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## THERMAL IMAGING

Infrared imaging, or thermography, is the ability to see the infrared heat emitted from living things (and certain other things such as engines, computers and even a toaster). When viewed through a thermographic camera, a horse looks like your three-year old took his 64 pack of crayons and just barely stayed inside the lines. But what you are really seeing is the subtle change in temperature of different parts of the horse's body.

Heat patterns are very geometric. For instance, the left front fetlock should be the same color (same temperature) as the right front fetlock; the left knee the same as the right knee and so on. When the colors don't match up, it's a signal of a potential problem. Although we automatically think of heat as being an indicator, cold is also a sign that there's something wrong. Coldness means less blood flow to the area, whereas heat usually means inflammation.

Thermography will show you increased blood flow, such as from inflammation or injury, will correlate to an area of increased heat. Inflamed joints, tendons, ligaments and muscles, along with hoof abscesses, will present as bright reds, oranges and yellows. In those areas where circulation is decreased where nerve damage, blood clot or scar tissue has occurred, the image appears in shades of green, blue and purple.

Thermography is a complementary imaging technology that can be used in conjunction with X-ray, ultrasound or scintigraphy. It will:

- Identify early stages of lameness
- Detect early stages of bucked shins and bowed tendons
- Highlight soft tissue injuries and conditions
- Detect joint inflammation
- Identify improper shoeing and saddle fit
- Detect a hoof abscess
- Monitor the recovery process

### The Lameness Scale

Soundness	Obvious Lameness	Complete Failure of 1 or More Limbs
0	2.5	5
		

With the aid of thermography, early detection of lameness in the "Gray Zone" increases the probability that horses compete when they are fit and healthy, preventing costly injuries or incapacity in the near future. This is possible due to the sensitivity of the thermal imaging camera, which is more than an order of magnitude and more sensitive than the human hand.

If you want to know if thermal imaging can be beneficial for your situation, call the office at 540-554-2004 or email us at [give2bute@aol.com](mailto:give2bute@aol.com).