4 Tactics of Training Stroke Survivors

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7th Annual Functional Aging Summit

4 Tactics of Training Stroke Survivors

- 1. Communicating between a fitness professional and a Stroke Survivor is Essential.

- 2. Having Knowledge of muscles and fascia and what movements each participate in is a must.

- 3. Understanding that the brain heals in its own order. This order can be scattered and does not always follow the workout plan.

- 4. We need to understand that exercises and therapy must adapt based on a survivor's progress and the neuroplasticity happening in their brain.

Communicating between a fitness professional and a Stroke Survivor is Essential.

- Stroke Survivors need to know they are being heard, understood, and treated with respect. They don't want to be treated like they are irrelevant.
- It is important to know at the beginning of each visit how they are doing and if they have experienced any changes. Changes can be big or small. Each change matters.
- Often, due to the brain injury from their stroke, it takes a survivor longer to process what we are saying. Sometimes they may forget a word mid sentence. Be patient with them. They need to feel comfortable in communicating with you.
- Share with them "Why" they are doing exercises. Show them muscle illustrations to help them understand.
- If they understand "Why" they are doing specific exercises it will encourage them to continue with their therapy at home and with you.
- The cell phone is a great communication tool. Use the camera (if they are okay with it) to show changes They can come aware of changes if they see it in a picture or video.

Having Knowledge of muscles and fascia and what movements each participate in is a must.

- Survivors are seeking out to find professionals to help them gain back movements so the can get daily activities back in their life. I don’t say that lightly. They are desperately seeking this help.
- You will meet survivors ranging in cases from those in wheelchairs, walkers, hemi-walkers, leg braces, arm braces, those who can't move an arm, lift a foot, spasticity and more.
- As professionals they choose to help them, we must know what muscles create which movements in order to help a survivor regain a movement and/or strength in specific movements.

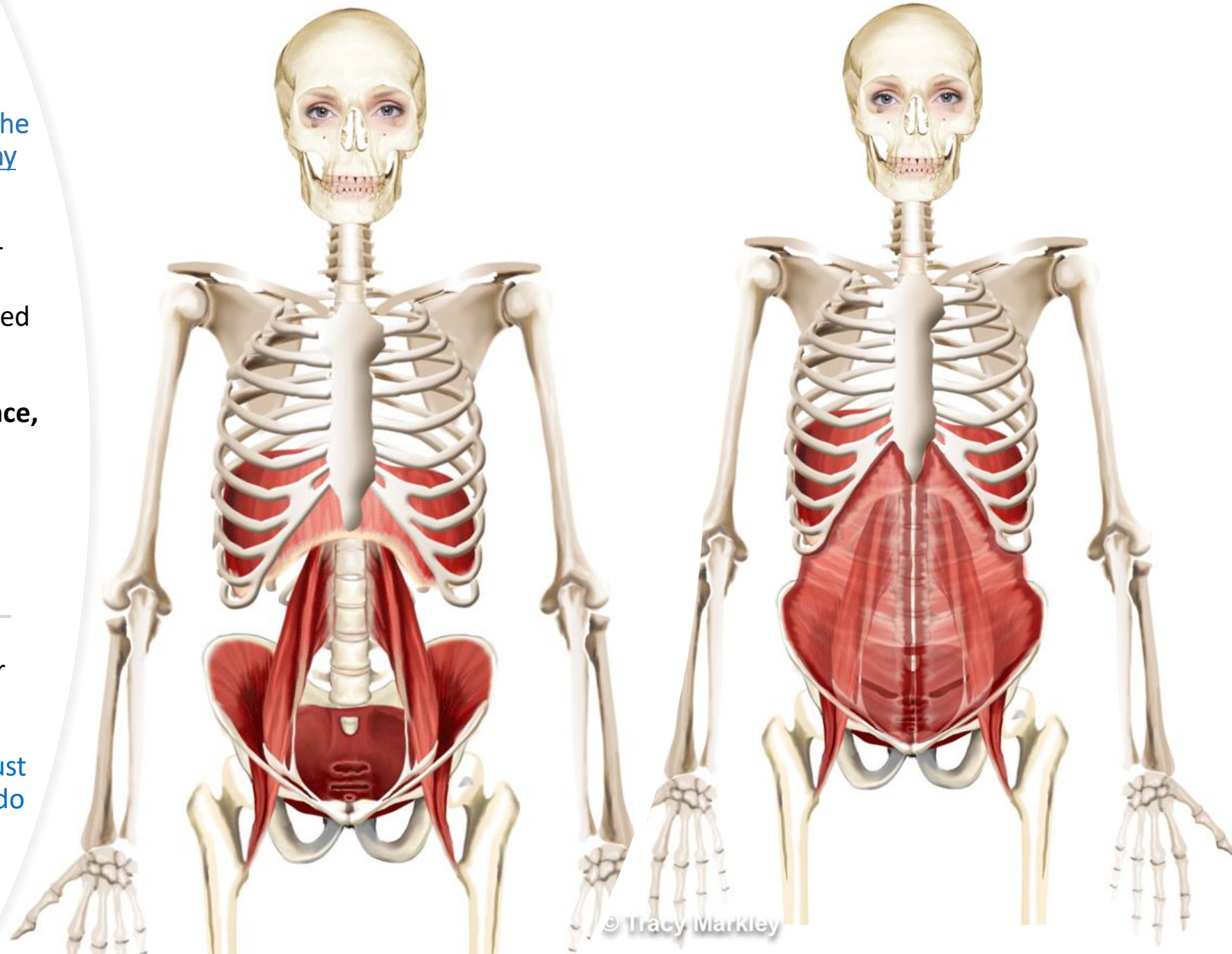
Example: If it makes sense to a client that the center of their body must be strong in many muscles achieve a fuller recovery. Such as:

1. Stabilize Pelvic/hips. This is needed for standing and walking. Needed for fall prevention, fixing foot drop, hyperextended knee, and more…..

2. Hold the upper body upright for balance, stabilization. This is needed for shoulder stabilization. Which is needed to get arm, hand, and finger movement back.

3. **The psoas, quadratus lumborum, multifidus, diaphragm, transverse abdominal, and other muscles** must get stronger and balanced to achieve a better recovery.

They will understand their goal and not just do an exercise because someone said to do so with no idea or what to expect.



Example:

Shoulder Subluxation

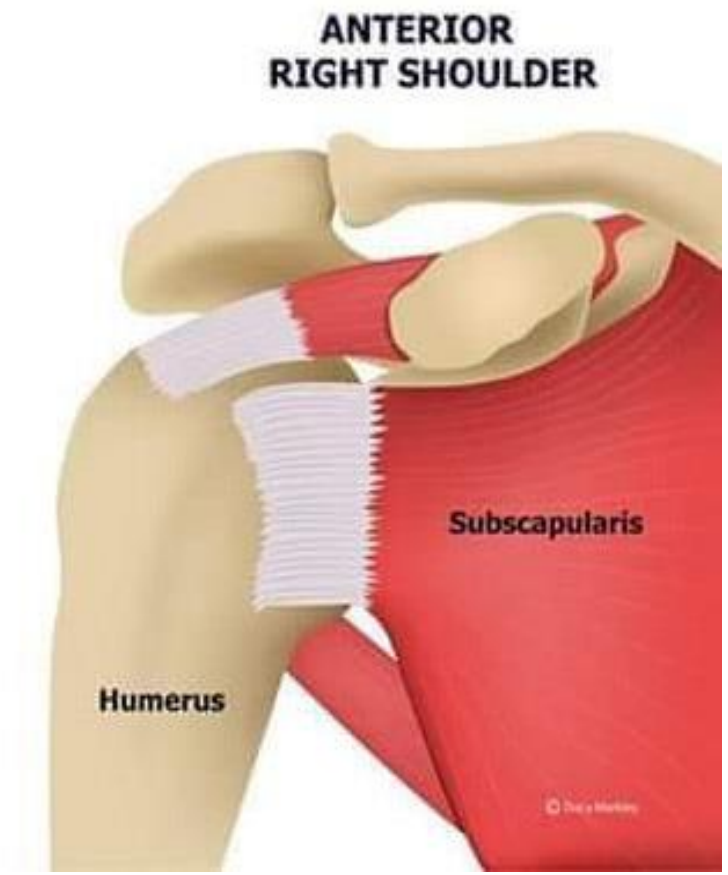
- Many stroke survivors have subluxation in a shoulder. This is a partial dislocation.
- Constant pain in the shoulder area.
- Often you will find they hold a shoulder up high on one side or even on both sides. Habits, protection, using a cane or walkers, no awareness, and poor posture causes this.
- Strengthening the core and posture helps fix subluxation.
- I had a stroke survivor who her shoulder popped back in place after working on core and posture for a month. Her shoulder pain stopped after that.

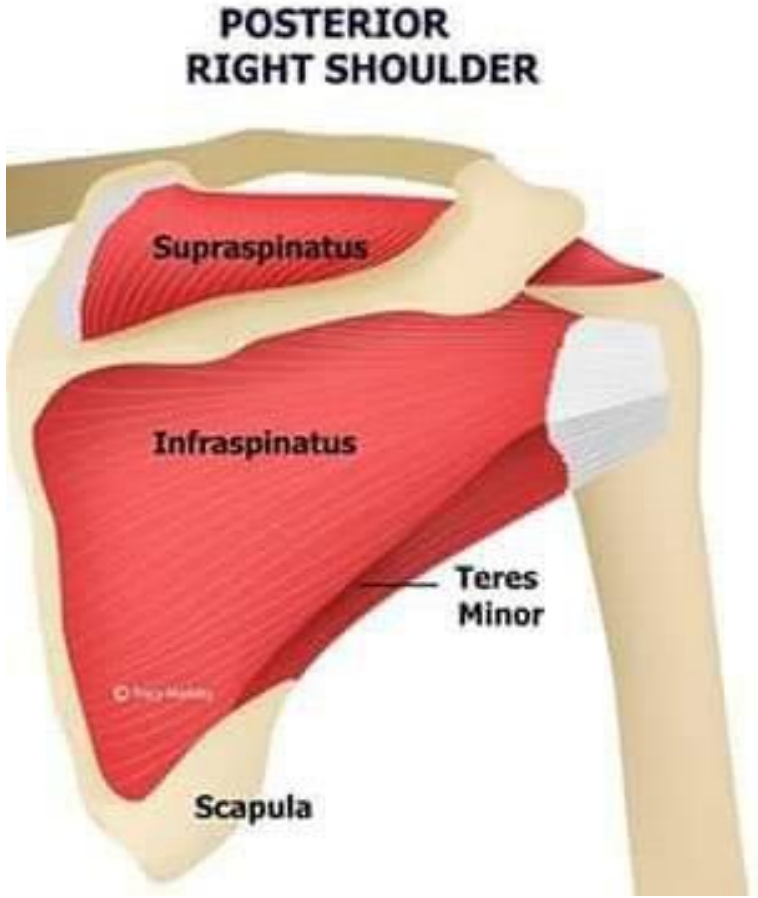
Hyper-extended cervical vertebrae (Neck)

Neutral spine through cervical vertebrae

If the Shoulder is raised up towards the ear it keeps the joint and muscles out of alignment.

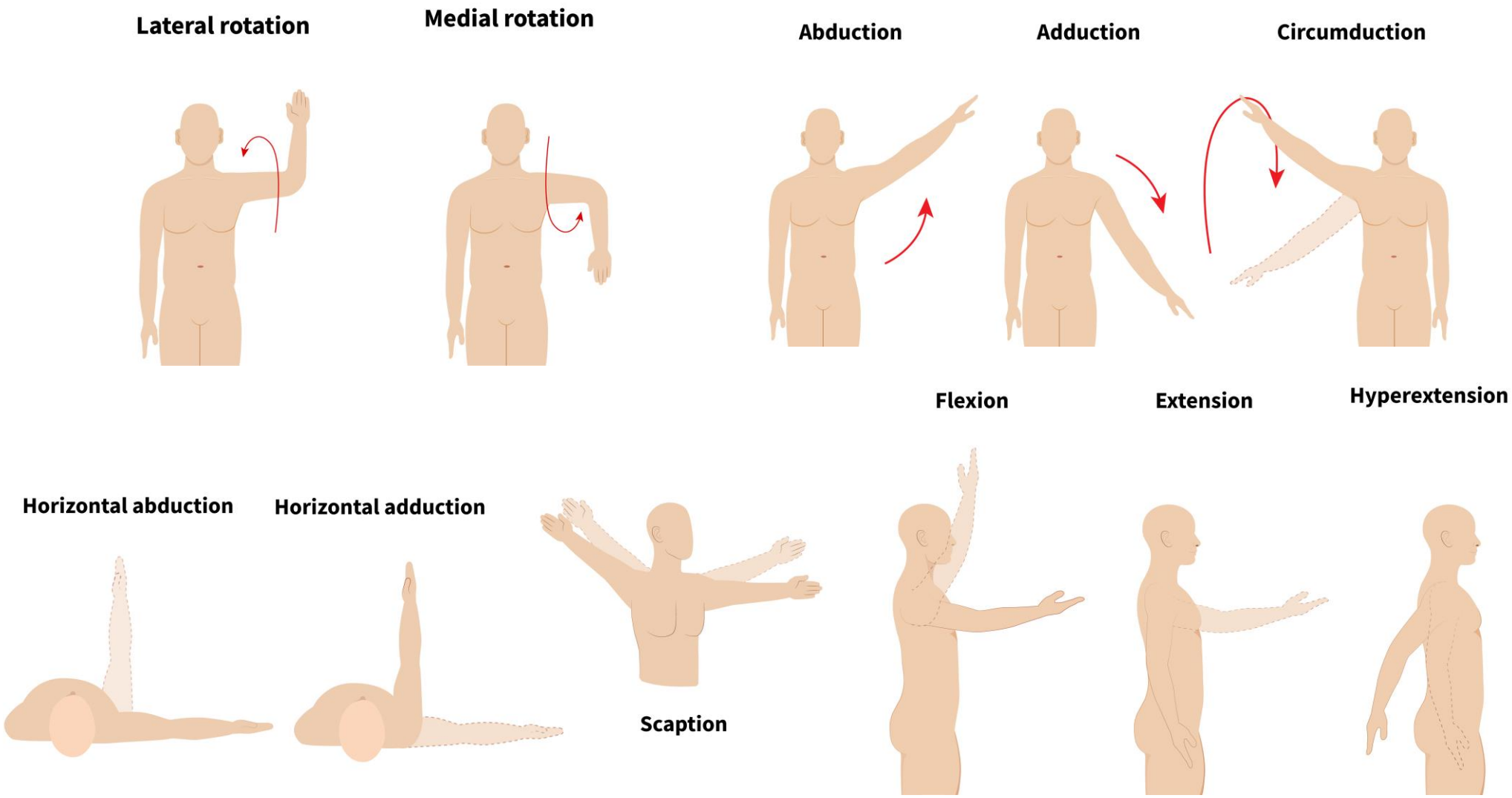
This <u>will</u> cause pain and limit mobility .



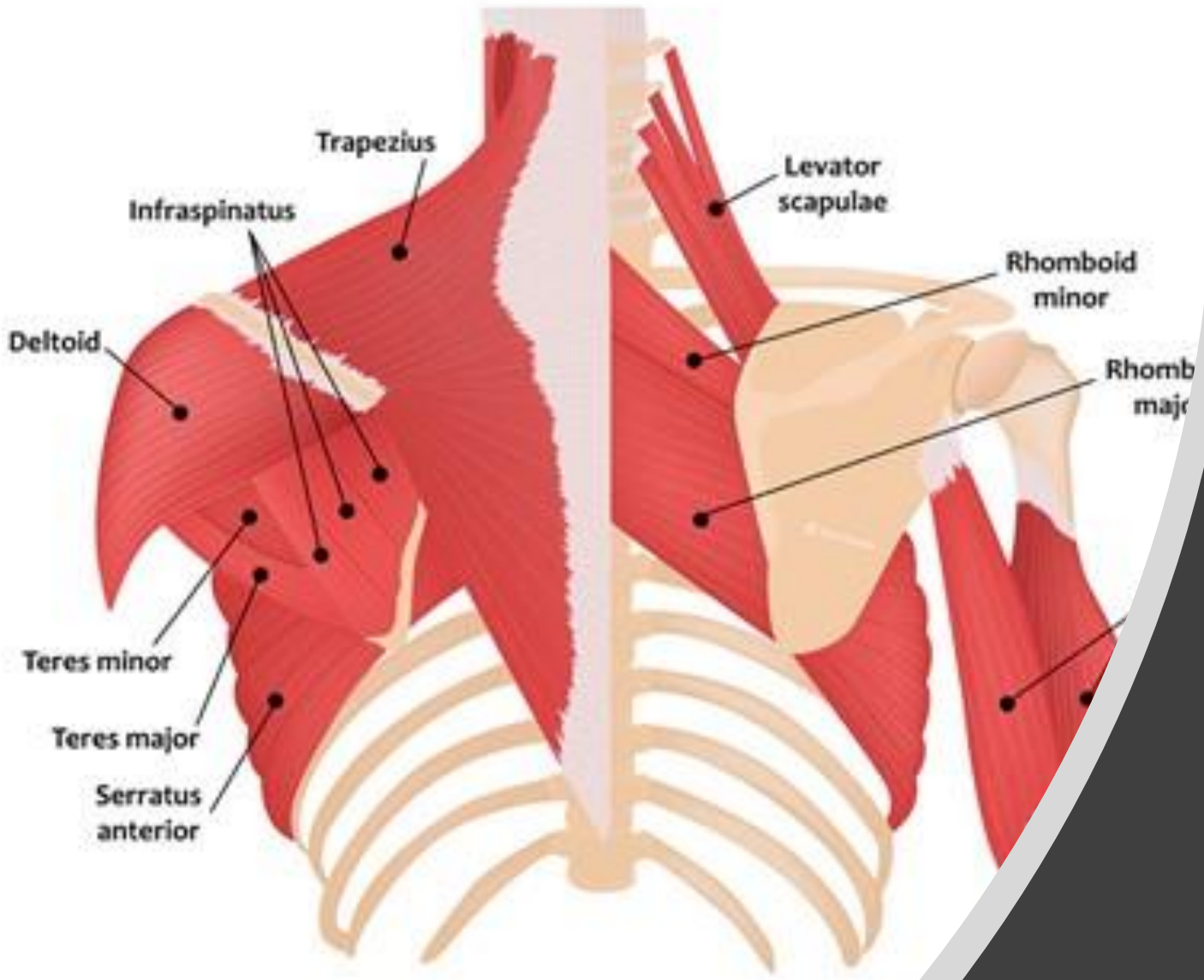


The 4 Rotator Cuff Muscles

Place your hands on someone's shoulder blades as they move through these motions.



Learn the muscles that attach and move the scapula. These are often the movements a survivor is trying to regain.



Examples:

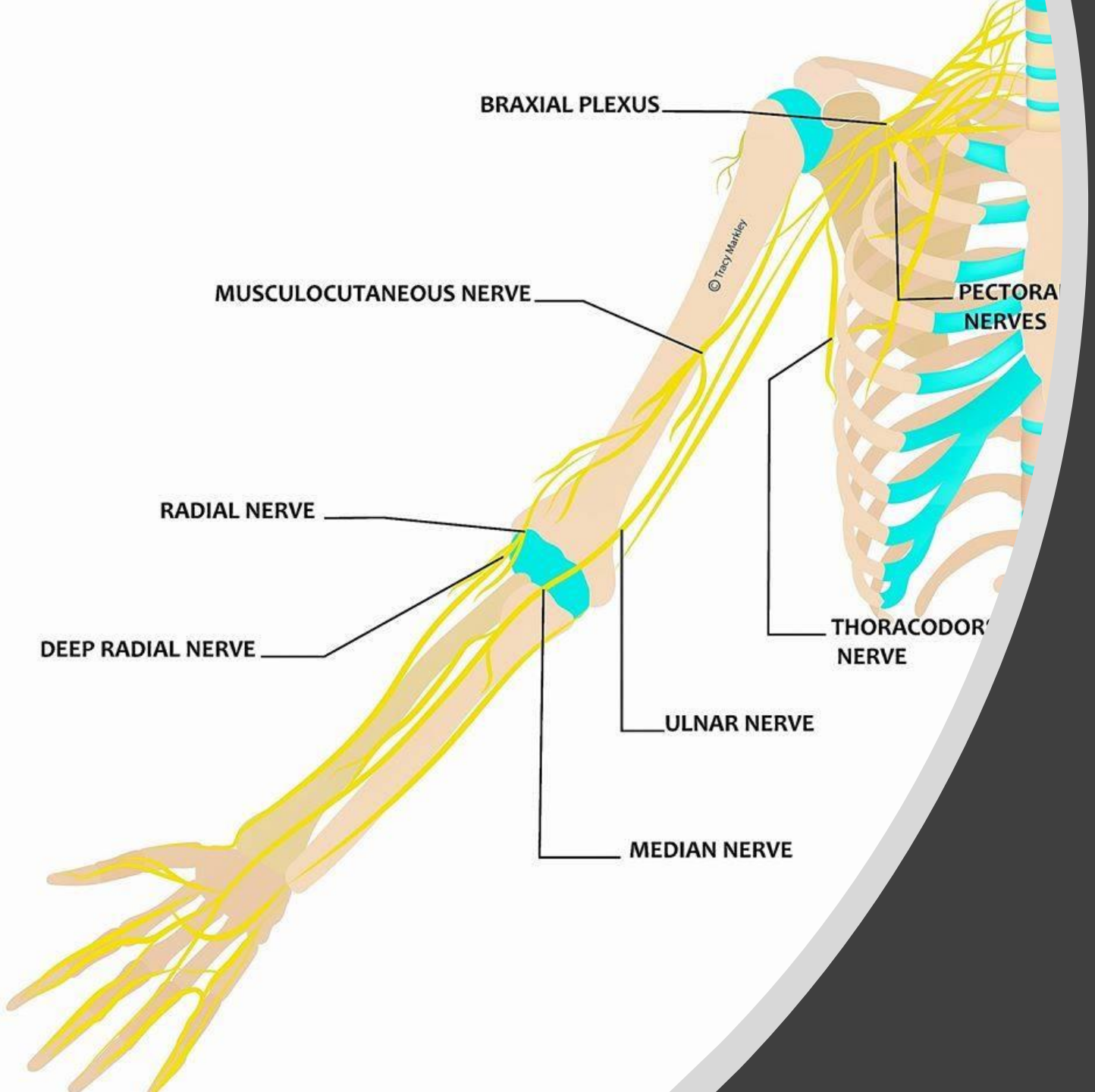
Trapezius: Has 3 parts. They abduct and abduct inward to rotate the scapula.

Infraspinatus: Extends and rotates the humerus outward. It is also one of the four rotator cuff muscles.

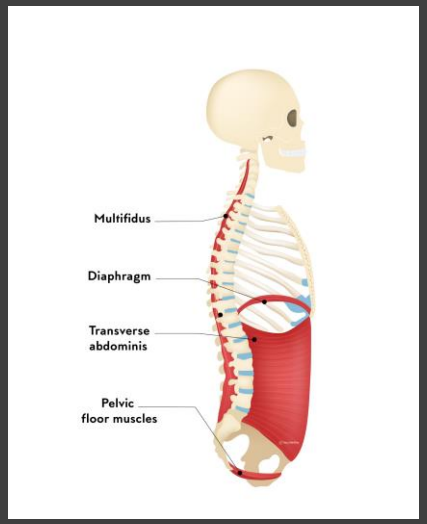
Serratus Anterior: Rotates scapula outwards.

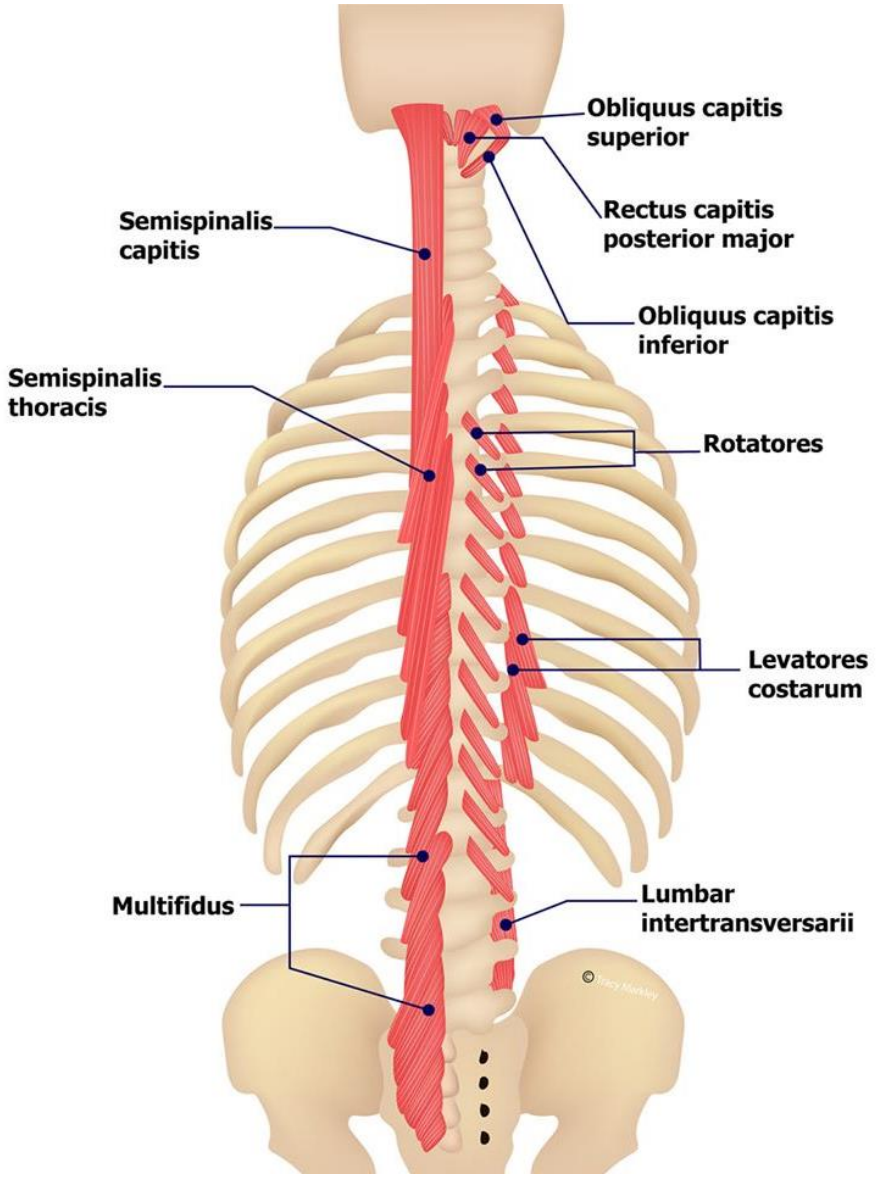
Levator Scapulae: Elevates the scapula. Also rotates the scapula downward. (this tilts the glenoid cavity inferiorly). If the scapula is fixed, it causes lateral flexion of the cervical vertebrae. It also stabilizes the vertebral column during rotation

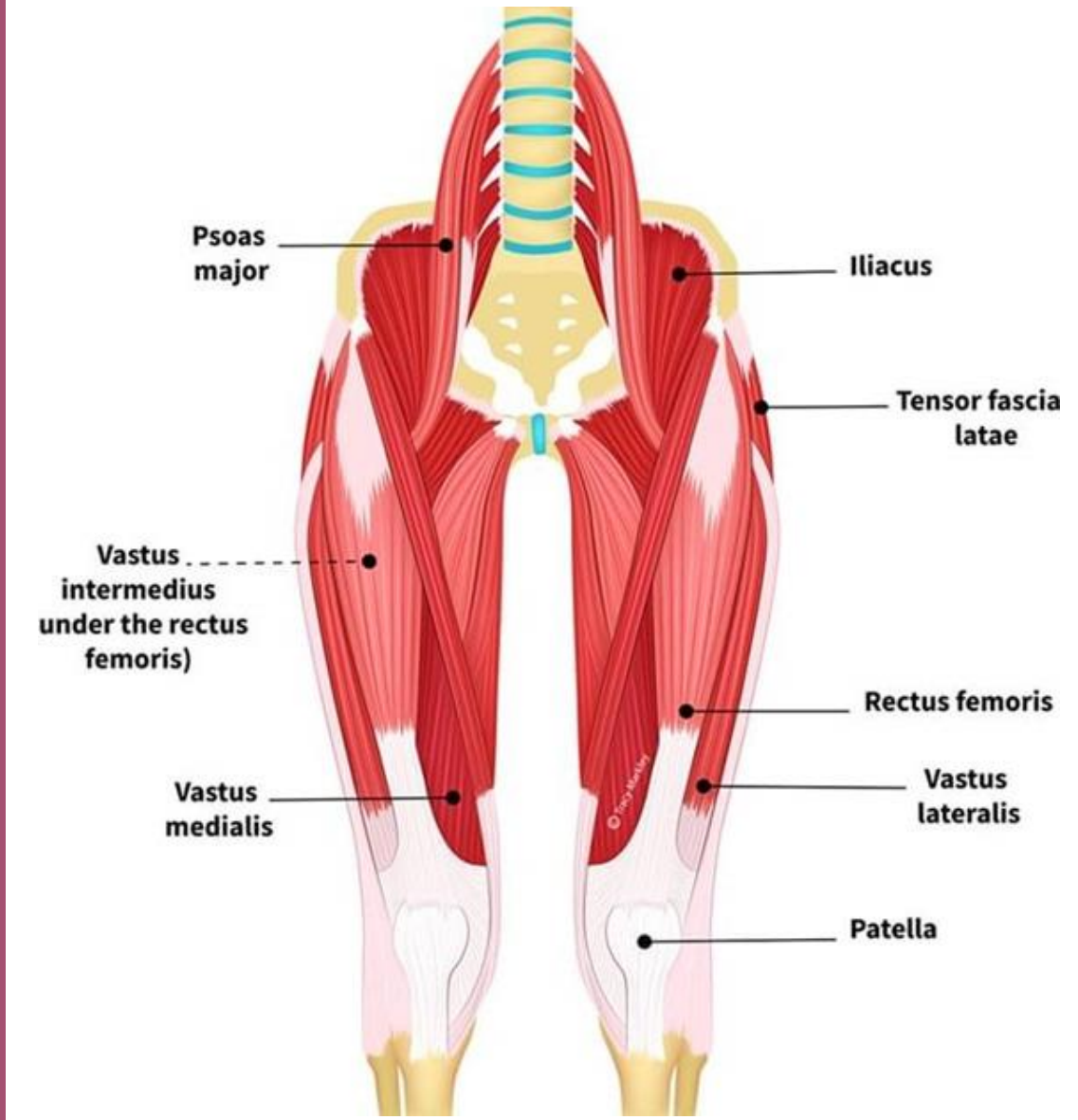
Rhomboids: Rotates inwards and adducts the scapula.

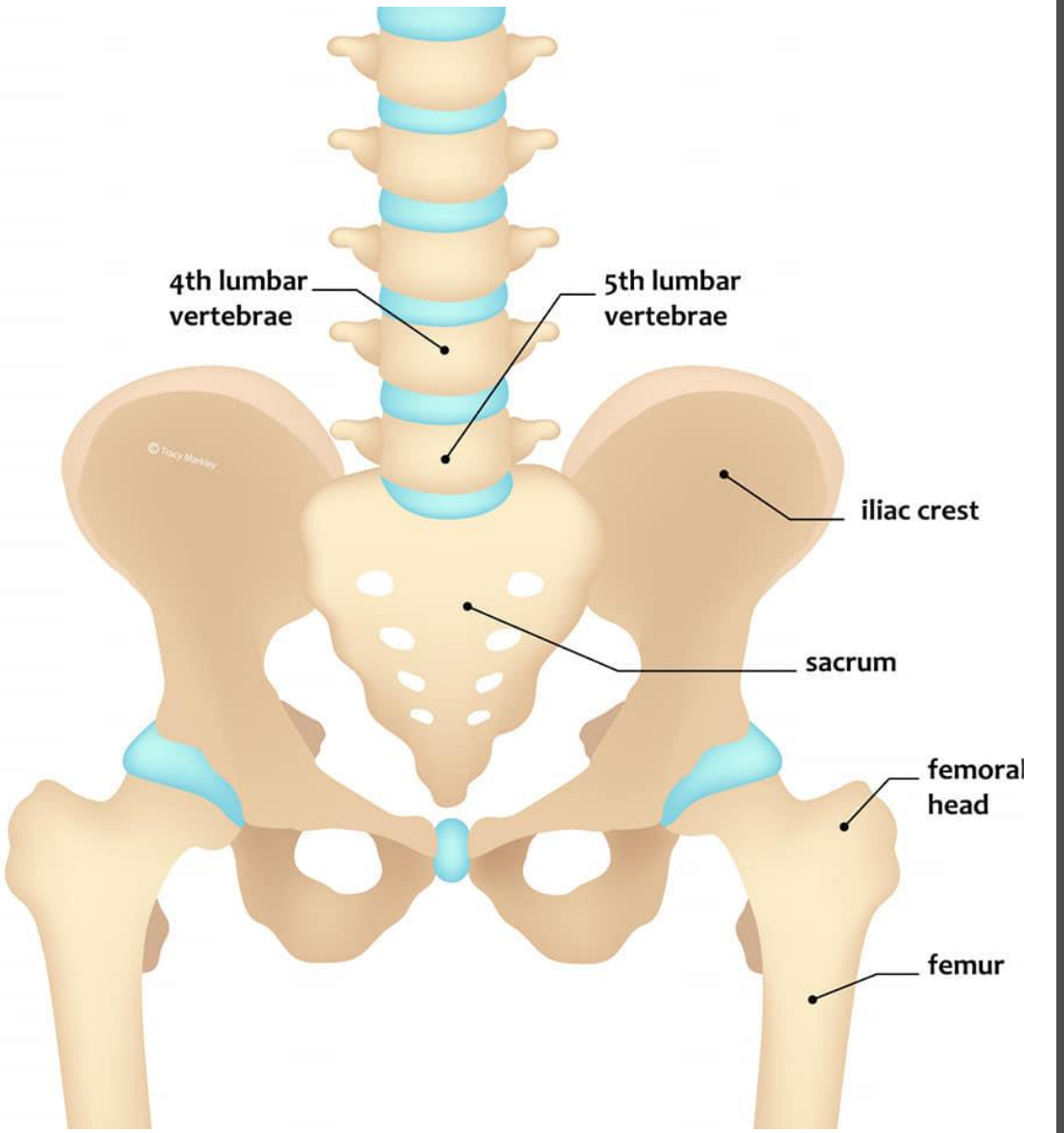


The center of the body must be strong and upright in good posture to gain better recovery in the the arm, hands and fingers.

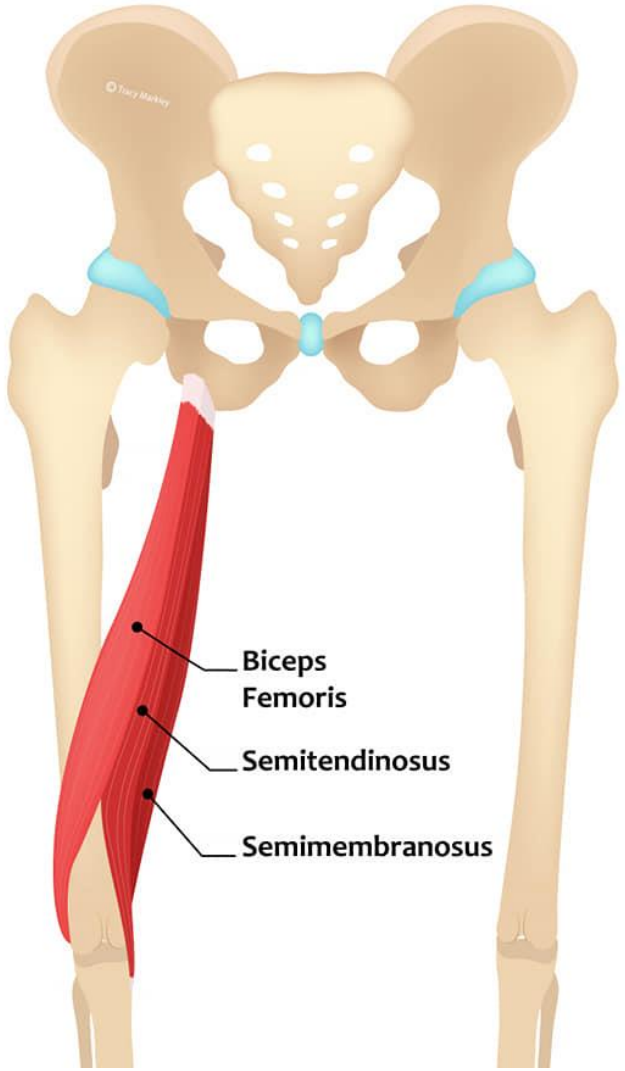



Obliquus capitis superior
Rectus capitis posterior major
Semispinalis capitis
Obliquus capitis inferior
Semispinalis thoracis
Rotatores
Levatores costarum
Multifidus
Lumbar intertransversarii

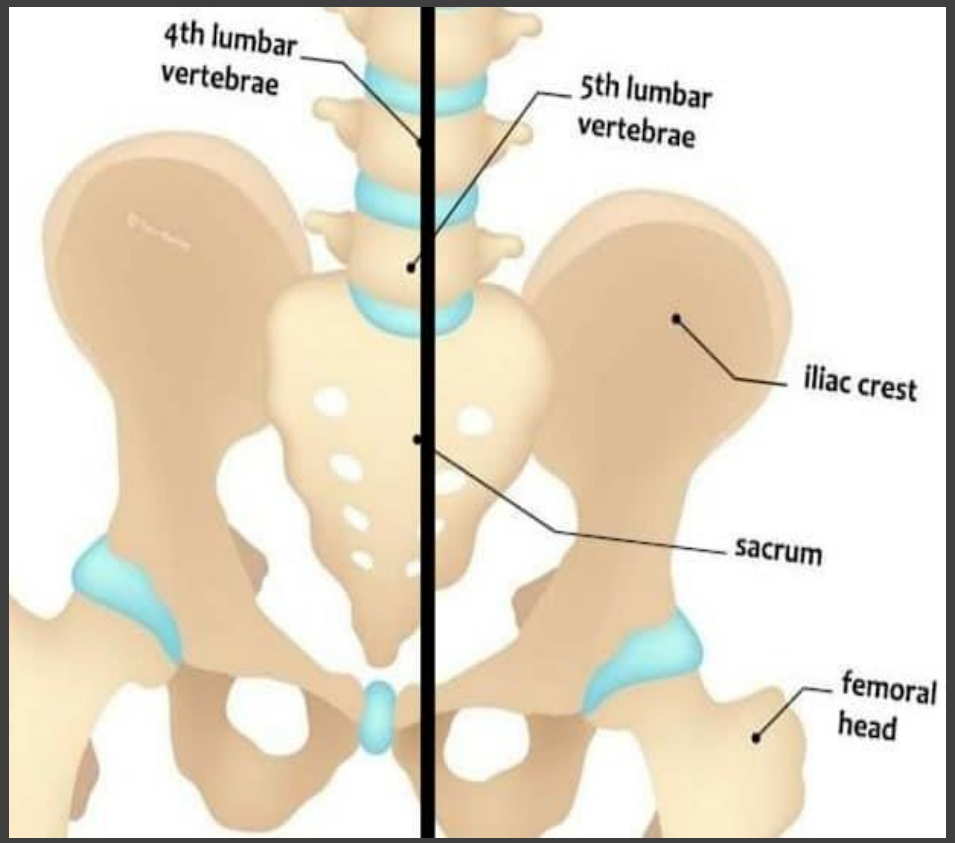

Psoas major
Iliacus
Tensor fascia latae
Vastus intermedius under the rectus femoris)
Rectus femoris
Vastus medialis
Vastus lateralis
Patella


4th lumbar vertebrae
5th lumbar vertebrae
iliac crest
sacrum
femoral head
femur

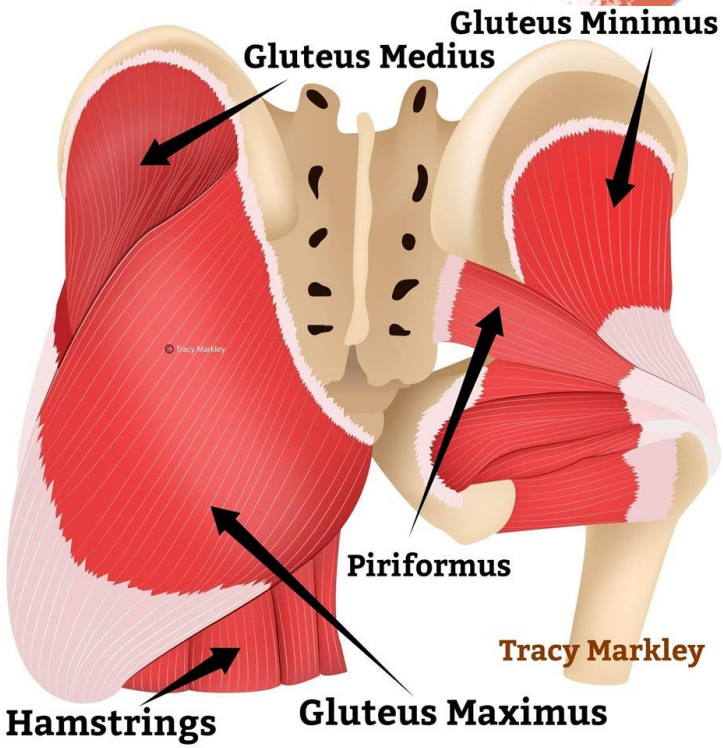
Hamstrings

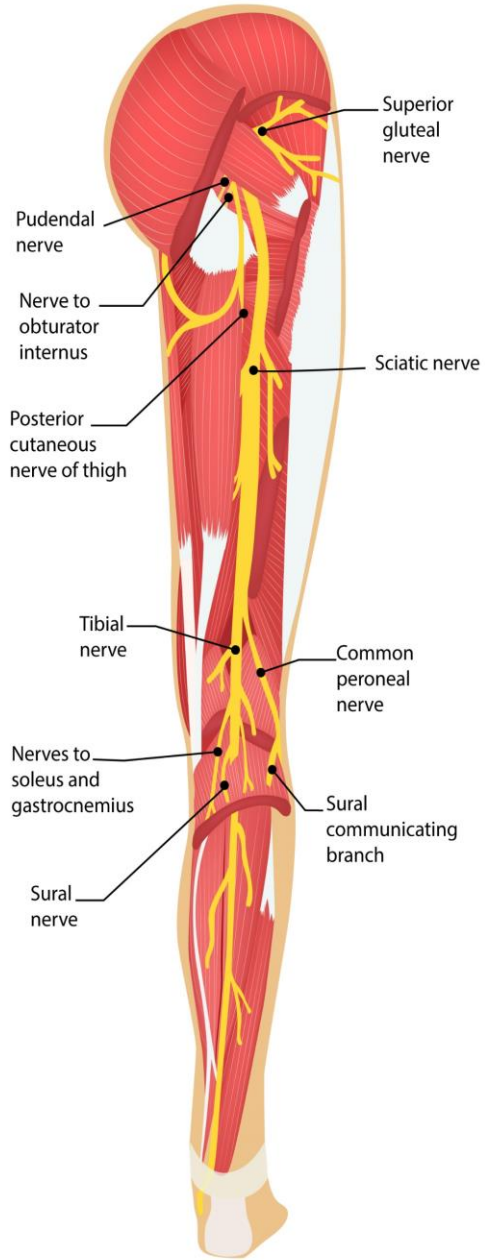

Biceps Femoris
Semitendinosus
Semimembranosus

- The spine, core, and pelvic girdle will not line up properly, nor will the survivor have the strength to stand up and walk with stability from the sitting position of the picture with the red X.
- The spinal, core, hips and leg muscles also remain imbalanced, weak and in disfunction.
- A change in stability and support of sitting cushion is essential.



Poor Posture while sitting will transfer into standing. This will limit stabilization and movements.


Gluteus Minimus
Gluteus Medius
Piriformus
Tracy Markley
Hamstrings
Gluteus Maximus


Superior gluteal nerve
Pudendal nerve
Nerve to obturator internus
Sciatic nerve
Posterior cutaneous nerve of thigh
Tibial nerve
Common peroneal nerve
Nerves to soleus and gastrocnemius
Sural communicating branch
Sural nerve

Understanding that the brain heals in its own order. This order can be scattered and does not always follow the workout plan.

- The brain can often lead the way.
- Listen to them if they want to share something that was good or bad that happened while moving at home.
- If for example, they say “last night I held my fork for the first time.” then focus on arm and hand movements that visit and give them new homework to add in.
- Movements come back in the order that you were not expecting. So, pay attention.

We need to understand that exercises and therapy must adapt based on a survivor's progress and the neuroplasticity happening in their brain.

- We may be focusing on balance and walking more in sessions and out of the blue their hand starts changing.
- Examples:

1. A wife of a survivor noticing the arm/hand twitching as husband sleeps.

2. A survivor showing up to session showing you a movement their arm now makes that was not their last session.

3. You as the professional notice their foot is not dragging as much as the last session.

Don’t Fake it!

Gain the knowledge needed to help survivors have the chance to reach the best recovery possible.

Knowledge is Power

- If professional limit their knowledge, they limit the survivor's recovery.
- In many cases the survivor will feel like it is their stroke that limited them, and they won’t try anymore. When in fact it they were limited by the professional's lack of advancing their knowledge.
- Don’t fake it. Don’t write titles on your business cards and websites that are not true.
- Being generic in knowledge or fake could be what causes another person, never to walk again, drive again, work again and more.
- Be fair to the survivors and their recovery.

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