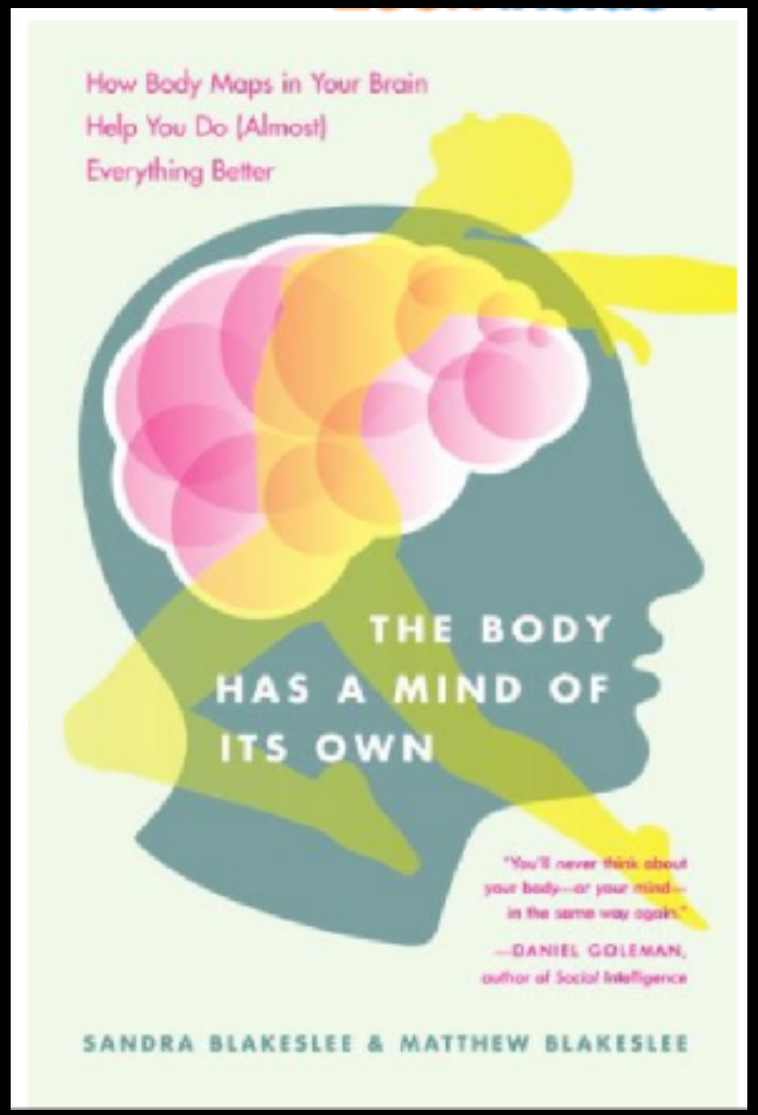
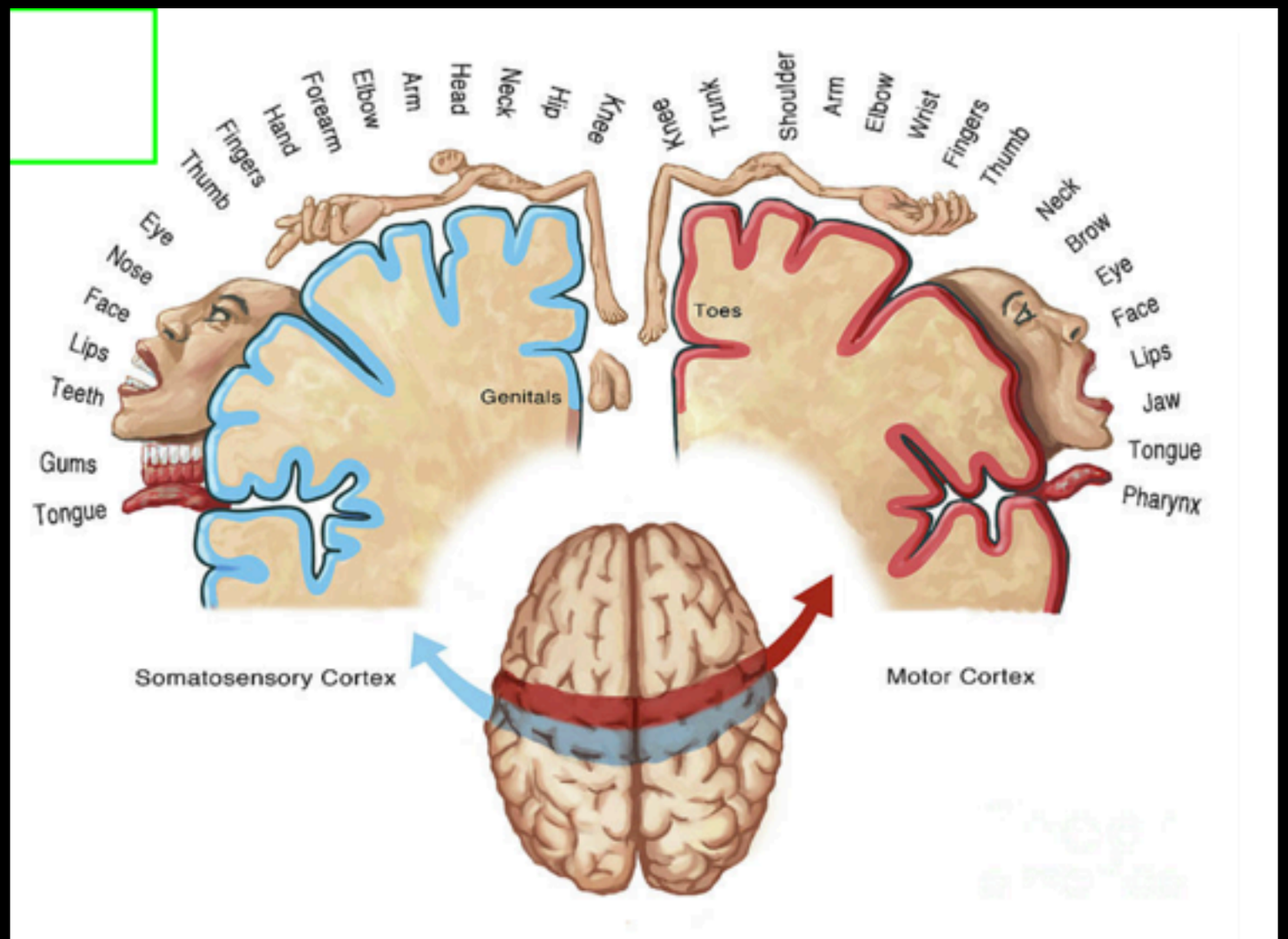

How Body Maps in Your Brain
Help You Do (Almost)
Everything Better
THE BODY
HAS A MIND OF
ITS OWN
"You'll never think about your body—or your mind—in the same way again."
—DANIEL GOLEMAN, author of Social Intelligence
SANDRA BLAKESLEE & MATTHEW BLAKESLEE

A **motor homunculus** represents a map of brain areas dedicated to *motor* processing for different anatomical divisions of the body. The primary motor cortex is located in the precentral gyrus, and handles signals coming from the premotor area of the frontal lobes.[1]

A 2-D cortical *sensory* homun

A **sensory homunculus** represents a map of brain areas dedicated to *sensory* processing for different anatomical divisions of the body. The primary sensory cortex is located in the postcentral gyrus, and handles signals coming from the thalamus.[1]

The thalamus itself receives corresponding signals from the brain stem and spinal cord.



Homunculus Map is a photograph by Spencer Sutton which was uploaded on June 5th, 2018.

3-D Sensory and Motor homunculus models at the Natural History Museum, London

What potentially degrades motor maps?

Lack of sensation
Lack of movement
Scar tissue
Pain
Injury
TBI
Neurological movement disorders like Parkinsons & MS

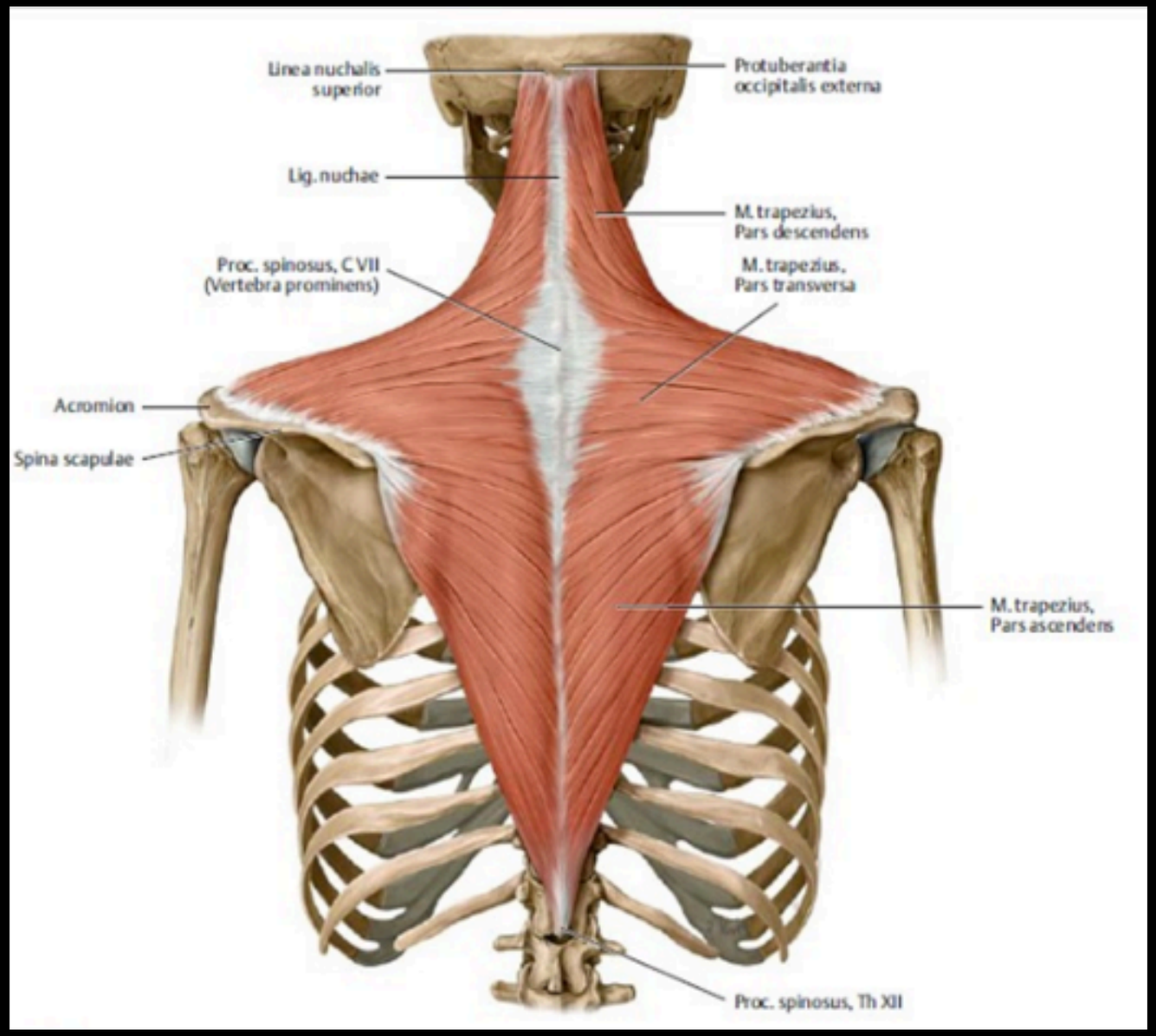
Isolate to Integrate

The ABCs of movement, all joints, all ways.
Bringing movement back onto the menu/online

Add (local) sensation

- our own hands on area of immobility (remember we have a great deal of cortical representation of hands)
- kinesio/rock tape
- massage device
- resistance bands/blocks
- external cueing
- goal/task based movement/cueing
- visual imagery cueing

Contracting/relaxing (active) muscle groups for better maps and function


Linea nuchalis superior
Protuberantia occipitalis externa
Lig. nuchae
M. trapezius, Pars descendens
Proc. spinosus, C VII (Vertebra prominens)
M. trapezius, Pars transversa
Acromion
Spina scapulae
M. trapezius, Pars ascendens
Proc. spinosus, Th XII

You actually have two trapezius muscles, or “traps,” (one on each side of your spine), and they are huge. They attach at the base of your skull, the spinous processes of the vertebrae C7 (the one that protrudes at the base of your posterior neck) through the T12 (which attaches to your twelfth and bottom rib), and the lateral edge of your shoulder where your clavicle (collar bone) connects to the acromion process of your scapula.

TRAPEZIUS

Contract:

Lift your **shoulder blade up.**

pull your shoulder blade backwards.

tilt the head backwards.

pull our ear toward that shoulder

swivel our head away.

Relax:

From here, we're going to reverse it.

turn my head toward that shoulder,

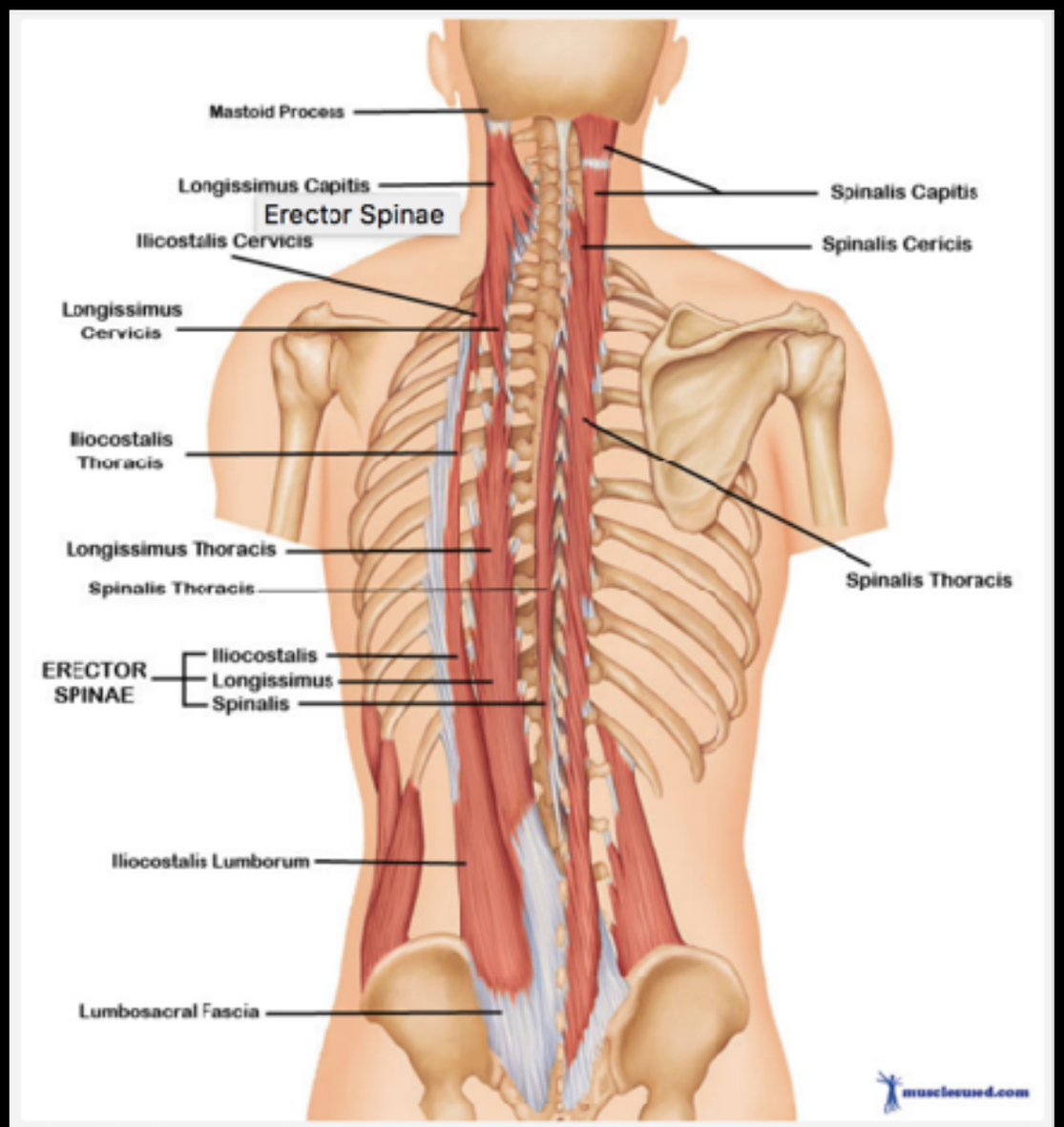
tilt my head away from that shoulder,

pull my shoulder blade down,

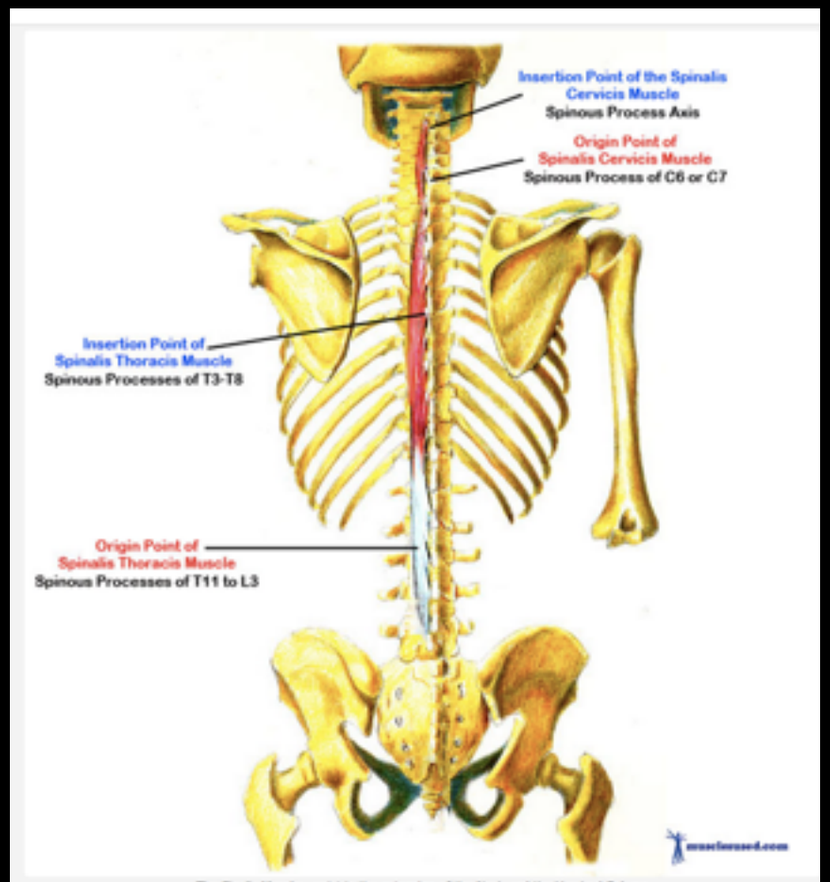
pull shoulder blade forward

bend my head forward.

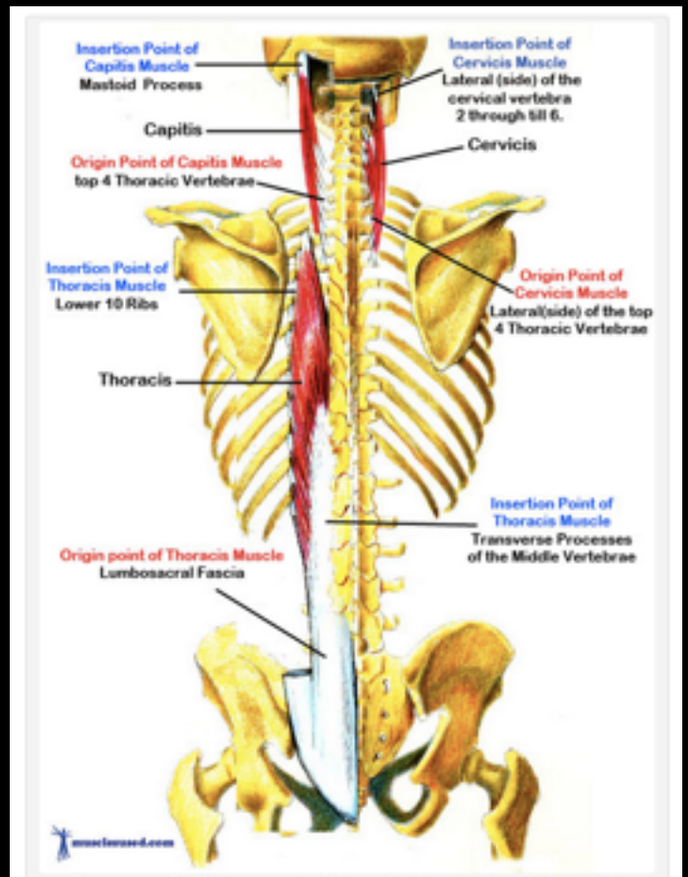
give 5 little pulses and relax.



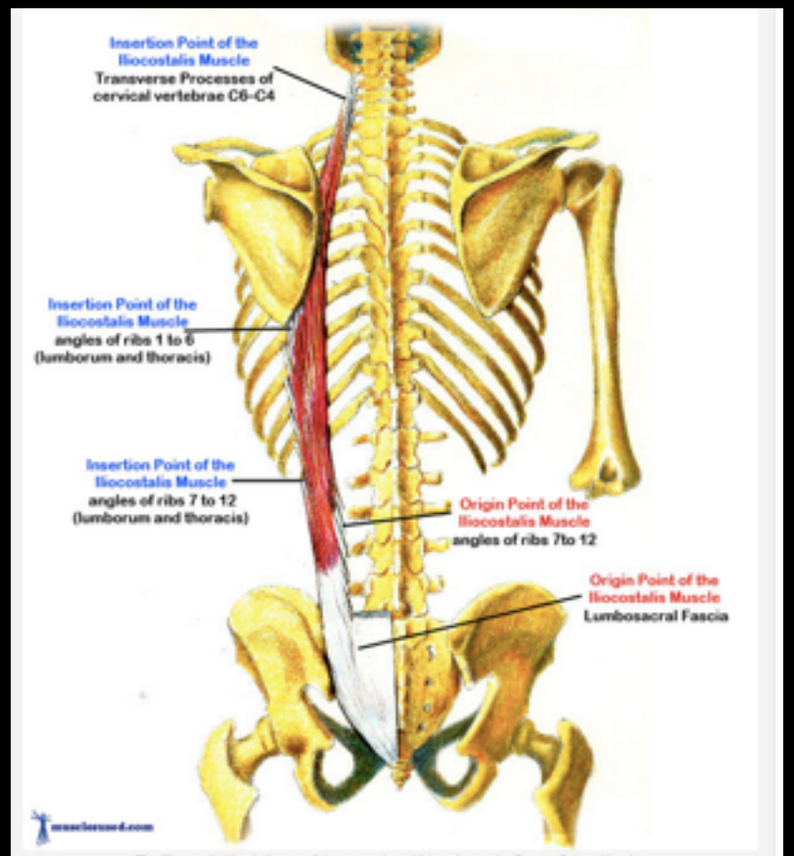
The Erector Spinae Muscles work together to keep the spine erect as well as assist in bending sidevards motions and assisting the extension of the Neck and face to turn



The Sinalis Muscles assist in the extension of the Neck and the Verebral Column



The Longissimus Dorsi Muscle is considered to be one of the longest muscles in the human body.



The Iliocostalis Muscle is one of three muscles which make up the Erector Spinae Muscles

PARASPINAL movements: these muscles are designed to help us do a lot of combination movements.

right side length:

posterior pelvic tilt (tuck pelvis)

left lateral tilt (tilt the left side pelvis up)

rotate to the left

roll everything down and forward

keep adding that rotation to the mix until we feel stretch from base of the skull all the way down the side of the body.

right side contraction:

get tall, bend my knees.

anterior tilt.

right lateral tilt (lift the right side of the pelvis)

right rotate and try to take base of my skull and try to touch it to the top of my hip

When you hold all of those things together what will happen is you'll get an increasing sensation of tension in the muscles running all the way down the right side of the back.

Once you've got all of that set, you can actually play with adding more lateral bend or more rotation or more extension to it to target different areas.

right side contraction.

anterior tilt to the pelvis.

Raise the pelvis up on the right side

rotate away

bend to that side and try to touch the back of head to hip

felt more in midline

version 2:

right side stretch:

posterior pelvic tilt, bend your knees. tuck your pelvis,

tilt left side of my pelvis up.

tilt and rotate toward.

roll the top of our head forward, keep adding that rotation in, lateral bend