

**Table 15.2** Manual Muscle Tests for the Thoracolumbar Spine

<b>Motion</b>	<b>Athlete position</b>	<b>Stabilizing hand placement</b>	<b>Resistance hand placement</b>	<b>Instruction to athlete</b>	<b>Primary muscles tested</b>
Trunk flexion	Supine, hook-lying position	None required	None required	With hands at ear level, perform an abdominal curl; if unable to complete full motion (grade 5), move hands to chest (grade 4) and then to sides (grade 3).	Rectus abdominis
Trunk rotation	Supine, hook-lying position	None required	None required	With hands at ear level, perform an abdominal curl toward the right and then toward the left knee; if unable to complete full motion (grade 5), move hands to chest (grade 4) and then to sides (grade 3).	Internal and external abdominal obliques
Lateral flexion	Side-lying	Lower extremities	None required	Lift shoulders and trunk off table with hands at ear level (grade 5), across chest (grade 4), or at sides (grade 3).	Abdominal obliques and erector spinae working unilaterally
Trunk extension	Prone, pelvis stabilized	Lower extremities	None required	Lift head and shoulders off table with hands behind head (grade 5), behind back (grade 4), or at sides (grade 3).	Erector spinae

From S. Shultz, P. Houglum, and D. Perrin, 2016. *Examination of musculoskeletal injuries*, 4th ed. (Champaign, IL: Human Kinetics).