Equine Thermography

Benefits of Thermal Imaging

<Prevention>       <Diagnosis>       <Treatment>
What is Equine Thermography & How does it work?

Many experienced horse owners and members of their horse health care teams will often use their hand to sense heat differences on a horse’s body to identify poor blood circulation or inflammation. Although the human touch can be effective, it is not nearly as accurate as a thermal imager for identifying an exact problem or problem location. The hand cannot detect differences in temperature of less than 2-3°. However, a thermal camera can “see” changes within fractions of a degree. The camera displays a visual image of these variations, making it much easier to accurately identify problems even months before they become serious and costly.

Equine Thermography offers an extremely effective, non-contact, non-radiating, diagnostic tool for the management, training, health, lameness assessment, injury prevention and injury rehabilitation of horses. It is a real time feedback tool revealing changes in physiology as they are happening now rather than looking at damage after the fact. Body temperatures are the first indicators to change when good health starts to deteriorate. Abnormal hot or cold areas can indicate inflammation, neurological injury, poor blood flow, or infection.
What areas does Equine Thermography highlight?

Body

- check for a poor fitting saddle
- back related issues
- tooth or jaw problems
- joint and musculo-skeletal problems
- soft tissue problems
- asymmetrical use of the body
- muscle tears, bruises and strains

Lower Legs

- inflammation
- sore shins and knees
- active stress or damage of suspensory ligaments
- tendon stress
- joint stress
- arthritic joints
- formation of splints
- areas with lack of blood or nerve supply

Hooves

- poor circulation in the foot
- balance of the foot and the effects of in-balance on the rest of the limb
- hot foot due to infection or bruising
- area pinpointing of abscess or bruise

Recovery from Injury

- observing how injury is responding to treatment
- observing how an injury is responding to being brought back to full work capacity
Prevention and Underlying Issues

- optimize soundness monitoring
- earliest detection of negative changes
- accurate location of underlying issues
- work and training management
- identifying one-sidedness and favoring sides
- issues which may lead to long term damage

Other Areas of Interest

- de-nerved limbs
- areas which may not yet show external signs of breakdown
- foot discrepancies
- muscle lesions
- old injuries
- assessment of lower limb activity
- other circulation issues
- posture related muscle use
- imbalances in the foot and limbs of young horses
- finding causes of unusual behaviors
Pre-Purchase / Pre-Sale Inspection

Anyone considering the purchase of a horse can benefit from an infrared inspection, even if the history of the horse is known. Thermal imaging provides real time information regarding the horse’s overall condition.

Performance & Competition Horses

As a form of “preventative medicine”, thermography has proven to be extremely valuable during the fitness training of performance and competition horses. Periodic inspections can be used to monitor performance throughout their training schedules. Thermal imaging can identify undue strains being placed upon the horse that can affect its performance or cause serious injury well before it happens. Thermal imaging will assist the trainer and farrier to identify how a horse is landing and if weight is being distributed evenly.

Does your Saddle fit your horse properly?

Are you sure the saddle is a correct fit? Even if the saddle was originally fitted to the horse at the time of purchase, the horse’s body develops and changes through training. As a result, the fit of the saddle can also change.

A thermal image will show the effects of the saddle on the horse’s back as well as the rider’s balance. Use your inspection report with your saddler to ensure your horse receives the best saddle fit.
Non-Specific Lameness / Hoof Problems

Infrared imaging is especially helpful with difficult to detect problems such as non-specific lameness.

The camera is able to accurately locate heat anomalies in the leg and hoof, where excessive heat could indicate a strain or infection. Cooler areas are often an indication of poor blood flow.

Monitoring ongoing Hoof Treatment

A thermal hoof inspection can be a valuable tool for your farrier or veterinarian. Thermal images provide a visual aid for monitoring treatment progress at a much lower cost than other imaging modalities.
How do you prepare for a scan?

Because Equine Thermography is a condition based science, it is crucial that it be performed by a highly trained technician using specific protocols and procedures to ensure the most accurate image results. Below are some guidelines that a horse owner must observe (and any experienced equine thermographer would follow) to obtain the best possible images. If you have any questions, please ask.

Preparing your Horse

- The horse should have all rugs, bandages, etc. removed, preferably 2 hours before the session.
- There should be no preparations on the body; liniments, topical lotions, grooming products, etc.
- The horse should be clean and completely dry, free of any mud, shavings or stable stains.
- No brushing of the horse for one hour before the session. Brushing creates friction which can affect surface heat.
- The horse should be kept away from any direct sunlight for the 2 hour duration prior to imaging.
- Imaging can be done without any lighting although when present, fluorescent lighting (i.e. “cold lighting”) is preferable to incandescent.
- The mane must be clumped up in 'stick up bunches' so that the neck is free from being covered with hair which will help us make a good comparison of the neck on each side.
- The tail can be plaited and/or bandaged.

The Scanning Environment

We want to get as close to a uniform temperature environment as possible with little or no external temperature influences. We should be away from the sun, wind, rain, etc. Ideally this will be an area with a stabilized temperature, free of drafts and hot or cold areas (like sun spots).

Area permitting, the inspection can be carried out in the horse’s stall or any enclosed area. A typical inspection can take up to one hour. Findings are immediate and a complete written report is generally provided within 24 hours.
What do we offer?

Our service is available to horse owners, veterinarians, trainers, farriers, physiotherapists and other equine professionals. We will travel to your premises and provide you with a full imaging survey of your horse, ensuring an optimum viewing environment, to identify anomalies that may warrant further investigation. Our objective is to assist everyone involved with your horse’s health care by providing images showing areas of physiological concern.

Your report from Infrared New England will include both high resolution thermal as well as digital images with supporting comments addressing areas that may indicate a need for further diagnosis.

About “Infrared New England”

Infrared New England is owned and operated by Gerald T. Brady. He holds the highest nationally recognized certification for image thermography. Infrared New England uses only the highest resolution (FLIR P660) infrared cameras.

Gerald understands that when horses are not performing at their optimum level, thermal imaging offers a lower cost advanced alternative to help identify problems in their earliest stages.
For more information regarding our many services in addition to Equine Scans please visit our website at:

www.InfraredNewEngland.com

or call us at

508-728-1099

“See what’s hot and what’s not.”

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