

THERMOGRAPHY FOR THE SPORT HORSE

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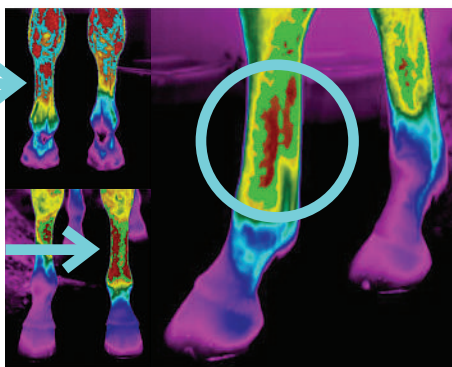
Orthopaedic injuries have always been and are almost certainly going to be the most common reason for lost training days in the Competitive Equine. The basic premise is that early detection of injuries should allow earlier intervention and lead to quicker resolution. Low-grade orthopaedic problems, if unrecognised, can progress over weeks and months into more catastrophic injuries threatening our horse's careers forever.

"Thermography has a wide range of clinical applications. The most common is evaluation of the tendons and ligaments of the limbs with a great capacity for preventative and monitoring applications. It can give the horse owner, trainer and rider peace of mind"

Infrared Thermography or thermal imaging as it is sometimes called, gives us the opportunity to detect early onset of injury when an injury is in the acute (early) stages of inflammation. Infrared Thermography works by detecting the heat generated from inflammation which allows direct visualisation and measurement of areas of concern. When there is an injury in the horse, for example tendon injury or joint pain, acute inflammation occurs, Infrared thermography provides the horse owner and the vet the opportunity to identify and focus on the exact area for further investigation. The skin surface temperature of the equine's limbs or body areas should have symmetrical thermal patterns and temperature measurements therefore any asymmetry observed in these areas would be viewed for analysis. The Initial examination of the thermal pattern would be classed as a qualitative examination and would be carried out by a Licensed Equitherm Thermographer. Once observation of asymmetry in the thermal pattern has been identified, a comparison of the absolute temperatures in the bilateral regions is made giving a quantitative measurement; this stage is normally carried out by a vet who understands Thermography.

Early Detection

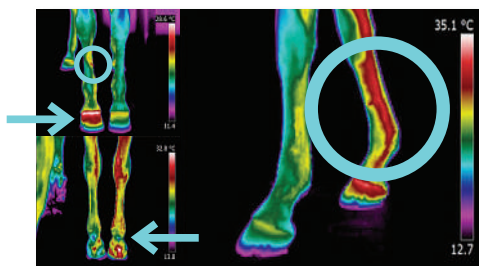
The benefits of Infrared Thermography for the sport horse or leisure horse is that it has been proven to detect damage to structures up to three weeks before the horse shows any clinical signs of lameness. Before a structure, such as a tendon or ligament 'breaks down' it goes through a degree of accumulative damage. This weakens the structure without the horse being actively lame and while training with this micro damage they are much more susceptible to serious injury.



CASE 1: Abnormal thermal patterns over the Tendon identified during a routine scan in a horse with no clinical signs of lameness and subsequently diagnosed as a 30% tear within the superficial flexor tendon.

Monitoring for training and identification of poor performance

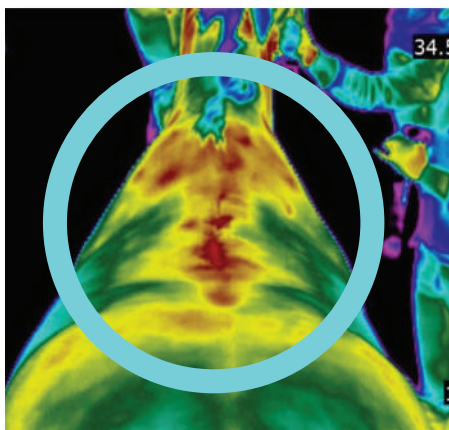
Thermography gives the trainer or rider the opportunity to monitor their horses in training, allowing them to see the micro damage caused by accidental injuries or training associated injuries and therefore preventing further serious injury to these areas. Quite often riders have a feel that something is wrong or that their horses are underperforming for the level of training that they are doing, but on visual assessment by a vet or by themselves cannot identify where the problem lies. Thermography will quickly pick up areas of unusual patterns of heat allowing for identification of the location of the injury and therefore, also with the support of the vet, allow for a swift decision on treatment needed. Equally Thermography can confirm the effects of training methods, old and new, and can be part of an everyday monitoring routine to help achieve peak performance.



CASE 2: Identification of start of a splint and Navicular.

Rehabilitation

Infrared thermography also acts as an aid to monitor our sports horses who are recovering from injury by measuring the reduction of inflammation. How do we know if a horse has fully recovered from injury? How often do our horses go back into training and yet still micro-damage exists? Again by monitoring the damaged area we can visualise the thermal patterns and measure the temperature, when symmetry is present once again, we can feel confident our horses are ready to go back to work.



CASE 3: Kissing spine – operated on and recovering



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Training as an Equitherm 'Licensed Equine Thermographer'

Like any other diagnostic tool Thermography must only ever be applied by a licensed Thermographer or Vet. Equitherm Training is the World's leading trainers in Equine and Veterinary Thermography. Equitherm have training centres based in Canada, Ireland, Warwickshire and Oxfordshire. They are a company who have trained Thermographers from all over the UK, Europe, America, Middle East and Africa and have the most comprehensive programme available to students from the Equine and Veterinary fields. The basis for their success is that their training is based on standardisation and tight protocols which allow for consistent and reliable scans to be performed. Their selected Licensed Thermographers, on completion of their initial training, are put on an 18 month programme within which their work is monitored constantly by Equitherm's team of Equine scientists and vets. Equitherm Training also run alongside this programme, continued professional development days and research days to ensure up-to-date information is always available to Licensees. Dates of future training courses with Equitherm can be found by visiting their website. Their Equitherm Licensed Thermographer's can also be found by accessing the Equitherm Training website www.equithermtraining.com

"The most crucial part of training as an Equine Thermographer is to standardise your work, understanding the artefacts and environmental challenges. Thermography is not about taking pretty pictures it is a technical process that requires the technician to thoroughly understand the processes required and to apply them consistently for successful scanning. At Equitherm Training the focus is on achieving reliable results that can be interpreted by their vets and lead on to successful recovery of the injured equine ensuring longevity in their sport"