

Activity 2

Activity	Muscle	Action	Innervation
1. Throwing a baseball overhead	Pectoralis major	As a whole, adducts and medially rotates arm at shoulder joint Clavicular head flexes arm Sternocostal head extends flexed arm to side of trunk	Medial and lateral pectoral nerves
	Deltoid	Lateral fibers abduct arm at shoulder joint Anterior fibers flex and medially rotate arm at shoulder joint Posterior fibers extend and laterally rotate arm at shoulder joint	Axillary nerve
	Subscapularis	Medially rotates arm at shoulder joint	Upper and lower subscapular nerve
2. Kicking a ball	Rectus femoris	All four heads extend leg at knee joint Rectus femoris muscle acting alone also flexes thigh at hip joint	Femoral Nerve
	Vastus lateralis		
	Vastus medialis		
	Vastus intermedius		
3. Doing sit-ups	Rectus abdominis	Flexes vertebral column esp. lumbar portion Compresses abdomen to aid in defecation, urination, forced exhalation, and childbirth RMA: Flexes pelvis on the vertebral column	Thoracic spinal nerves T7-T12

	Transversus abdominis	Compresses abdomen	Thoracic spinal nerves T8-T12, Iliohypogastric nerve, and Ilioinguinal nerve
	Internal Oblique	Acting together, compress abdomen, and flex vertebral column Acting singly, laterally flex vertebral column, esp. lumbar portion Rotate vertebral column	Thoracic spinal nerves T8-T12, Iliohypogastric nerve, and Ilioinguinal nerve
4. Breathing	Diaphragm	Contraction of diaphragm causes it to flatten and increases vertical dimension of thoracic cavity, resulting in inhalation Relaxation of diaphragm causes it to move superiorly and decreases vertical dimension of thoracic cavity, resulting in exhalation	Phrenic nerve, which contains axons from cervical spinal nerves C3-C5
	External Intercostals	Contraction elevates ribs and increases anteroposterior and lateral dimensions of thoracic cavity, resulting in inhalation Relaxation depresses ribs and decreases anteroposterior and lateral dimensions of thoracic cavity, resulting in exhalation	Thoracic spinal nerves T2-T12
	Internal Intercostals	Contraction draws adjacent ribs together to further decrease anteroposterior and lateral dimension of thoracic cavity during forced exhalation	Thoracic spinal nerves T2-T12

References:

Tortora, G. J., & Derrickson, B. (2017). *Principles of Anatomy and Physiology* (15th ed.). Langara College.