

# Diagnosing lameness using nerve blocks

## WHAT IS A NERVE BLOCK?

A nerve block involves anaesthesia of a nerve or nerves supplying part of the body to assist diagnosis or treatment of a condition. Nerve blocks are most commonly used to diagnose lameness in horses and can be divided into two broad categories:

- 1 **Articular blocks** where local anaesthetic is injected into a joint, tendon sheath or bursa (small cavity between soft tissues).
- 2 **Regional blocks** where local anaesthetic is placed adjacent to nerves to numb larger areas of a leg.



## WHY DOES MY HORSE NEED ONE?

If your horse is lame, a nerve block can be used to help pinpoint the source of pain. The nerve block numbs a joint or larger area of the leg, so if the horse goes sound after the injection, the vet can say that the source of the problem is in that area or joint. Diagnosis will only be effective if the horse is sufficiently lame for the vet to notice a difference after administering the nerve block.

## SO WHAT WILL THE VET DO?



The vet will undertake an initial assessment of your horse to identify the lame leg and the degree of lameness. This will be done by trotting your horse in a straight line on a hard, level surface or on a lunge in both directions.

The process of nerve blocking will then commence, with the vet typically starting at the lowest point of the leg and working upwards. Once the nerve block has been administered, and the anaesthetic has taken effect (usually 5 to 10 minutes), the horse will be trotted up again.

If there is a significant improvement, the vet will know that the cause of lameness is within the target area of the nerve block and will focus their attention in this area. Conversely, if there is no real improvement, the vet will need to wait until the anaesthetic has worn off (approximately 20 minutes) before applying another nerve block further up the leg. Your horse will then need to be trotted up and assessed again. This whole process may be repeated several times and can be very time consuming.

Once the nerve block (or blocks), has indicated the general area of the problem, the vet can then use other diagnostic techniques to more accurately determine the cause of lameness. This may involve the use of X-rays, ultrasound scans or specialised techniques such as Magnetic Resource Imaging (MRI).



## ARE THERE ANY RISKS ASSOCIATED WITH NERVE BLOCKS?



Risks are low with nerve blocks.

With regional blocks, local anaesthetic is put adjacent to the nerve. The vet will clean the area with a surgical scrub or spirit to reduce the number of bacteria on the skin and risk of infection. Occasionally, a low grade infection may start in the area of injection which will cause some local pain for 24 to 48 hours, but the horse's body will usually sort this out for itself. If not, antibiotics may be required.

The risks are slightly greater with articular blocks as the needle is going into highly sensitive structures such as joints and tendon sheaths. The vet will often prepare this area as if for a surgical operation by clipping and scrubbing the area with a surgical antiseptic. They may also prepare their hands for surgery and may even wear surgical gloves. The assistant will not be allowed to touch the syringe, needle or bottle of anaesthetic unless they are similarly prepared. All these preparations are to reduce the risk of infection.

If numerous nerve blocks are performed, there is also a risk of the leg swelling.

## WILL MY HORSE NEED SEDATING?

Most horses are fairly amenable to nerve blocks but some individuals are not. With articular nerve blocks, horses must remain still due to the sensitive area the needle is going into. In this case, light sedation may be needed to allow the nerve blocks to be placed. However, this can affect the way the horse moves on re-examination of the lameness which can make results more difficult to interpret.

To ensure a safe procedure for both vet and horse, the vet will assess the best way to proceed based on the nature of the lameness and temperament of the horse among other things.

## WHAT SHOULD I DO AFTER THE NERVE BLOCK?



Your vet will probably instruct you to watch your horse for 24 hours after a nerve block procedure for any signs of increased lameness and contact them if you are worried.

Your vet may also advise you to keep your horse stabled after local anaesthetic has been used, so that it has time to wear off. While anaesthetic is still present in the horse's system, the horse will not know precisely where its limb is and it may cause further damage to itself. Your vet will advise you how long to stable the horse for.

If possible, stable bandages should be applied to the leg for the first 12 - 24 hours after the block to minimise development of any swelling. Again, your vet will advise you.