

Fig. E-1A

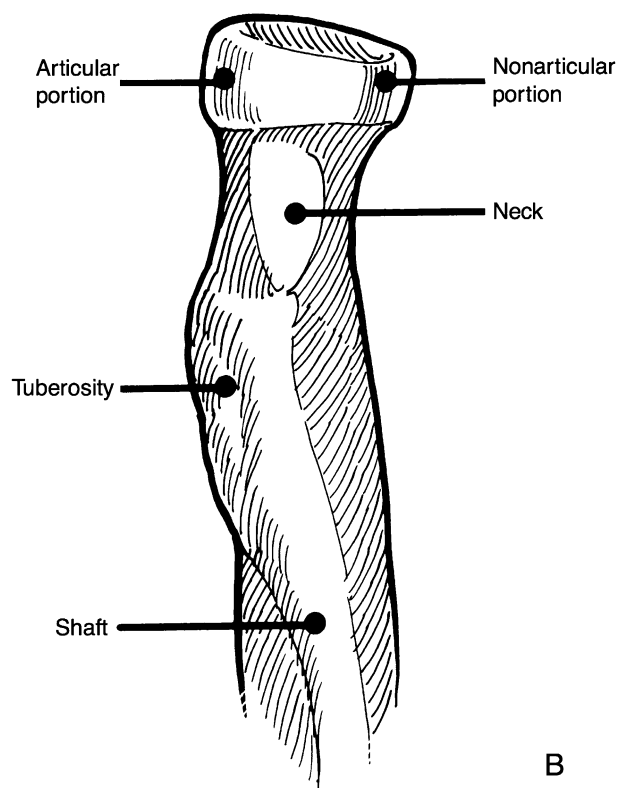


Fig. E-1B

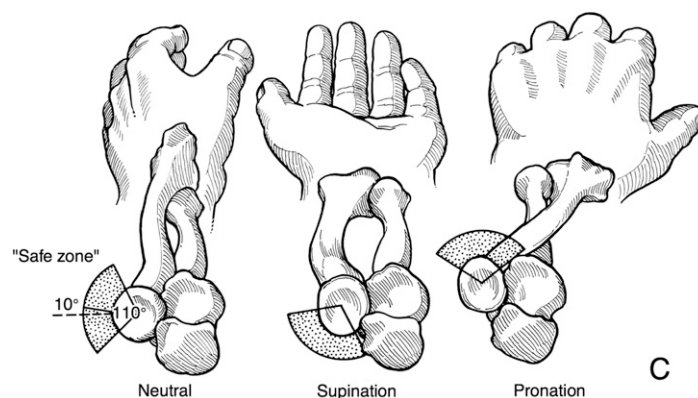


Fig. E-1C

Figs. E-1A, E-1B, and E-1C Anatomy of the radial head and lateral aspect of the elbow. (Illustrations by Elizabeth Martin © 2011. Reproduced with permission.) **Fig. E-1A** The lateral collateral ligament is composed of the lateral ulnar collateral, radial collateral, and annular ligaments. **Fig. E-1B** Articular and nonarticular zones of the radial head. **Fig. E-1C** Note the elliptical shape of the radial head and safe zone in neutral, supination, and pronation of forearm.

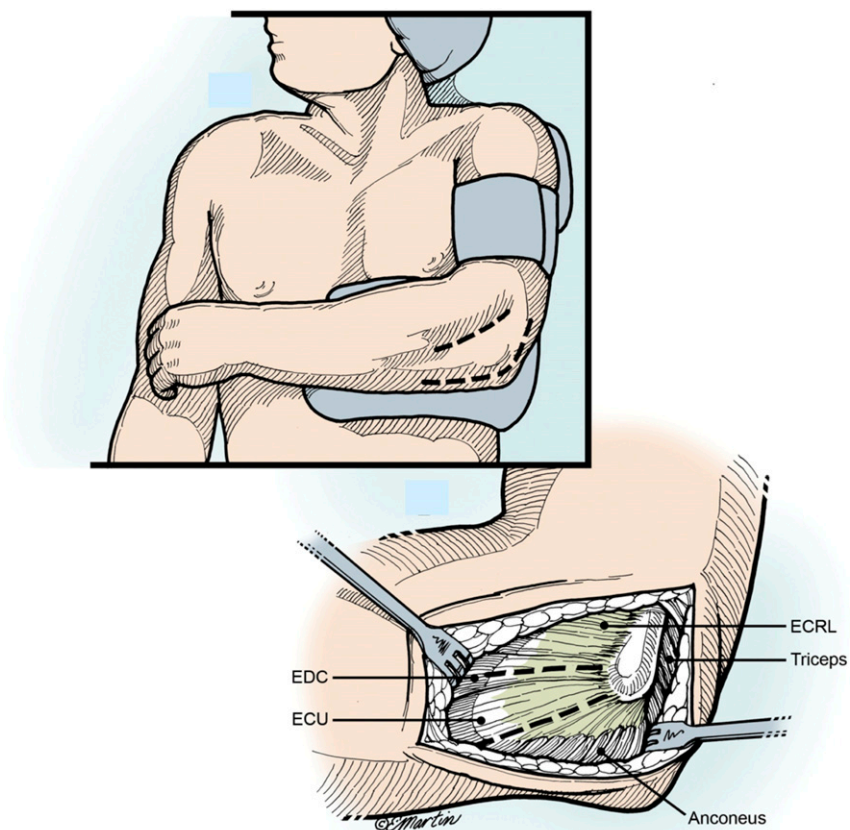


Fig. E-2A

A

Figs. E-2A and E-2B Surgical approach. (Illustrations by Elizabeth Martin © 2011. Reproduced with permission.) **Fig. E-2A** Superficial approach for radial head exposure. **Fig. E-2B** A posterior or direct lateral skin incision can be used. A deep surgical exposure using an extensor digitorum communis (EDC) split is preferred if the lateral collateral ligament is intact, while an anconeus-extensor carpi ulnaris interval is preferred if the lateral collateral ligament is disrupted. The radial collateral and annular ligaments are transected for radial head exposure. Note that the lateral ulnar collateral ligament is preserved with this approach. ECRL = extensor carpi radialis longus, and ECU = extensor carpi ulnaris.

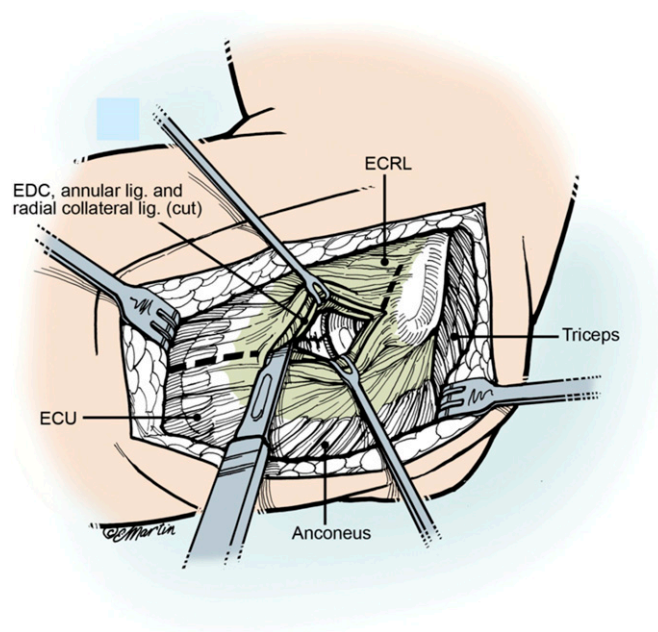


Fig. E-2B

B

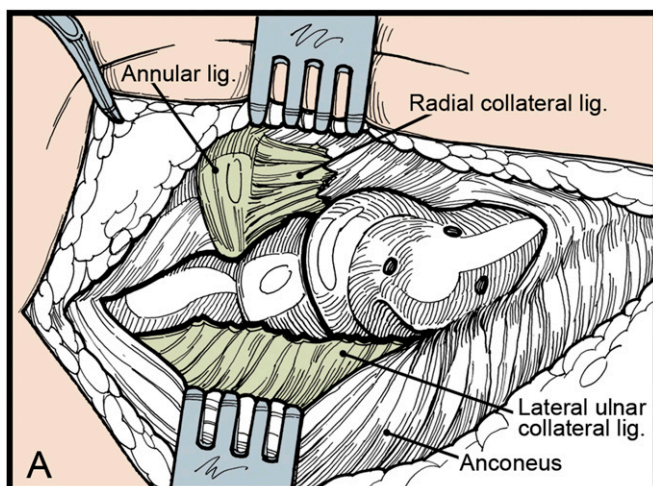


Fig. E-3A

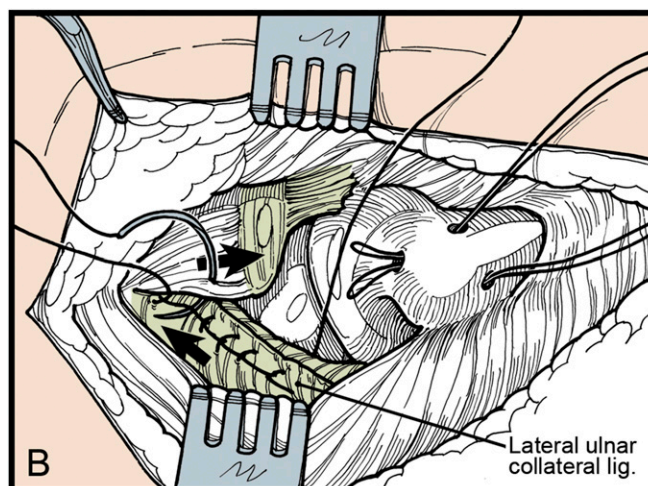


Fig. E-3B

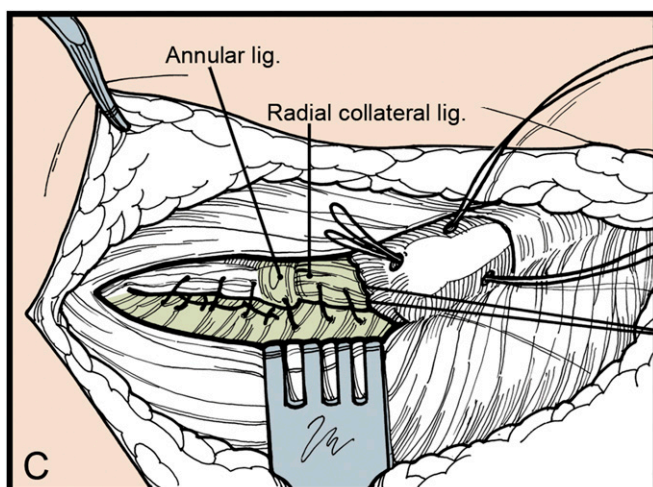


Fig. E-3C

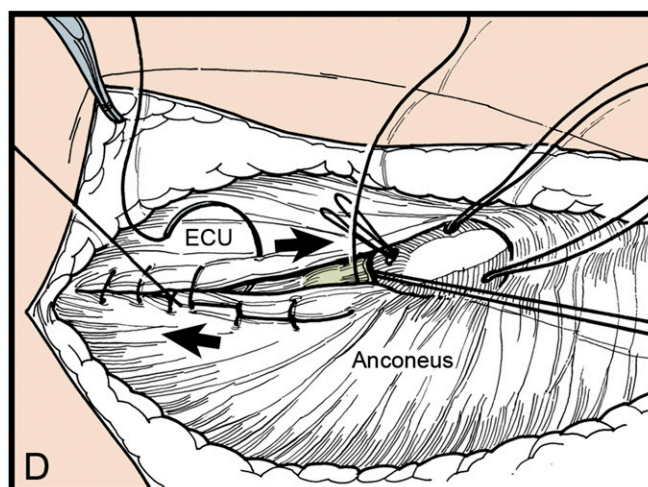


Fig. E-3D

Figs. E-3A through E-3F Lateral collateral ligament (LCL) repair. (Illustrations by Elizabeth Martin © 2011. Reproduced with permission.) **Fig. E-3A** LCL repair using transosseous bone tunnels on the lateral humeral epicondyle. **Figs. E-3B and E-3C** Repair of the LCL with heavy braided suture. **Figs. E-3D, E-3E, and E-3F** Closure and repair of the anconeus-extensor carpi ulnaris interval. ECU = extensor carpi ulnaris.

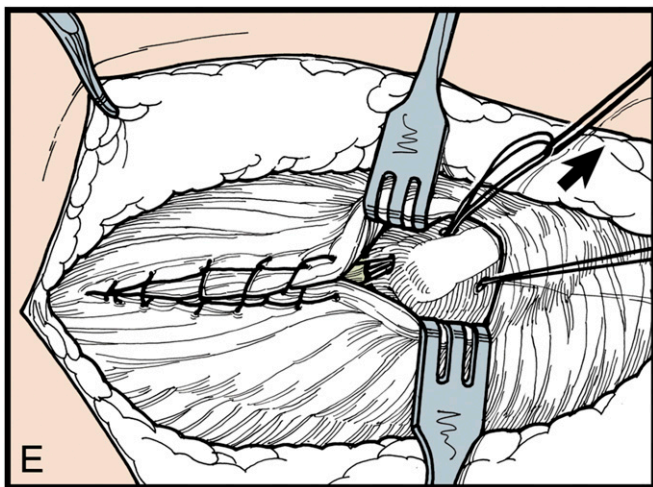


Fig. E-3E

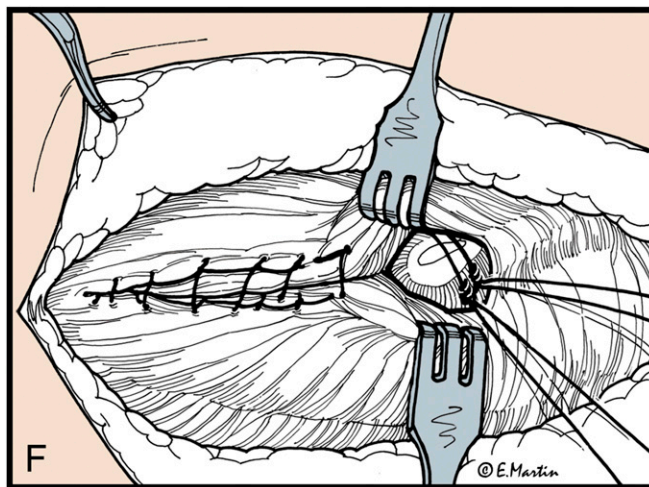


Fig. E-3F



Fig. E-4

Figs. E-4A and E-4B A seventy-four-year-old man who was seen twenty years after radial head excision because of pain and stiffness that were interfering with the activities of daily living. Anteroposterior (**Fig. E-4A**) and lateral (**Fig. E-4B**) radiographs demonstrate ulnohumeral arthritis after radial head excision. The patient underwent a successful total elbow arthroplasty (not shown).