

Table 11.2 Manual Strength Tests for Cervical Motions

Motion	Athlete position	Stabilizing hand placement	Resistance hand placement	Instruction to athlete	Primary muscles tested
Cervical flexion	Supine	Thorax	Forehead	From neutral position, tuck chin and flex head and neck toward chest.	Sternocleidomastoid, anterior scalenes, rectus capitis anterior, longus capitis, hyoid bone bilaterally
Cervical extension	Prone, arms at sides, head off table	Thorax to discourage trunk extension	Posterior aspect of head	From neutral position, lift and extend head against resistance.	Paravertebral extensor muscle groups (splenius, semispinalis, capitis), upper trapezius bilaterally
Lateral flexion	Seated or side-lying	Ipsilateral shoulder (side-lying) Contralateral shoulder (seated)	Lateral aspect of head	From neutral position, attempt to move ear toward shoulder.	Sternocleidomastoid, scalenes, upper trapezius, and small intrinsic muscles unilaterally
Lateral rotation	Seated	Contralateral shoulder	Open palm along the lateral forehead and cheek	From neutral position, rotate head against applied resistance.	Sternocleidomastoid unilaterally

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