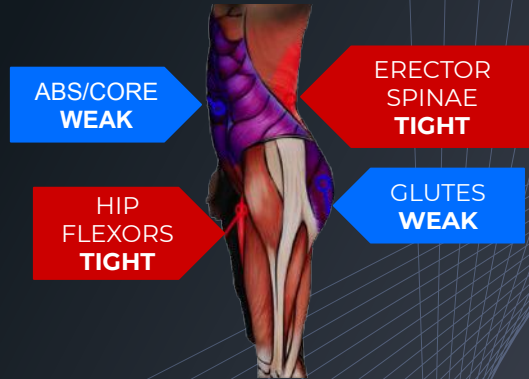
Lower Cross Syndrome

Back Pain

Prolonged sitting can act as a repetitive injury that is likely to cause Lower Cross Syndrome.

This is diagnosed when the **hip flexors & hamstrings** are shortened/tight and the **butt/glutes & core/abs** are weak.

If not addressed, pain will likely emerge.



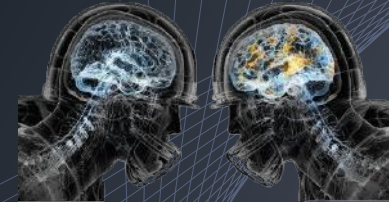
Most **OVERLOOKED** Cause

The most overlooked cause of back pain is suffering from a previous **head and neck injury**.

Most commonly from

1. Car crash
 - Whiplash injury
2. Sports growing up:
 - A football player getting a concussion
 - A soccer player heading the ball
 - A wrestler thrown to the ground
 - A gymnast falling on their head
 - A fighter taking a blow to their head
 - Falling off a bike

Anything that jolts the head and neck



Complex Neurological Cascade

Head & Neck Injury

Upper Cervical Misalignment

Suboccipital Muscles Stretch

Mechanoreceptors

Lamina 7 Spinal Cord

Cerebellum

Vestibular Nucleus

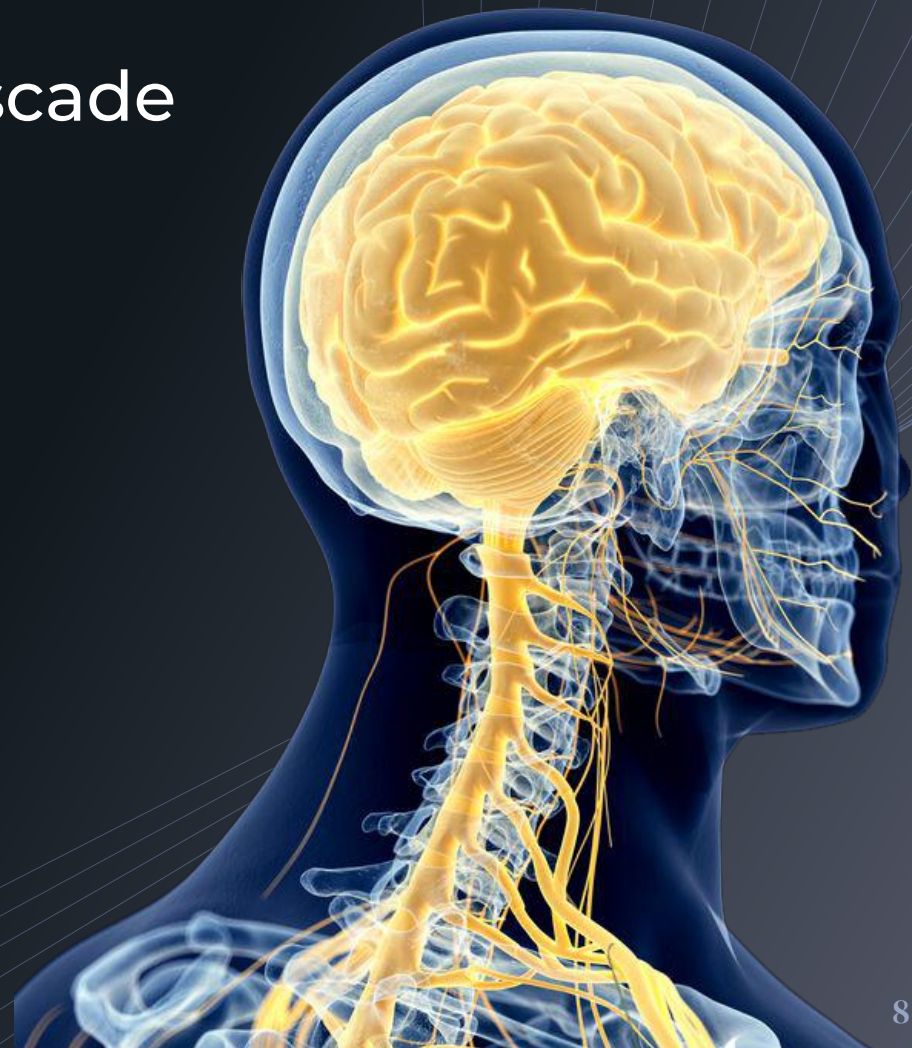
Postural Muscle Contracture

Postural Lean

Spinal Disc Bulge

Spinal Inflammation

Spinal Osteoarthritis



Neurological Feedback Loop

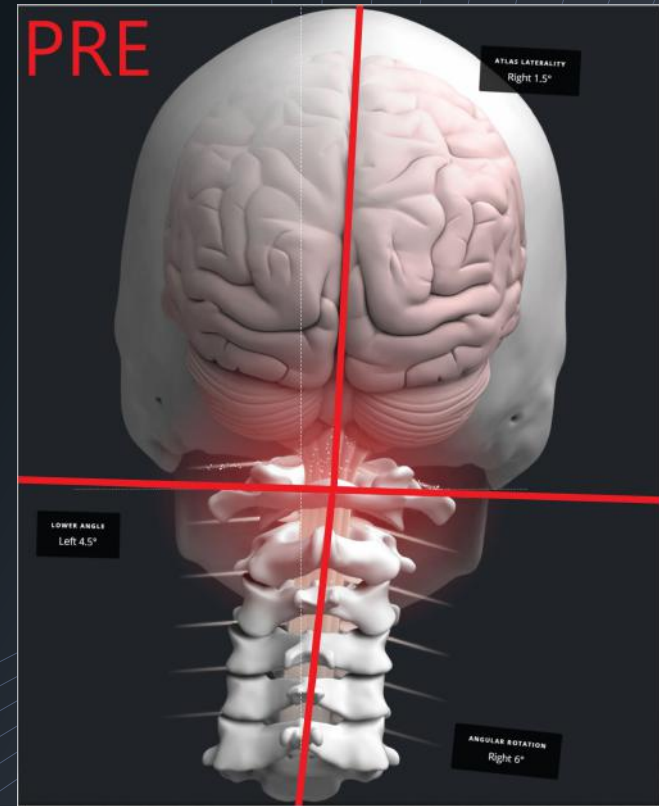
Head & Neck Injury

Upper Cervical Misalignment

The first thing that needs to happen is some form of **head and neck injury**.

Then, the connective tissue that holds the head center over the neck will **tear loose and stretch**. Mainly, the upper cervical ligaments will be damaged and the top bone in the neck will most likely shift out of its normal position.

As a result, **the head will tilt and cause the lower neck to angle underneath it**. This is called an upper cervical misalignment.



Neurological Feedback Loop

Head & Neck Injury

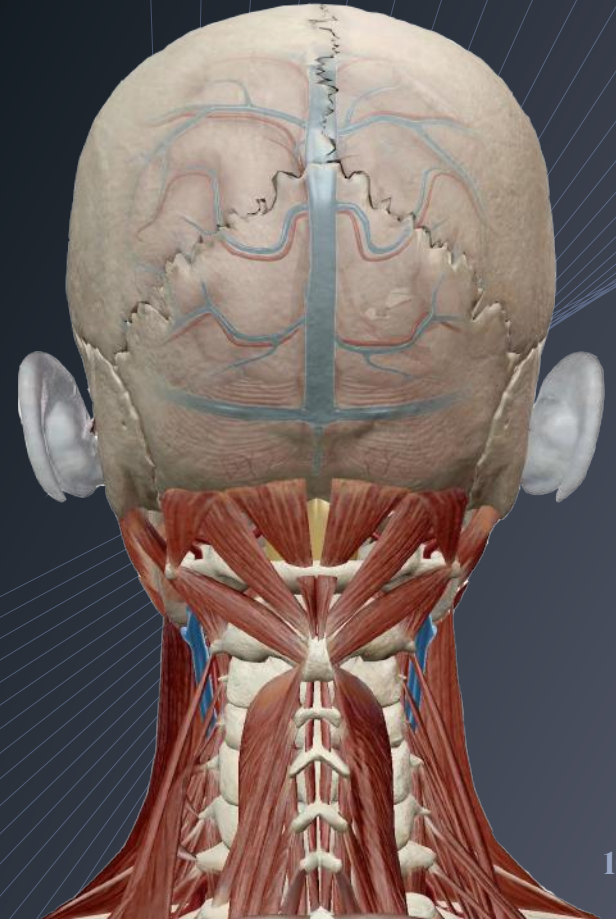
Upper Cervical Misalignment

Suboccipital Muscles Stretch

The suboccipital muscles, at the base of your skull, are stretched as a result of an upper cervical misalignment. This is significant because **the suboccipital muscles are the most sensitive muscles located in your body.**

How do we know this? Muscle spindle density.

Every single muscle in your body has a certain number of muscle spindle fibers that will send information to the brain. **The suboccipital muscles have the highest density of muscle spindles compared to any other muscle group in the body.**



Suboccipital Muscles

Obliquus Capitis Inferior

242 Muscle Spindles Per Gram of Tissue
**The MOST sensitive muscle in the entire body*

Obliquus Capitis Superior

190 Muscle Spindles Per Gram of Tissue

Rectus Capitis Posterior Major

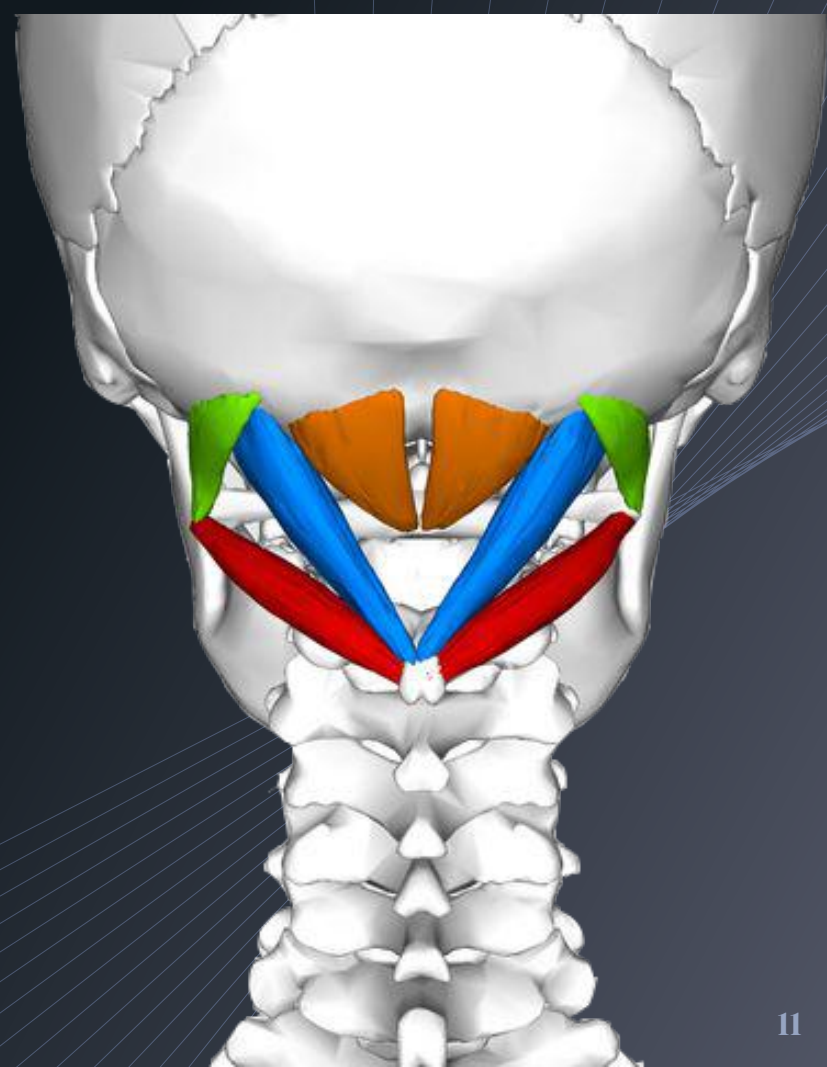
98 Muscle Spindles Per Gram of Tissue

Rectus Capitis Posterior Minor

98 Muscle Spindles Per Gram of Tissue

Biceps Brachii

97 TOTAL Muscle Spindles
**Larger than all suboccipitals combined*



Neurological Feedback Loop

Head & Neck Injury

Upper Cervical Misalignment

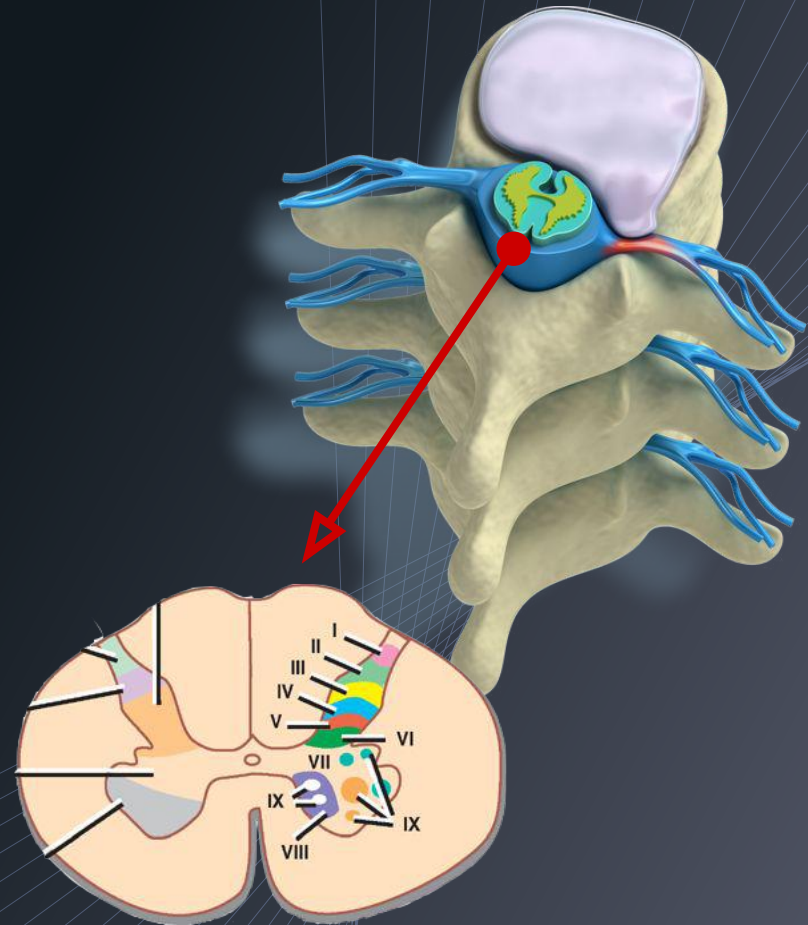
Suboccipital Muscles Stretch

Lamina 7 Spinal Cord

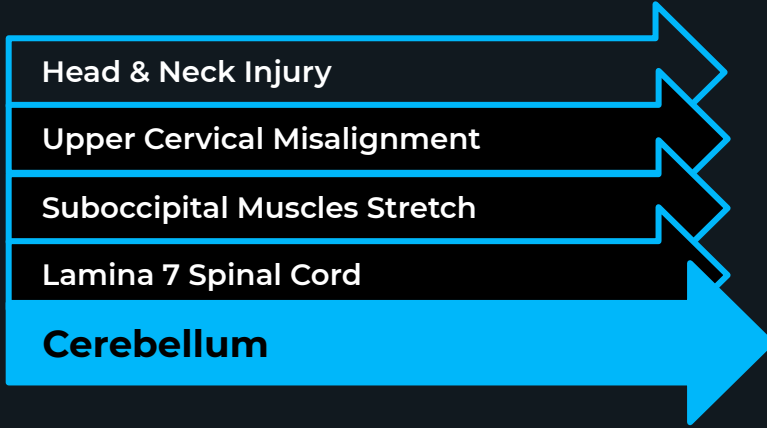
Mechanoreceptors are known as the sensors that detect when muscles have stretched and will communicate that to the brain.

Mechanoreceptors inside the suboccipitals will send a neurological signal up lamina 7 of the spinal cord.

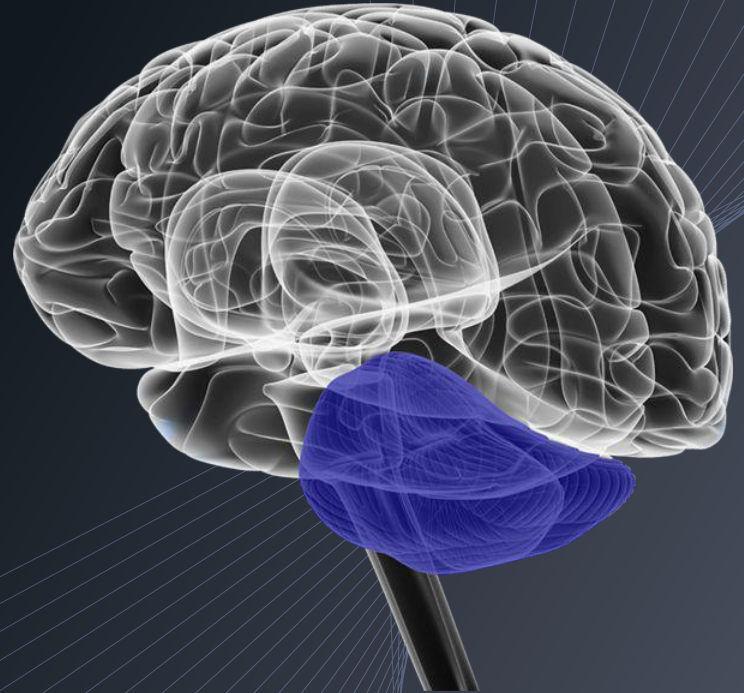
82.4% of all mechanoreceptors in your body are located in the upper cervical muscles and ligaments.



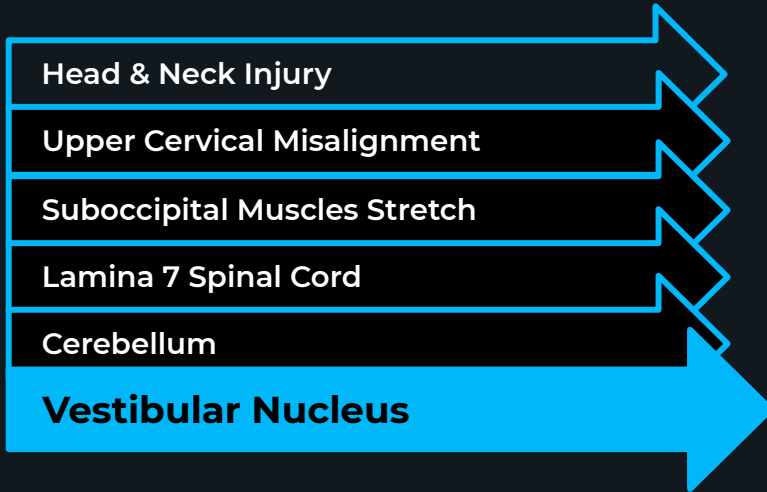
Neurological Feedback Loop



The signal continues to the cerebellum, the posterior lobe of your brain that is mainly responsible for controlling **equilibrium and balance**.



Neurological Feedback Loop

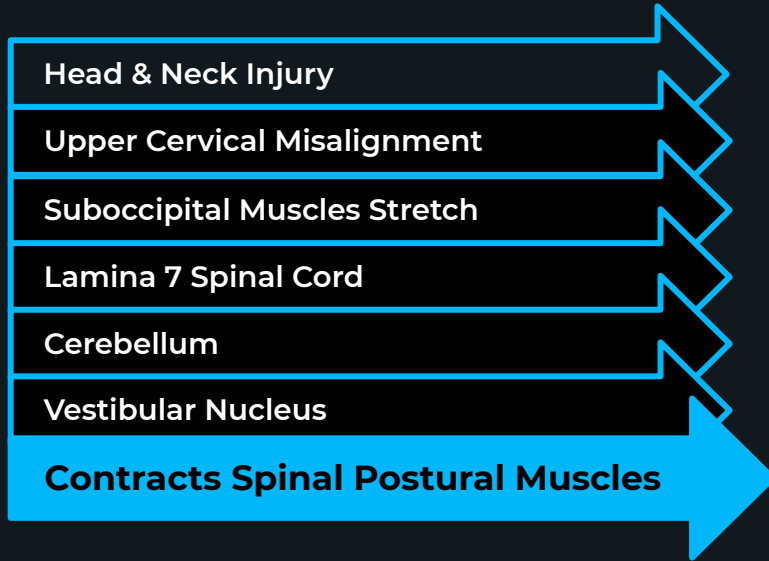


The signal continues to the vestibular nucleus located in the medulla of the brain stem, directly in front of the cerebellum.

The cerebellum and the vestibular nucleus work hand in hand to keep the body upright and posturally balanced.



Neurological Feedback Loop



Now that the signal has reached the vestibular nucleus, the **postural muscles on one side of the spine will contract and tighten**. These include the extensor posture muscles - erectors, rotatores, multifidi and your quadratus lumborum (QL).

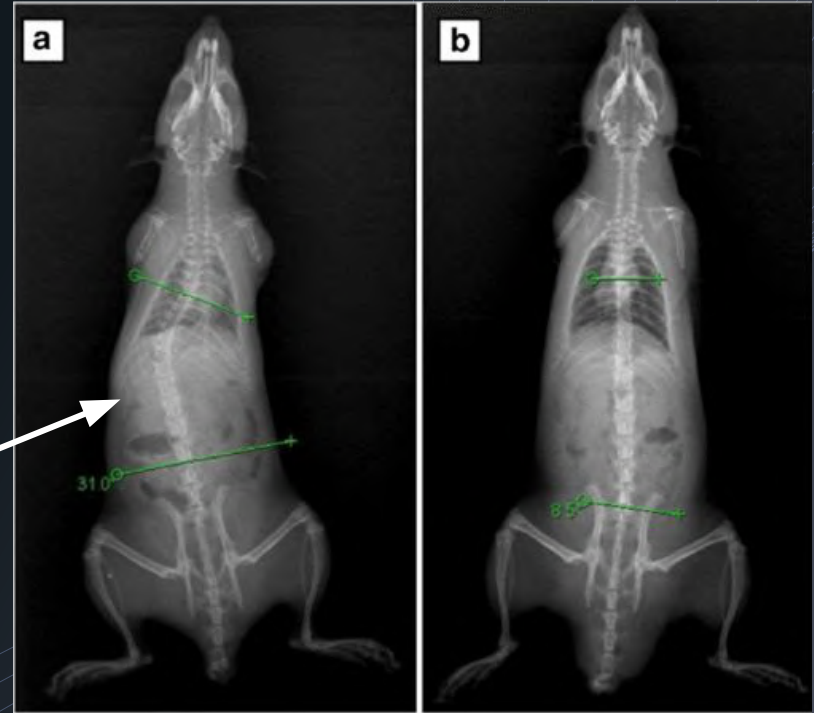
These muscles will remain contracted until the neurological loop is stopped. The longer the loop is active, **the worse the muscle imbalances will get.**

Scoliosis Rat Study

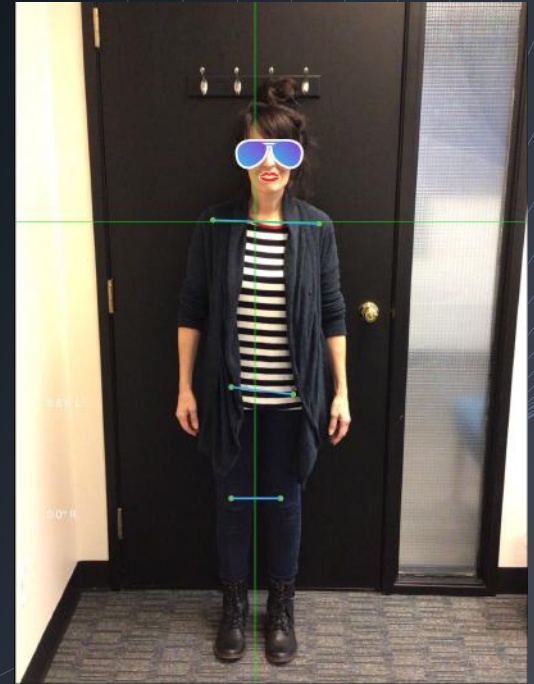
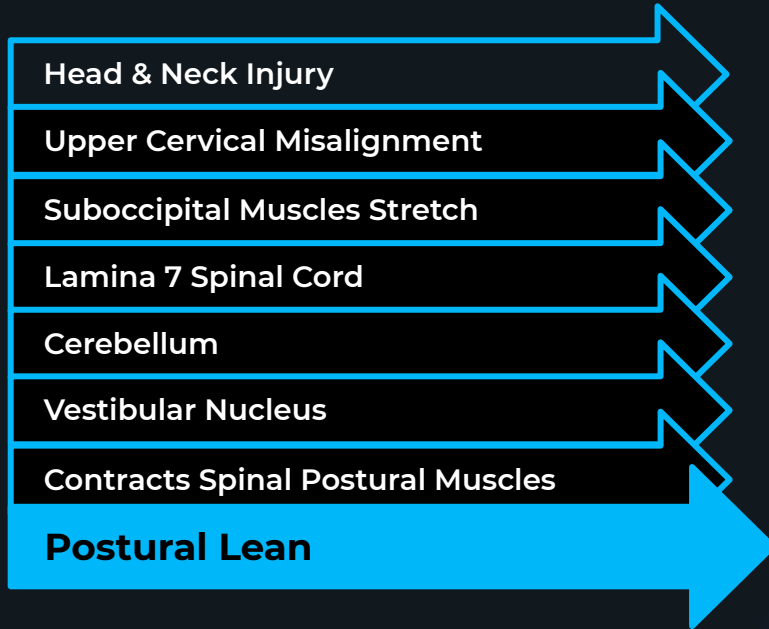
There was a study done where researchers took several rats, and *purposely damaged* their vestibular nucleus.

The rats were then monitored on an EMG, a machine that specifically monitors muscle tone.

By the end of the study, the rats were imaged and *25% of them had developed a significant spinal scoliosis*. On the convex side of the scoliosis, every rat had *hypertonic, spastic musculature*.

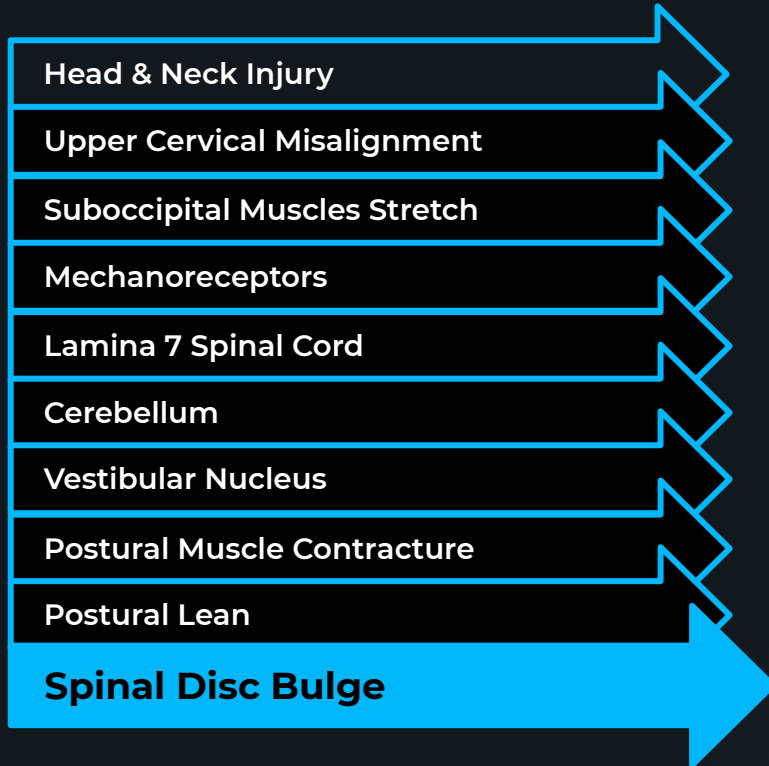


Neurological Feedback Loop



When the posture muscles contract unilaterally along the spine, the **body will compensate by leaning to one side or the other**. Notice the **green** line passing through the center of the feet in the photo. Ideally, the line should pass through the episternal notch (center of the top of the sternum) and nose. Clearly it's not, as the majority of her weight has shifted onto the left leg.

Neurological Feedback Loop

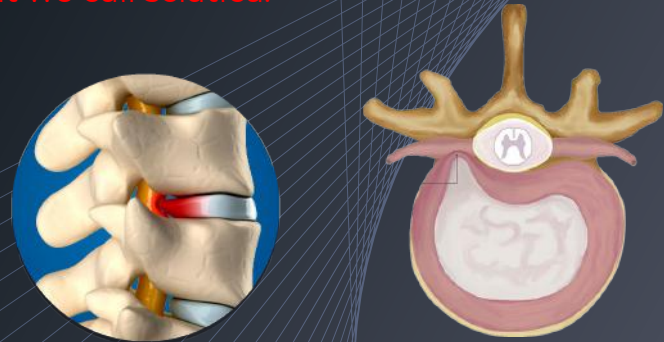


With more compression on the spinal discs, most commonly **L4/L5/S1**, they begin to bulge posteriorly towards the sciatic nerve.

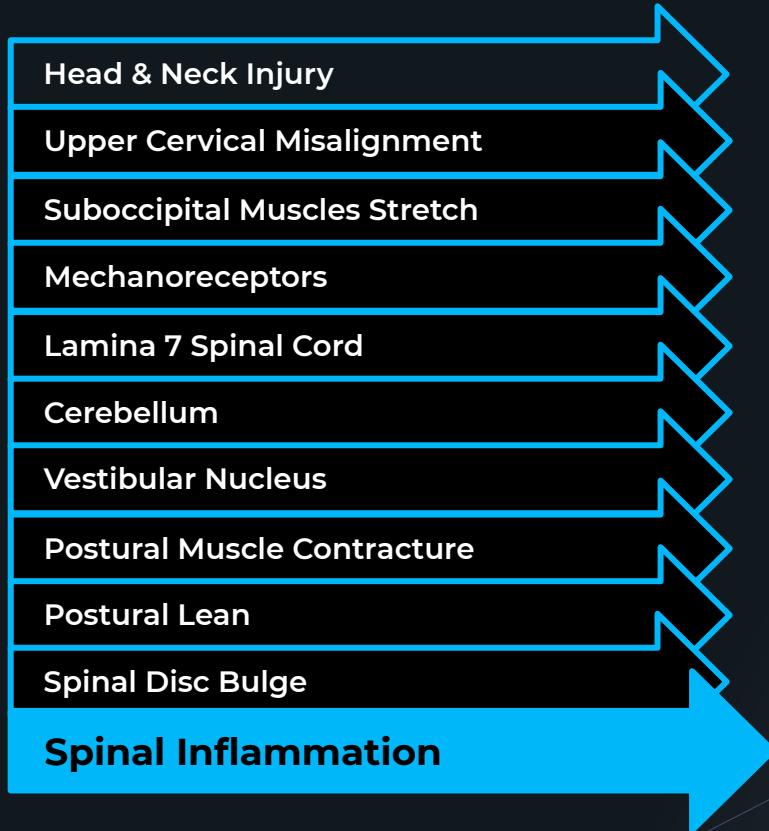
When the compression becomes too much, the annular fibers of the disc (darker pink) and the nucleus of the disc (lighter pink) will encroach upon the sciatic nerve.

When this occurs, it's common to feel **pain, tingling or numbness** shooting down through the leg and even into the foot.

This is what we call sciatica.



Neurological Feedback Loop



As the spinal disc(s) become injured and start to bulge, the body will START by sending **protein, water and red blood cells** to the area in the attempt to heal the injured disc.

This is what we call inflammation.



Neurological Feedback Loop



If the inflammation is not strong enough to heal and stabilize the disc, and the disc continues to degenerate, **the body will make an extreme move.**

As a final resort, the body will purposely **coordinate the stealing of calcium from less important bones** (commonly the arm bones), **drag the calcium through the spine**, and dump it around the injured disc. The goal is to concrete the weak area giving it maximum stability.

As this occurs, it's extremely common to see **osteoarthritis/bone spurs** in the spine at the level of the injured disc.

The calcium simply moved from one part of the body to another.



HOW DO I CORRECT IT?

Low back pain **UNRELATED** to your neck:

→ **Massage/Muscle Work**

Deep Tissue, Graston, ART, Rolfing

→ **Traditional Chiropractic**

General Spinal Manipulation

→ **Physical Therapy**

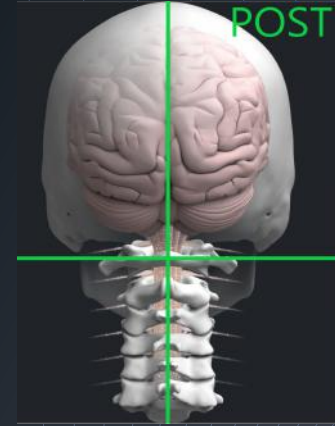
Corrective Exercise/Stretching



HOW DO I CORRECT IT?

Muscle Imbalances **RELATED** to your neck:

→ Upper Cervical Chiropractic



NUCCA, an upper cervical chiropractic specialty, has [helped several people overcome back pain](#) by tracing it back to the neck.

Once the neck is corrected and properly aligned, posture is restored and brought back to center which allows the muscles throughout the rest of the body to [relax and recover](#).

With less compression on the spinal discs, [the risk of developing a disc bulge/herniation drops significantly](#). And, of course without a disc bulge, the risk for developing sciatica also drastically reduces.

The NUCCA assessment is the best place to start when evaluating back pain.

If you would like to schedule a NUCCA assessment with us, to see if your back pain is stemming from your neck, we would love to speak with you.

Please visit [EliteUC.com](#) to schedule your **FREE** phone consultation.

We look forward to speaking with you!

Stay healthy,
Dr. Corey Burt



ELITE
UPPER CERVICAL