

FIGURE 6.19 Movements of the ankle: (a) dorsiflexion and plantar flexion, and (b) eversion and inversion.

Core Muscles

The core of the body spans the entire trunk extending from the rib cage and diaphragm on the superior border to the pelvis inferiorly. Muscles of the core (the active subsystem of spinal stabilization) have been described by function as stabilizers or mobilizers since the late 1960s.

Movement of the torso occurs at two primary joint locations—at the spine and at the pelvis.

Spinal movement occurs at the intervertebral joints (the joints between the vertebrae of the spine). An articulation between the fifth lumbar vertebra and the sacrum of the pelvis allows the pelvis to tilt. The core or torso area is best illustrated by viewing the torso from both the front (anterior view) and the back (posterior view) as seen in figure 6.20. The muscles and movements of the torso are listed in table 6.10 and illustrated in figure 6.21.

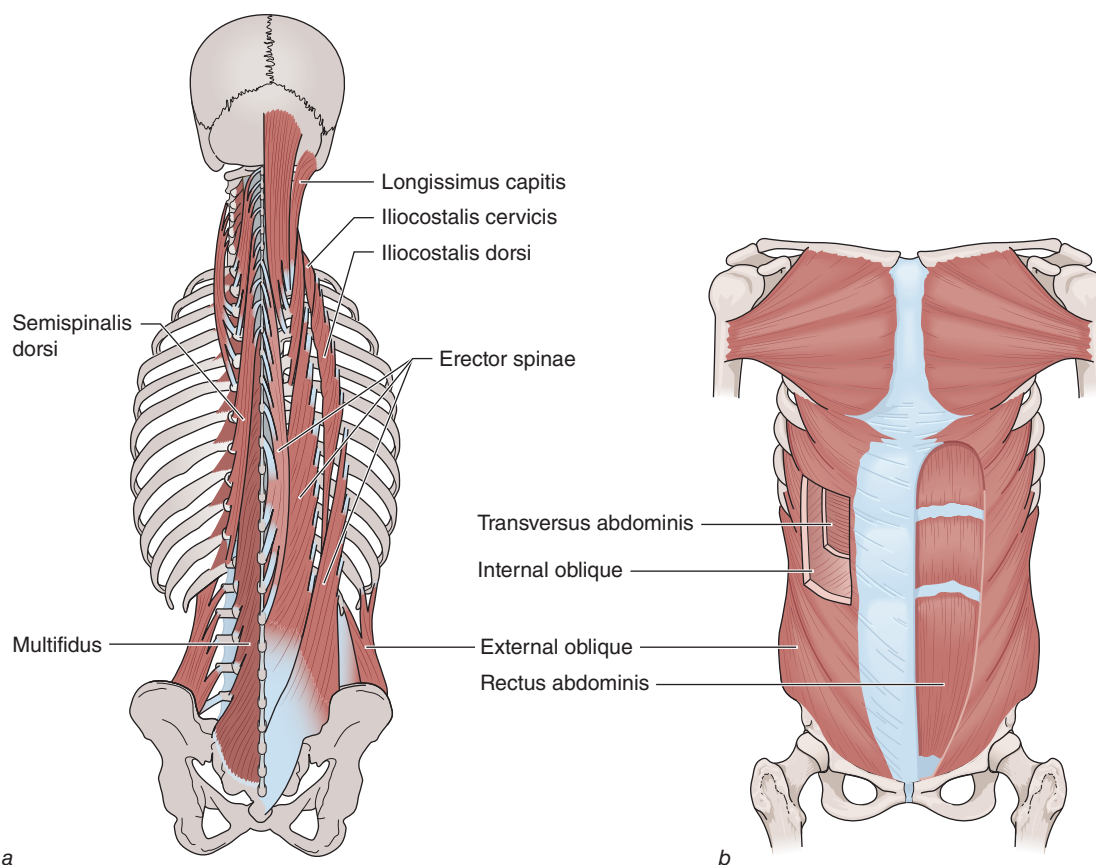


FIGURE 6.20 Muscles of the core: (a) posterior and (b) anterior views showing abdominal and back core muscles and (c) deep muscles of the lower spine and pelvis.

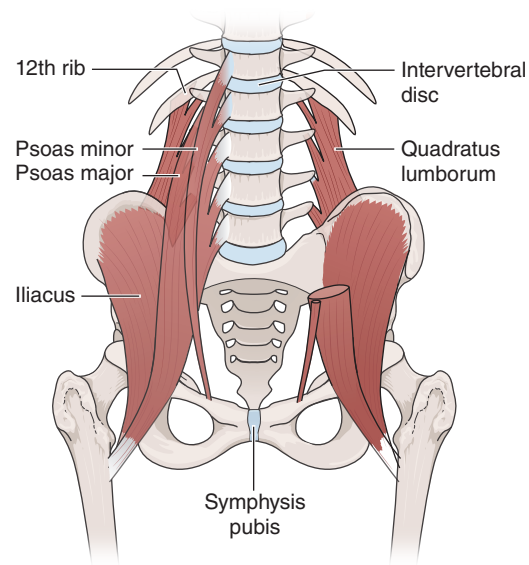


FIGURE 6.20 > continued

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TABLE 6.10 Muscles and Movements of the Core

Muscle	Origin	Insertion	Function
Rectus abdominis	Pubis	Ribs 5 through 7, sternum	Spinal flexion, posterior pelvic tilt
Internal oblique	Pelvis	Lower ribs	Spinal rotation, lateral flexion, posterior pelvic tilt
External oblique	Lower 8 ribs	Pelvis	Spinal rotation, lateral flexion, posterior pelvic tilt
Transversus abdominis	Lateral torso	Linea alba, pelvis	Internal stability
Erector spinae	Lower thoracic vertebrae, lumbar spine	Cervical and thoracic vertebrae, ribs, base of skull	Spinal extension
Quadratus lumborum	Pelvis (iliac crest)	Rib 12, lumbar vertebrae	Lateral flexion
Multifidus	Posterior sacrum	Spinous processes of the vertebrae	Spinal extension and stabilization of spinal column

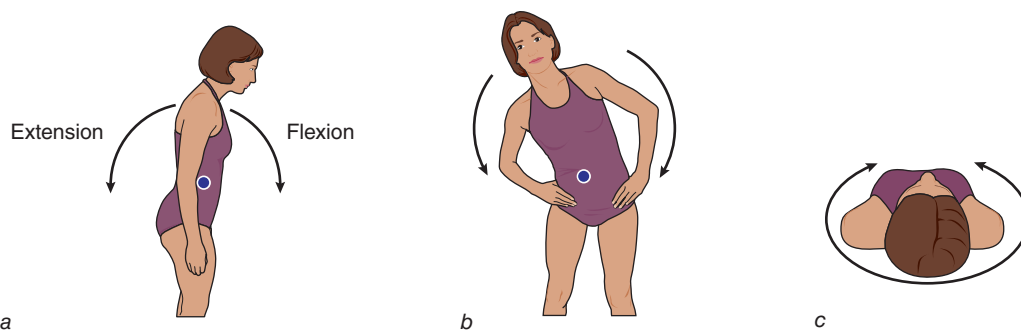


FIGURE 6.21 Movements of the torso: (a) spinal flexion and extension, (b) lateral flexion, and (c) rotation.