

Table 13.1 Goniometric Examination of Elbow ROM

Motion	Location of goniometer	Movement	Normal range
Flexion	P: Supine A: Lateral epicondyle S: Long axis of humerus M: Long axis of radius	Palm is moved toward shoulder.	0 to 145-160° (depending on muscularity)
Extension	P: Supine, forearm off edge of table or arm placed on towel A: Lateral epicondyle S: Long axis of humerus M: Long axis of radius	Elbow is straightened as far as possible, with back of hand moving toward the table.	0° (can vary from -10 to 15°)
Supination	P: Seated, arm at side and elbow flexed to 90° holding a pencil with a closed fist A: Head of third metacarpal S: Perpendicular to floor M: Parallel with pencil	From neutral (pencil perpendicular to the floor), forearm is rotated externally, with palm facing the ceiling.	0 to 90°
Pronation	P: Seated, arm at side and elbow flexed to 90° holding a pencil with a closed fist A: Head of third metacarpal S: Perpendicular to floor M: Parallel with pencil	From neutral (pencil perpendicular to the floor), forearm is rotated internally, with palm facing downward.	0 to 80-85°

P = Patient position; A = axis of motion; S = Stationary arm of goniometer; M = Moveable arm of goniometer

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