CHAPTER 7

Elbow, Wrist, and Hand Immobilization Orthoses

Key Terms

- Complex forearm fractures
- Constraint induced movement therapy (CIMT)
- Cubital tunnel syndrome
- Distal humerus
- Distal radioulnar joint
- Dysesthesias
- Extra-articular fractures
- Fall on an outstretched hand (FOOSH)
- Interosseous membrane
- Intra-articular fractures
- Joint dislocation
- Open reduction internal fixation (ORIF)
- Paresthesia
- Proximal radioulnar joint
- Radial head
- Radial neck
- Supracondylar
- Ulnar claw hand

Learning Outcomes

Upon completion of this chapter, you will be able to:

1. Describe the clinical conditions and goals for prescribing an elbow, wrist, and hand immobilization orthosis.

2. Identify pertinent anatomical structures and biomechanical principles involved in an elbow, wrist, and hand immobilization orthosis and apply these concepts to orthotic design and fabrication.

3. Identify the most commonly selected orthotic designs and describe the rationale for choosing one design over another.

4. Design suitable patterns for the two common types of elbow, wrist, and hand immobilization orthoses and one forearm-based orthosis and identify the pertinent anatomical landmarks.

5. After reviewing the instructional videos:
   a. Outline the steps involved in the fabrication of an elbow, wrist, and hand immobilization orthosis.
   b. Complete the molding and finishing of an elbow, wrist, and hand immobilization orthosis.
   c. Evaluate the fit and function of a completed elbow, wrist, and hand immobilization orthosis and identify and address all areas needing adjustment.