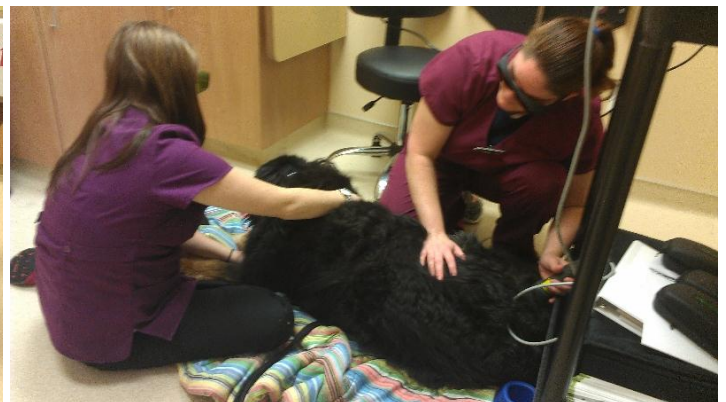




From Arthritic Joints to Inflamed Ears: The Latest Advancement in Veterinary Care

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Credit given to Cutting Edge Laser Technologies



“Remarkably, I noticed small improvements after the very first treatment. Since then, improvements have continued: with less limping, less hesitation when he decides to jump up on the couch/bed, more active including once again climbing up onto snow banks to explore, less pain—I have only given pain medications FOUR times since starting treatments last fall! He just seems happier.” (Owner of arthritic 13-year-old Labrador)

The field of Veterinary Medicine has broken new ground in recent years, utilizing new technology to improve the health and comfort of animal species ranging from dogs and cats to chickens and horses. Conventional Laser therapy has been in use in the human medical field for more than 25 years, and over 3,000 scientific publications test its effectiveness and validity. It has been demonstrated that it is not toxic and it has no side effects. Today, it is used as a monotherapy (stand-alone treatment) or as a complementary therapy along with chiropractics, acupuncture, surgery, and pharmaceuticals.

At Camden Pet Hospital, in Minneapolis, MN, therapeutic laser has improved the comfort and quality of life in many of our canine, feline, and exotic animal species. Many of our senior patients experience chronic pain and inflammation in their

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joints and backs, and the use of monthly laser treatments has reduced (and in some cases eliminated) the need for pain medications like Rimadyl (carprofen). We also use therapeutic laser treatments after all surgical procedures and dental extractions to help reduce pain and inflammation and speed up healing. Overall, we have seen a great response with the addition of laser therapy to our tool box.



Biological Effects of Laser Therapy:

1) Anti-Inflammation: Laser therapy has an anti-edema (anti-swelling) effect as it causes blood vessels to dilate, but also because it activates the lymphatic drainage system (drains swollen areas). As a result, there is a reduction in swelling caused by traumatic injury or inflammation.

2) Anti-Pain (Analgesic): Laser therapy blocks pain transmission by nerve cells to the brain and decreases nerve sensitivity. Also, due to less inflammation, there is less edema and less pain. Additionally, laser energy can help in the production of pain-killing chemicals such as endorphins and enkephalin.

3) Accelerated Tissue Repair and Cell Growth: Photons of light from lasers penetrate deeply into injured tissue and accelerate cellular reproduction and growth. The laser light increases the energy available to the cell so that the cell can take on nutrients faster and get rid of waste products. As a result of exposure to laser light, the cells of tendons, ligaments and muscles are repaired faster.

4) Improved Vascular Activity: Laser light will significantly increase the formation of new capillaries (small blood vessels) in damaged tissue, which speeds up the healing process, closes wounds quickly, and reduces scar tissue.

5) Increases Metabolic Activity: Laser therapy creates higher outputs of specific enzymes, greater oxygen, and food particle loads for blood cells.

6) Trigger points and Acupuncture Points: Laser therapy stimulates muscle trigger points and acupuncture points on a non-invasive basis, providing musculoskeletal pain relief.

7) Reduced Fibrous Tissue Formation: Laser therapy reduces the formation of scar tissue following tissue damage from cuts, scratches, burns or surgery.

8) Improved Nerve Function: Slow recovery of nerve functions in damaged tissue can result in numbness and impaired limbs. Laser light will speed up the process of nerve cell reconnection and increase the amplitude of action potentials to optimize muscle action.

9) Immunoregulation: Laser light has a direct effect on immunity status by stimulation of immunoglobins and lymphocytes. Laser therapy is absorbed by chromophores (molecule enzymes) that react to laser light. The enzyme flavomono-nucleotide is activated and starts the production of ATP (adenosine-tri-phosphate), which is the major carrier of cell energy and the energy source for all chemical reactions in the cells.

10) Faster Wound Healing: Laser light stimulates fibroblast development (fibroblasts are the building blocks of collagen, which is predominant in wound healing) in damaged tissue. Collagen is the essential protein required to replace old tissue or to repair tissue injuries. As a result, laser therapy is effective on open wounds and burns.

“Two of my cats are getting laser treatments for their arthritis, and it is working so well. They think they are young again! (Ages 14 and 15)” (Owner of arthritic cats)

Who Can Benefit from Laser Therapy?

Laser therapy has been used in a wide range of species and ages, including dogs, cats, chickens, rabbits, and other pocket pets. Large animal veterinarians are also using laser therapy in horses. Laser therapy is safe and effective, even in young animals, and can be used to benefit pets in various ways throughout the stages of their lives.

What is Laser Therapy Used For?

The most common indications for therapeutic laser are:

1. Degenerative Joint Disease and Arthritis
2. Musculoskeletal and tendon/ligament injury
3. Post-operative care (after spay/neuter, orthopedic surgery, abdominal surgery, dental extractions, etc.)
4. Intervertebral Disc Disease (post-surgery or as medical treatment)
5. Skin/ear issues (dermatitis, ear infections, lick granulomas, hot spots, pododermatitis, anal gland abscesses)

It is important to first talk to your veterinarian, who will perform a thorough physical examination of your pet and determine if and how laser therapy can be beneficial.

What Happens During a Laser Treatment?

If your veterinarian recommends therapeutic laser treatments for your pet, there are some things you should know. First and foremost, laser therapy is painless and has no known side effects. You, your pet, and the veterinary staff member should wear safety goggles (lovingly known as “doggles” when worn by your pet) to protect the eyes from any accidental exposure to laser light. Your pet will be positioned (often lying down) to allow access to the treatment areas, and after entering the correct settings for your pet and his or her medical issue, the treatment will begin. Depending on the number of treatment points and specific laser settings, most treatments last anywhere from 2 to 10 minutes.

Most patients appear to enjoy the treatments; however, some animals will experience a temporary increase in discomfort immediately following the treatment. These uncommon effects typically subside within 24 hours.

What Can I Expect After the Treatment?

Most patients experience positive results within 1 to 3 treatments, with the average course of treatment being 6 to 12 sessions. Any swelling is greatly reduced and there is a rapid relief of pain. Acute conditions usually subside quickly, typically within one round of treatments, and chronic conditions can be controlled with regular treatments. Initial treatment protocols vary, but chronic conditions often involve 2 to 3 treatments for the first couple of weeks, gradually becoming more spread out. The average patient being treated for chronic issues is eventually maintained with one treatment every 4 to 6 weeks.

The effects of Laser Therapy are cumulative; therefore, you can expect to see improvement as you proceed through your treatment plan. It is critical that once your pet starts, you complete the course of treatments recommended by your doctor or symptoms are likely to reoccur.

Please keep in mind that other treatment options may be recommended for your pet, and consultation with your veterinarian is vital for success. Laser Therapy, while effective for treating many conditions, is not a replacement for surgery or medications when these treatments are indicated.

“[My dog] has responded extraordinarily well to the laser treatments. He is an active, athletic dog but had started exhibiting some weakness in the hips after activity...I started to notice improvements after a few treatments, and after a full course [of 6 treatments], he is going up stairs, jumping onto the bed, etc. without needing help and without displaying discomfort...The laser treatment, along with chiropractic care, has allowed him to resume his active lifestyle and reduced the amount of drug therapy needed to manage soreness and inflammation.” (Owner of arthritic 13-year-old Shiba Inu)



Cutting Edge MLS Laser, <http://www.celasers.com/>

Are There Different Kinds of Lasers?

There are many different manufacturers and types of therapeutic lasers available today. Some alternative terms for therapeutic lasers include cold laser and low-level laser. Surgical lasers are also used in veterinary medicine; however, these lasers are “hot” and are used in place of a scalpel during surgery.

Therapeutic lasers have come a long way in recent years. In the past, the challenge with Laser Therapy has been its inability to treat deeper conditions such as arthritis or bladder inflammation, since it is used with low to medium power (diode lasers). *Continuous Laser* emissions act fast on inflammation, stimulating blood and lymphatic circulation and inducing fast re-absorption of fluids; however, they don't directly treat pain. *Pulsed Laser* emissions, on the other hand, have an immediate effect on pain, since they are able to interfere with the very transmission of the pain impulse to the higher brain centers, but they are less effective at treating inflammation and edema. *MLS (Multiwave Locked System) Therapy* is able to overcome these limitations, since it is based on the characteristic therapeutic properties of a new Laser pulse. This Laser pulse combines and synchronizes emission of continuous and pulsed Laser emissions with different infrared wavelengths. Thanks to this synchronization, the various therapeutic effects – anti-inflammatory and anti-edema of the continuous emission and pain relief of the pulsed emission –not only take place at the same time but also reciprocally reinforce each other. Because of this, MLS therapy is able to guarantee effectiveness and short treatment times when treating numerous musculoskeletal system diseases and when repairing superficial conditions.

What other modalities work with laser therapy?

Depending on what issues are affecting your pet, your veterinarian may recommend other complementary therapies in addition to laser therapy. Chiropractic adjustments and acupuncture treatments are other modalities which work synergistically with laser therapy. Make sure to ask your veterinarian about what options would be best to help your pet.

Laser treatments can be purchased as individual treatments or as package of multiple treatments. If you are interested in learning more about therapeutic laser treatments for your pet, please consult with your veterinarian. You'll be glad you did!

