

Client Factsheet #1: Bonescan

What is a bonescan?

“Bonescan” is the name given to nuclear scintigraphy, an advanced imaging technique that looks for areas of increased metabolic activity within your horse’s skeleton. This allows for the vet to diagnose conditions in the early stages, for example, before the issue becomes obvious on a radiograph.

How does a bonescan work?

Bonescan, or scintigraphy, relies on inflamed (sore) areas within bone having an increased metabolic rate. A radioactive compound is used to identify these areas of increased metabolic activity, because they absorb more of the compound than the surrounding healthy bone tissue. All tissue absorbs the radioactive compound but inflamed tissue absorbs more of it than the normal tissue. Once the radioactive compound has been absorbed into the bone, it decays, which can then be detected by a gamma camera. The gamma camera puts together an image, which allows us to identify problem areas as “hot spots” or areas of increased radioactive compound uptake.

When might my horse need a bonescan?

Your vet might recommend a bonescan if your horse is lame on multiple legs, to pinpoint the problem areas. Other situations include horses that cannot tolerate nerve-blocks, horses which are suspected of having hairline fractures that cannot be detected on radiographs, horses that have back or pelvic issues (areas where it is difficult to obtain good-quality radiographs). Rarely, bonescans are used to image the soft tissues, for example if a vascular or kidney issue is suspected. Horses with subtle problems such as poor performance or intermittent lameness are also candidates for scintigraphy.

What will happen when my horse comes in for a bonescan?

On the day of admission, your horse will be examined by a senior vet, so that an assessment can be made of whether it is safe to lunge them, how severely lame they are, and whether any clues about the source of the problem can be identified. Your horse then has a catheter placed, to allow safe administration of medications during the bonescan. The radioactive compound, technetium phosphonates, is given via this catheter. Your horse will have a mild sedation during the bonescan, to stop them being frightened by the gamma camera and to ensure they remain still while the images are collected. Once the scan is over, the catheter is removed. Your horse will remain with us for another 48 hours while the technetium is excreted from their system. During this time, further tests to support the findings from the bonescan can be carried out, e.g. targeted radiographs, medication of joints.

Are there any risks of bonescans?

Bonescans are minimally invasive, meaning they do almost no damage to the horse. There is a small amount of risk with any sedation and any exposure to radiation. This is a very small risk and the team at VEH do all they can to minimize it. The advanced and sensitive nature of the bonescan means the benefits far outweigh the risks to your horse.