






Regional Anaesthesia of the Forelimb


Technique	Quantity (Q) of the local Anaesthetic Needle size	Injection Technique	Region Desensitized	Disadvantages	Picture
<p>Palmar Digital Nerve (PDN) Most common regional nerve block in the forelimb.</p>	<p>Q: 1 – 1.5ml NS: 5/8 inch, 25 gauge</p>	<p>The limb is held up.. The needle is inserted directly over the palpable neurovascular bundle (approximately 1 cm above the collateral cartilage) and directed distally. After which 1-1.5ml of anaesthesia will be administered.</p>	<p>Palmar foot Distal interphalangeal joint Entire sole Skin at the bulbs of the heels.</p>	<p>Blocking too high in the pastern Too much anaesthetic (diffusion decrease specificity)</p>	 <p style="text-align: right;">25 g 5/8" needle 1-1.5 mL</p>


Basi-sesamoid (high palmar digital) Nerve Block	Q: 1.5 to 2 ml NS: 5/8 inch, 25 gauge	The limb is held up. The palmar nerves at the base of the proximal sesamoid bones are anaesthetized. After being palpated 1.5 -2 ml of anaesthesia is deposited directly over the nerves.	Desensitize the palmar/plantar soft tissue structures of the pastern, the PIP joint and all the structures of the foot. Unlikely to desensitize the fetlock	Too much anaesthetic (diffusion decrease specificity) Difficulty in palpating the PD nerves.	
--	--	--	--	---	---

<p>Abaxial Sesamoid Nerve Block</p>	<p>Q: 1.5 to 2 ml NS: 5/8 inch, 25 gauge</p>	<p>The fetlock is held elevated in one hand. Then the palmar nerve is isolated by rolling it away from the artery and vein using the thumb or forefinger. The 2ml of the anaesthetic is injected perineurally. (use small amounts)</p>	<p>Desensitizes: Foot Middle phalanx PIP joint Distopalmar aspects of the proximal phalanx Distal portions of the SDFT and DDFT Distal sesamoidean ligaments Digital annular Ligament.</p>	<p>Too much anaesthetic used causing the desensitization of the fetlock joint or the sesamoid bones. May not completely desensitize the skin over the dorsal aspect of the pastern region.</p>	 <p>25 g 5/8 " needle 1.5 - 2 mL</p>
--	--	--	--	--	---

<p>Low Palmar or Low Four-point Nerve Block</p>	<p>Q: 2-3 ml per site NS: 5/8 inch 25 gauge 1 inch 22 gauge</p>	<p>Normally done with the horse bearing weight on the leg, although it can be done holding the leg. The lateral and medial palmar nerves lie between the suspensory ligament and DDFT 2-3 ml of local anaesthetic is deposited. (best done by injecting 1cm above the distal ends of the splint bones to avoid injecting the DFT sheath) The Medial and lateral palmar metacarpal nerves innervate the deep structures of the fetlock. 2-3ml of anaesthetic is injected around these nerves as they emerge distal to the ends of the 2nd and 4th metacarpal bones.</p>	<p>+ve response to a low 4-point block performed after a -ve response to abaxial sesamoid nerve block, localise the site of the pain causing lameness in to the fetlock.</p>	<p>Inadvertent injection of the fetlock joint or the digital flexor tendon sheath. Proximal diffusion of the anaesthetic that may desensitize the body of the suspensory or other proximal structures. Difficulty in assessing whether the palmar metacarpal nerves are desensitized.</p>	
--	---	--	--	---	--

<p>High Palmar Nerve Block or High Four-point Nerve Block</p>	<p>Q: 3-4ml per site NS: 5/8 inch 25 gauge 1 inch 22 gauge</p>	<p>Analogous of the Low Palmar Nerve block, same nerves are being anaesthetized but in the proximal aspect of the metacarpus just below the carpometacarpal joint. The proximal palmar nerves are anaesthetized in the groove between the suspensory ligament and DDFT. A 25 gauge needle is inserted through the heavy fascia and 3-4ml of anaesthetic is deposited. (done weight bearing) A 22 gauge needle is directed toward the palmar metacarpus along the axial borders of the splint bones until bone is contacted. Withdraw and aspirate the needle to ensure it is not placed in the carpometacarpal joint. (done with limb held in hand)</p>	<p>Desensitize the deep structures of the metacarpus with the exception of the origin of the suspensory ligament.</p>	<p>Inadvertent injection of the distal outpouching of the carpometacarpal joint. Difficulty in assessing whether the palmar metacarpal nerves are desensitized. Swelling of the proximal metacarpal region that may interfere with a subsequent ultrasound evaluation.</p>	 <p>Palmar nerves 25 g 5/8", 2 mL</p> <p>Palmar metacarpal 22 g 1.5", 3-5 mL</p>
--	--	---	---	--	--

Lateral Palmar Nerve Block.	Q:5-8ml NS: 5/8 inch 25 gauge 1 inch 22 gauge	The needle is directed in the palmarolateral-to-dorsomedial direction and must penetrate the 2-3mm thickness of the flexor retinaculum of the carpus. This nerve block maybe performed with the horse standing or with the carpus flexed.	Desensitizes the origin of the suspensory ligament and other deep structures of the palmar metacarpus.	Difficulty in injecting (the needle may not penetrate the fascia below accessory carpal bone. Difficulty n assessing the success of the block.	
------------------------------------	---	---	--	--	---

<p>Ulnar Nerve Block</p>	<p>Q: 10-12ml NS: 1- ½ inch, 20-22 gauge</p>	<p>The ulna nerve is anaesthetized four inches proximal to the accessory carpal bone on the caudal aspect of the forearm. The needle is inserted through the skin and fascia perpendicular to the limb. The anaesthesia is infused both superficially and deeply in this region.</p>	<p>Partially desensitize the accessory carpal bone and surrounding structure, palmar carpal region, carpal canal, proximal metacarpus, superficial digital flexor tendon and suspensory ligament.</p>	<p>Injecting anaesthetic too superficially. Difficulty assessing.</p>	
<p>Median Nerve Block</p>	<p>Q: 10-12ml NS: 1- ½ inch, 20-22 gauge</p>	<p>The needle I walked off the caudal aspect of the radius. The anaesthesia is injected distal to the elbow joint, on the medial aspect of the limb.</p>			