

Table 12.3 Manual Muscle Tests for Scapular Motion

Motion	Athlete position	Stabilizing hand placement	Resistance hand placement	Instructions to athlete	Primary muscles tested
Scapular elevation	Seated, arm in neutral	Posterior thorax	Superior border of scapula	Shrug the shoulder.	Trapezius, levator scapula
Scapular depression and upward rotation	Prone, arm overhead	Posterior thorax	Scapula	Elevate the shoulder.	Pectoralis minor, lower trapezius, subclavius, levator scapula, rhomboids
Scapular retraction	Prone, shoulder abducted and laterally rotated	Posterior thorax	Medial border of scapula	Squeeze the shoulder blade (adduct scapula) toward midline.	Rhomboids, medial and lower trapezius
Scapular protraction	Seated, shoulder flexed to 90-120°	Posterior thorax	Elbow	Push arm forward and upward.	Pectoralis minor, serratus anterior, rhomboids
Scapular downward rotation	Prone, hand behind back	Posterior thorax	Medial inferior border of scapula	Elevate hand toward the ceiling.	Upper and lower trapezius, serratus anterior, pectoralis major and minor

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