Elbow Joint

Quantity of Local Anesthetic: 20 to 30 mL
Needle Size: 1-1/2 to 3-1/2 inches, 20 gauge
Injection Techniques:

- Lateral approach (Figure 3.85): All approaches to the elbow are performed with the horse bearing weight on the limb. The landmark for the lateral approach is the lateral collateral ligament that extends across the joint from the lateral epicondyle of the humerus to the lateral tuberosity of the radius. The elbow joint can be entered either cranial or caudal to the collateral ligament. The site for injection is 2/3 the distance distally measured from the lateral epicondyle of the humerus to the lateral tuberosity of the radius. A 1-1/2-inch, 20-gauge needle is inserted at a 90° angle to the skin just cranial or caudal to the lateral collateral ligament. If injected caudally, the needle may enter the bursa of the ulnaris lateralis muscle, which is thought to communicate with the elbow joint. However, communication between the bursa and the elbow joint occurred in only 9/24 (37.5%) of the joints examined.
- Caudolateral approach (Figure 3.86): The caudolateral approach is an alternative to placing the needle directly caudal to the collateral ligament using the lateral approach. The injection site is caudal to the palpable humeral epicondyle in the aconeal notch within the humero-ulna joint. This palpable V-shaped depression is usually just below the triceps muscles and 6 to 8 cm cranio-distal from the point of the olecranon process. A 1-1/2- to 3-1/2-inch, 20-gauge needle is inserted at a 45° angle to the skin and directed craniomedially.
- Caudal approach (Figure 3.87): The large caudal joint pouch of the elbow can be entered from a more proximal location. The landmarks are the lateral supracondylar crest of the distal humerus and the most proximal point of the olecranon process. The injection site is 1/2 inch proximal to and 1/3 of the distance measured caudally from the supracondylar eminence to the point of the olecranon. A 3-1/2-inch, 18- to 20-gauge spinal needle is directed distomedially through the triceps musculature at a 45° angle to the long axis of the limb into the olecranon fossa.

Pitfalls:

1. Difficulty in palpating the radial tuberosity or the lateral humeral epicondyle
2. Hitting bone when advancing the needle between the radius and humerus, and between the humerus and the ulna
3. Radial nerve paralysis from injecting anesthetic outside the joint when placing the needle cranial to the collateral ligament
4. Inability to obtain synovial fluid