

Pilates for Rounded Shoulders and Kyphosis

Sylvia Nho
11/26/18
Los Angeles, CA

Abstract

Rounded shoulders are an unnatural posture characterized by an exaggerated curvature of the upper back, often a forward positioning of the head where the shoulder girdle is protracted, and a thoracic kyphosis. Over time, this posture causes the muscles and fascia to get tight and shorter in the front of the chest (pectoralis major and minor) while the muscles in the upper back (trapezius, rhomboids, latissimus dorsi) get longer and weak. I hope to educate myself on the anatomy of the shoulder and spine, increase mobility, and minimize pain in my shoulders using the Basi block system.

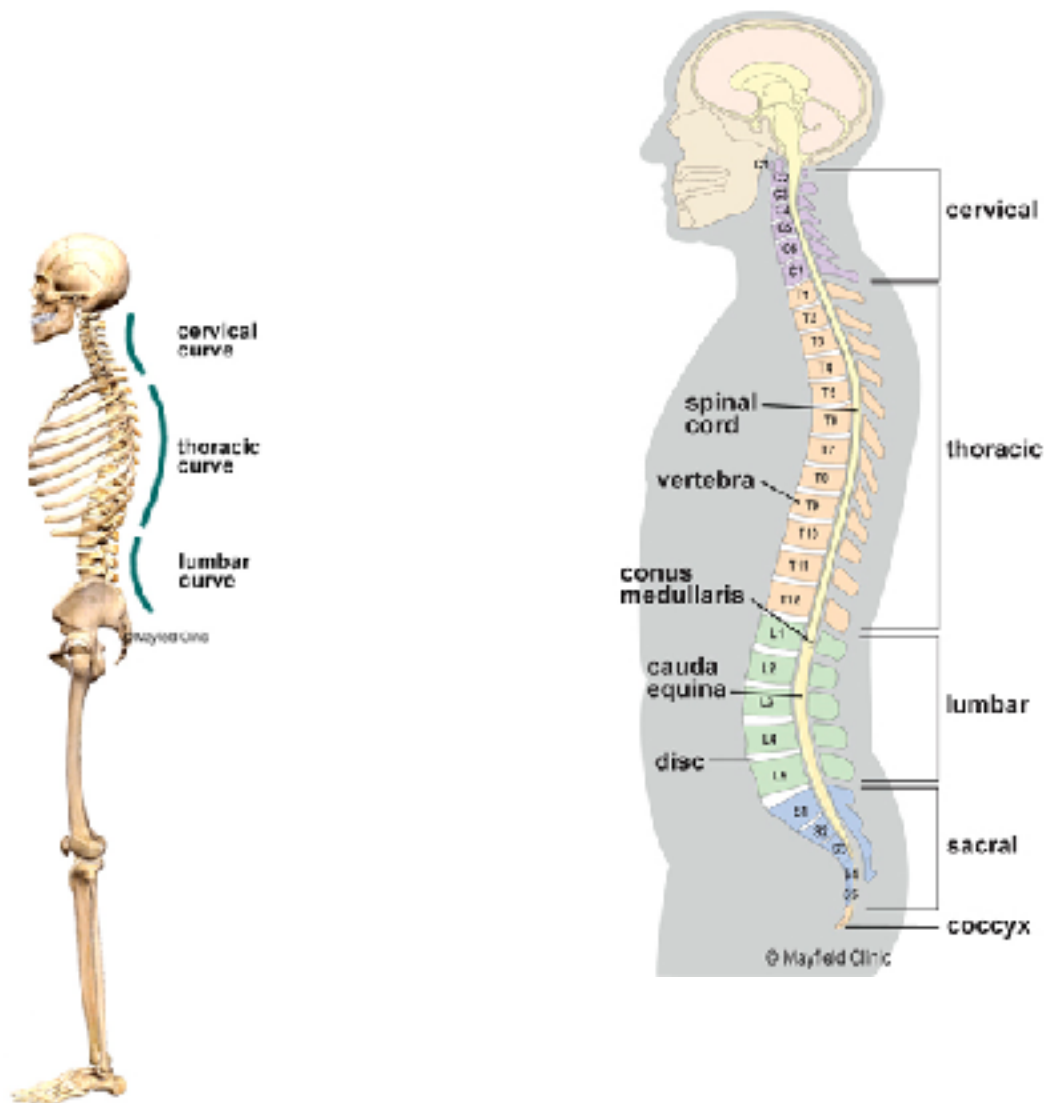
Table of Content

Abstract	1
Anatomy of the spine	3
Rotator cuff muscles and tendons	4
Case Study	7
Exercise Program	8
Bibliography	9

Anatomy of the Spine

The spine is made of 33 individual bones stacked one on top of the other. This spinal column provides the main support for your body, allowing you to stand upright, bend, and twist, while protecting the spinal cord from injury.

When viewed from the side, an adult spine has a natural S-shaped curve. The neck (cervical) and low back (lumbar) regions have a slight concave curve, and the thoracic and sacral regions have a gentle convex curve. The curves work like a coiled spring to absorb shock, maintain balance, and allow range of motion throughout the spinal column.

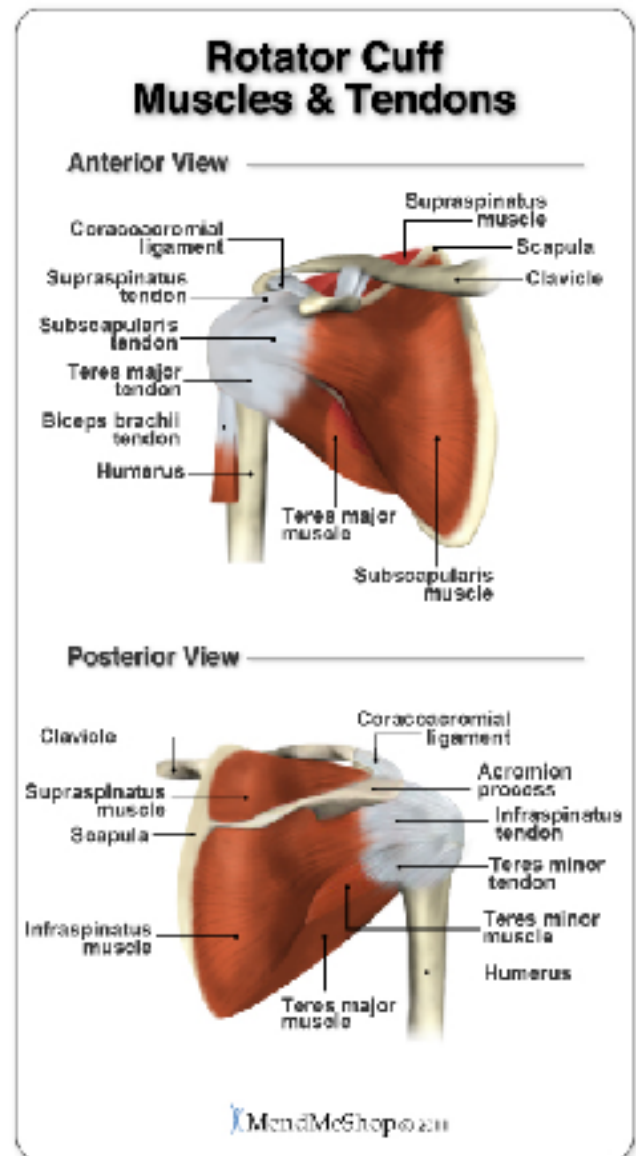


Anatomy of rotator cuff muscles

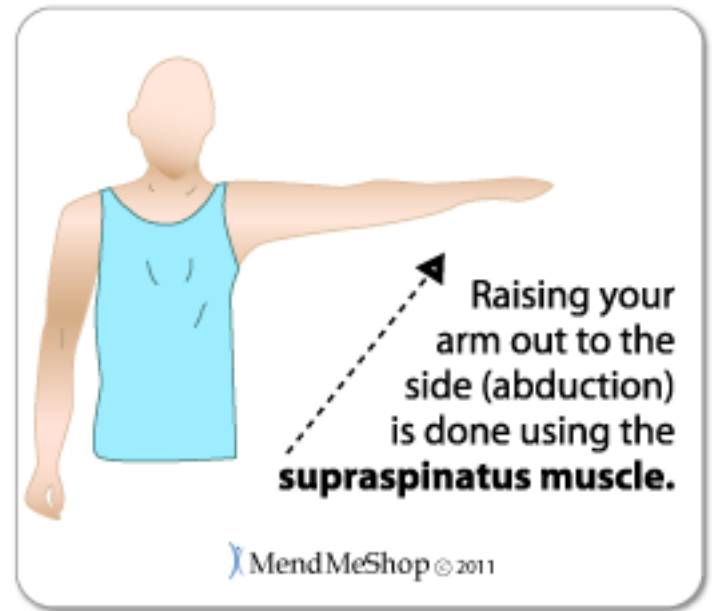
The Rotator cuff is a group of four tendons located at the top of your humerus:

1. Subscapularis
2. Supraspinatus
3. Infraspinatus
4. Teres minor

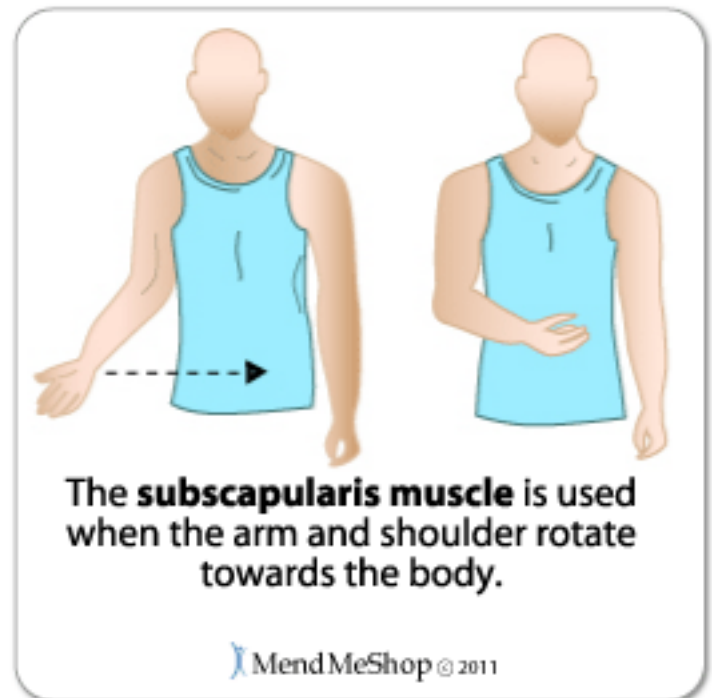
These four muscles pull on the tendons causing the shoulder to rotate up, down, back, front, in, or out. These muscles along with the major and deltoids keep the shoulder joint in place and is responsible for stabilizing the shoulder. They all work together as an unit therefore injuries usually involve more than one muscle.



The supraspinatus is the most frequently torn of all the rotator cuff tendons. It is the uppermost muscle of the rotator cuff and is located at the back of your shoulder blade. Your supraspinatus muscle primarily helps you to bring your arm directly out to the side. (abduction)

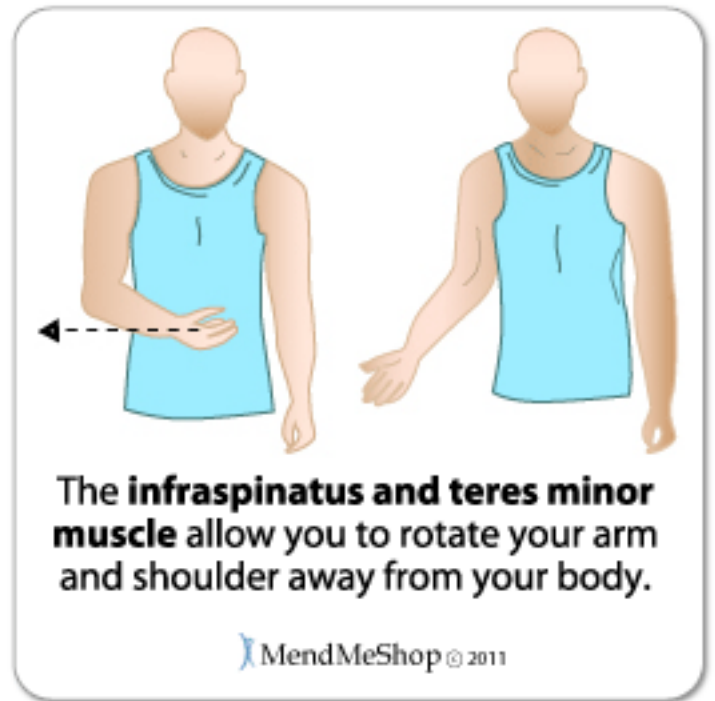


The subscapularis is the largest and the strongest of all your rotator cuff muscles. It completely covers the front of the shoulder blade. This muscle is attached to the front of the humerus which allows you to move your upper arm inward toward the center of your body (internal rotation).



The infraspinatus muscle is located at the back running from the bottom of the shoulder blade across to the top of the humerus. This muscle works with the teres minor muscle to move your arm outward, away from the center of your body (external rotation).

The teres minor muscle sits below the infraspinatus and runs at the same angle attaching just below the greater tubercle of your humerus bone. The teres minor also assists with the outward rotation of your arm from the center of your body (external rotation).



Other main muscles in the shoulder:

- Deltoids
- Subclavius
- Trapezius
- Teres major
- Serratus anterior
- Sternocleidomastoid
- Levator scapulae
- Rhomboids

Case Study

I used myself as the case study because I struggle with rounded shoulders and kyphosis. I started to notice myself having rounded shoulders around 7 years ago when I first started to work as a professional chef. I would use my knife for many hours a day hunching over my cutting board. I started to have a lot of pain between and under my shoulder blades so I began physical therapy alongside pilates to help with my posture and pain. It's been about two years since I've started pilates but it has helped me immensely with body awareness and managing my pain. I typically did pilates about twice a week with the goal of increasing mobility in my shoulders, stretching out my upper back, stabilization of the shoulders, and finally to learn to engage the proper muscles.

Basi Block System	Exercises	Goals
Warmup	Roll down, Pelvic Curl, Spine Twist Supine, Chest Lift, Chest Lift with Rotation	Warming up the spine and abdominals
Footwork (Reformer)	Parallel Heels and Toes, V position toes, Open V Heels and Toes, Single Leg Heels and Toes, Calf Raises, Prances	Activate hamstrings and quads. Focus on breathwork and engaging transverse abdominals. Stabilize pelvis
Abdominal (Reformer)	100 prep, 100s, double legs in strap, double legs with rotation	Focus on strengthening abdominals so that my core is stronger and more stable to lift myself up
Hip Work (Reformer)	Frog, Circles (Down, up)	Thinking of keeping my chest wide and open while stabilizing hips and pelvis
Spinal Articulation (Reformer)	Bottom Lift, Bottom Lift with Extension, Short Spine	Mobilizing thoracic and lumbar spine
Stretches (Cadillac)	Shoulder Stretch	Stretching chest and shoulders
Full body Integration (Cadillac)	Kneeling Cat Stretch, Sitting Forward, Side Reach	Stretching shoulders while articulating spine. Hamstring stretch and engaging oblique muscles
Arm work	Arms Kneeling Series (Chest Expansion, Circles (Down, Up), Biceps, Triceps)	Strengthening shoulder extensors and posture.
Leg Work	Single Leg Skating	Strengthening quads and gluten
Lateral Flexion/Rotation	Side over on Box	Strengthening obliques
Back extension	Pulling Strap 1 and 2	Improves back and shoulder extensor

Conclusion

In conclusion, after about two years of continuous pilates I've learned to manage my pain. I have much less pain around my shoulders and my posture has improved immensely. I continue to focus on back extension and having a strong core to help myself sit up taller and not slumped over. Pilates has changed my life so much that that pushed me to want to help others manage pain. That is why I enrolled in the comprehensive program at BASI, so that I can help other people with their own body goals.

Bibliography

Isacowits, Rael. Study Guide: Comprehensive Course. Costa Mesa, California, 2013.

“Spine Anatomy, Anatomy of the Human Spine.” *Brain Anatomy, Anatomy of the Human Brain*, mayfieldclinic.com/pe-anat spine.htm.

MendMeShop. “Rotator Cuff and Shoulder Anatomy.” *How to Deal with Supraspinatus Tears - Symptoms & Injury Recovery*, www.aidmyrotatorcuff.com/rotator-cuff-information/rotator-cuff-and-shoulder-anatomy.php.