

High Palmar or High Four-point Block
(Figure 3.65)

Quantity of Local Anesthetic: 3 to 4 mL/site

Needle Size: 5/8 inch, 25 gauge and 1.5 inch, 22 gauge

Injection Technique: The high four-point or high palmar block is analogous to the low four-point block because the same four nerves are anesthetized in the proximal aspect of the metacarpus just below the carpometacarpal joint. However, the high palmar block is more difficult to perform because the soft tissue structures are more closely confined to the metacarpus and the palmar metacarpal nerves are located deeper within the axial borders of the second and fourth metacarpal bones. The proximal palmar nerves are anesthetized in the groove between the suspensory ligament and the DDFT. A 5/8-inch, 25-gauge needle is inserted through the heavy fascia and 3 to 4 mL of anesthetic is deposited. Blocking just the palmar nerves will not completely desensitize the deep structures of the metacarpus. The palmar metacarpal nerves run parallel and axial to the second and fourth metacarpal bones and each can be desensitized by infiltration of 3 to 4 mL of local anesthetic along the axial surfaces of the metacarpal bones. A 1.5-inch needle is directed toward the palmar metacarpus along the axial borders of the splint bones until bone is contacted. The needle is withdrawn slightly and aspirated to be certain that the needle is not within the carpometacarpal joint before the anesthetic is deposited. Blocking the palmar metacarpal nerves usually is performed with the limb held, whereas anesthesia of the palmar nerves often is easier with the limb bearing weight. These four nerve blocks will effectively desensitize the deep structures of the metacarpus with the exception of the origin of the suspensory ligament.

Pitfalls:

1. Inadvertent injection of the distal outpouchings of the carpometacarpal joint (and therefore the middle carpal joint).
2. Resentment by the horse when blocking the palmar metacarpal nerves axial to the splint bones
3. Difficulty in assessing whether the palmar metacarpal nerves are desensitized
4. Swelling of the proximal metacarpal region that may interfere with a subsequent ultrasound evaluation