



Nerve and Joint Blocks

Lameness accounts for a large proportion of any equine vet's caseload. The actual cause of lameness may be determined following physical examination if there is an obvious swelling or area of pain, but often further investigation is necessary to localise the problem and identify the cause. Orthopaedic investigations often involve the use of nerve and joint blocks.

Nerve blocks refer to the injection of local anaesthetic around the nerves in your horse's limb. These differ from **joint blocks** where the local anaesthetic is injected directly into a joint or tendon canal.

NERVE BLOCKS

Nerve blocks are the mainstay of most lameness investigations and help localise the source of pain. Local anaesthetic, when injected into specific locations close to nerves, will numb the area below the injection site. If the source of the pain is in this area the patient's lameness will improve or completely disappear. Unless there is an obvious cause of lameness, most vets will start from the lowest nerve block and work up the limb, particularly in the front legs.

Palmar digital/heel block

Local anaesthetic is injected into superficial nerves on the back of the lower pastern, abolishing sensation in most of the foot.

Abaxial sesamoid block

Local anaesthetic is injected around the same nerve as the PDNB but higher up the limb at the back of the fetlock. Abolishes sensation below the fetlock in the foot and pastern.

Low four point block (low six in the hind limb)

Local anaesthetic is injected into two pairs of nerves just above the fetlock, abolishing sensation to the fetlock and below. In the hind limb, two more nerves at the front of the limb must also be injected.

High four point block

Local anaesthetic is injected into four sites just below the carpus (knee) at the back of the limb. This abolishes sensation from the cannon area down to the foot.



PALMAR DIGITAL NERVE BLOCK BEING USED TO DESENSITISE THE BACK OF THE FOOT, FROG, NAVICULAR STRUCTURES AND MOST OF THE SOLE

KEY POINTS

- Nerve blocks involve deposition of local anaesthetic around a nerve.
- In the front leg, most vets start with the lowest nerve block (palmar digital) and work up the limb.
- Nerve blocks tell you approximately where the source of pain originates from. They do not tell you the actual cause of the lameness.
- Nerve blocks are normally followed by x-rays or ultrasound scans as part of a lameness investigation.

JOINT BLOCKS (SYNOVIAL BLOCKS)

This involves the injection of local anaesthetic into specific joints to determine whether any pain is associated with the joint or its supporting structures. Some examples of common joint blocks are listed below.

Coffin joint

Located within the hoof capsule, the coffin joint region is a common site of lameness, particularly in the front limbs.

Fetlock joint

The fetlock is a common site of lameness in young TB racehorses due to cartilage and bone injury, also in the general horse population where arthritis often develops with age.



A NEEDLE PLACED IN THE FETLOCK JOINT PRIOR TO LOCAL ANAESTHETIC INJECTION

Hock joint

Arthritis of the lower hock joints is one of the most common causes of hindlimb lameness.

Stifle joint

The stifle is a large, highly mobile joint with three distinct compartments, lameness associated with this joint is common in all ages of horse.



PLACEMENT OF A NEEDLE INTO THE LARGE COMPARTMENT IN THE STIFLE JOINT

TENDONS SHEATHS AND BURSAE

These are sterile fluid filled structures similar to joints, their job being to protect, support and cushion various tendons and ligaments in the limbs. Numerous injuries of these structures and their contents can result in lameness.

Flexor tendon sheath - Running behind the back of each fetlock down into the foot, this canal contains two tendons and is surrounded by several ligaments, all of which are commonly injured, causing bulging of the canal (windgall) behind the fetlock, along with significant lameness.

Navicular bursa - A small, fluid filled pouch between the navicular bone and tendon within the heel. This structure is an extremely common site of injury, often in association with damage to, or degeneration of, the navicular bone, flexor tendon and several associated supporting ligaments.



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