

Activity 2

1. Throwing a baseball overhead

a. Deltoid

i. Action:

- When throwing a ball deltoid muscles are at work as the lateral fibers proceed to abduct the arm at the shoulder joint. Also, the anterior fibers flex and rotate the arm medially at the shoulder joint. Lastly, posterior fibers extend and laterally rotate the arm-shoulder joint.

ii. Innervation:

- Axillary Nerve

b. Subscapularis

i. Action:

- It medially rotates the arm at the shoulder joint which assists the arm in throwing the baseball overhead.

ii. Innervation:

- Upper and Lower subscapular nerve.

2. Kicking a ball

a. Gastrocnemius

i. Action:

- It requires the flexion of the leg when kicking a ball, therefore, the gastrocnemius muscle plays a big role in this action. Plantar flexes the foot at the ankle joint and it also flexes the leg at the knee joint

ii. Innervation:

- Tibial Nerve

b. Soleus

i. Action:

- The plantar flexes the foot at the ankle joint.

ii. Innervation:

- Tibial Nerve

3. Doing sit-ups

a. Rectus Abdominis

i. Action:

- It flexes the vertebral column, especially the lumbar portion. The rectus abdominis compresses the abdomen aiding the defecation, urination, forced exhalation, and childbirth of humans.

ii. Innervation:

- Thoracic spinal nerves (T7- T12)

b. Transversus Abdominis

i. Action:

- It compresses the abdomen.

ii. Innervation:

- Thoracic spinal nerves (T8 - T12), iliohypogastric nerve, and ilioinguinal nerve.

4. Breathing

a. Pectoralis Minor

i. Action:

- It abducts the scapula, and rotates it downward. It also elevates the ribs (3-5) during forced inhalation when the scapula is fixed.

ii. Innervation:

- Medial Pectoral Nerve

b. Serratus Anterior

i. Action:

- It abducts the scapula and rotates it upward. It elevates the ribs when the scapula stabilizes. It is important in horizontal arm movements such as punching and pushing.

ii. Innervation:

- Long thoracic nerve

Source:

Tortora, G. J., & Derrickson, B. (2017). Tortora's Principles of Anatomy and Physiology. In *John Wiley & Sons, Inc. eBooks*. <https://ci.nii.ac.jp/ncid/BB23861293>