



### **What Is Laser Therapy?**

Laser therapy is the use of specific wavelengths of light (red and near-infrared) to create therapeutic effects. These effects include improved healing time, pain reduction, increased circulation, and decreased swelling.

Laser therapy is a noninvasive, drug-free treatment option. Laser therapy is often used with other forms of therapy, including physical therapy, chiropractic adjustments, massage, soft tissue mobilization, electrotherapy and following surgery. Other healing modalities are complementary and can be used with laser to increase the effectiveness of treatment.

### **Laser Therapeutic Effects**

During each painless treatment, laser energy increases circulation, drawing water, oxygen, and nutrients to the damaged area. This creates an optimal healing environment that reduces inflammation, swelling, muscle spasms, stiffness, and pain. As the injured area returns to normal, function is restored and pain is relieved.

### **Cellular Effects of Laser Therapy**

During laser therapy the infrared laser light interacts with tissues at the cellular level, and metabolic activity increases within the cell, improving the transport of nutrients across the cell membrane. This initiates the increased production of cellular energy (ATP) that leads to a cascade of beneficial effects, increasing cellular function and health.

### **Benefits of Laser Therapy**

Laser therapy can relieve pain, reduce swelling, and increase range of motion. It reduces the formation of scar tissue, promotes accelerated tissue repair and cell growth, and improves vascular and metabolic activity of damaged tissue. Laser therapy stimulates muscle trigger and acupuncture to provide musculoskeletal pain relief and has the ability to optimize muscle action and reduce nerve pain.

### **Clinical Effectiveness**

There are thousands of published studies demonstrating the clinical effectiveness of laser therapy. Among these, there are more than one hundred rigorously controlled, scientific studies that document the effectiveness of laser for many clinical conditions.

### **Laser Treatment Helps Multiple Conditions**

- Osteoarthritis
- Joint Pain
- Edema and Congestion
- Ligament Sprains
- Muscle Strains
- Bite Wounds
- Traumatic Injuries
- Post-Surgical Pain
- Neck and Back Pain
- Hip Dysplasia
- Burns
- Chronic Wounds
- Rehabilitation
- Post-Orthopedic Surgical Recovery

## Frequently Asked Questions

### What Happens During a Laser Treatment?

The operator uses a hand-held probe to apply laser energy to targeted areas. Treatments vary in length, but most conditions require 2 to 8 minutes per site. Your pet may feel just the sensation of the probe moving against the hair coat or skin, and/or a warming or tingling sensation over the treated areas during the treatment. The laser unit makes beeping sounds, lower than normal conversation volume, to indicate laser operation and transitions between phases applying continuous or pulsing energy. For most patients, laser therapy does not require sedation and pets may go home immediately following treatment.

### How Many Treatments Will My Pet Need?

The length and frequency of treatments varies with your individual pet's condition and response. Most patients require several treatments for greatest benefit, although for some patients improvement may be seen after the first visit. Class IV laser therapy treatments are cumulative in nature, and about 80-90% of patients show a positive response to treatment. Some conditions require more intensive therapy to gain a response. Most pets require periodic maintenance treatments to continue to control pain. Your veterinarian will make recommendations tailored to your pet's condition.

### Will My Pet Need to Have Its Coat Shaved for the Treatments?

The healing laser light is absorbed by the pigmentation in dark hair and skin, and may be scattered by the presence of hair in the treatment area. In addition, very dense coats may limit contact of the laser probe with the skin. Your veterinarian may recommend the treatment location be shaved for these reasons and to better define the treatment location for future therapies.

### Is The Radiation from Laser Therapy Safe?

Treatment protocols are designed to provide your pet with a therapeutic, safe dose of laser energy. Friendship takes appropriate precautions and provides specialized eyewear to protect the eyes of the patient, viewer and operator.

The electromagnetic spectrum describes the entire range of radiation from gamma rays to radio waves. All forms of light, including laser light, emit radiation. As with visible light, excessive exposure to laser light can be detrimental. It is widely accepted that laser light poses the greatest risk to the eyes and secondarily, to the skin, of living beings. Laser light is a non-ionizing form of radiation. Radiation that has enough energy to move atoms in a molecule around or cause them to vibrate, but not enough to remove electrons, is referred to as "non-ionizing radiation." Other examples of this kind of radiation are sound waves, visible light, and microwaves.

Alternately, radiation that falls within the "ionizing radiation" range has enough energy to remove tightly bound electrons from atoms, thus creating ions. This is the type of radiation that people usually think of as 'radiation.' Radioactive materials that decay spontaneously produce ionizing radiation, which has sufficient energy to strip away electrons from atoms (creating two charged ions) or to break some chemical bonds. X-rays are ionizing radiation.

