

## **Class IV Therapy Laser Treatment and Surgical Laser at Niles Animal Hospital**

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We are excited to announce that we have been using our Class IV therapy laser for the treatment of all sorts of disease conditions in our animal patients: dogs, cats, birds, small mammals, and wildlife. Laser therapy is being used worldwide in both people and pets. The application of laser therapy is a powerful tool in providing care through the relief of pain and swelling, as a local and systemic anti-inflammatory mediator, as a superior means of healing wounds or injuries, as a stimulation of the acupuncture points (needleless acupuncture) and as a solution to many persistent dermatological disorders.

### **How the Laser Works**

The laser works by light penetrating deep within the tissues and the photons stimulate the physiological processes at the cellular level. This is termed photostimulation. As the cells absorb this light energy, both the cellular respiratory and metabolic rates increase significantly. Therefore, the physiological effects that these photons have upon the cells is photochemical and not photothermal in nature.

Photobiostimulation allows for an increase in cellular health and energy. Photons are only absorbed by unhealthy cells: they have no effect on normal healthy cells. The impact is that the cells produce more energy (ATP), which leads to normalization of cell function, pain relief, and healing.

With animals that have chronic arthritis and are on anti-inflammatory drugs, such as Rimadyl or Metacam, laser therapy can provide such relief that the dosages of these drugs can be significantly reduced.

### **The Biological Effects of Laser Therapy**

- 1) Relieves Pain
- 2) Reduces Inflammation
- 3) Accelerates Tissue Repair and Cell Growth
- 4) Improves Circulation
- 5) Increases Cellular Metabolic Activity
- 6) Reduces Fibrous Tissue Formation (Scarring)
- 7) Improves Nerve Function
- 8) Accelerates Wound Healing
- 9) Stimulates Immunoregulation (helps the immune system response)
- 10) Stimulates Acupuncture and Trigger Points (provides needleless acupuncture)

### **Conditions Responsive to Laser Therapy**

#### Wound Healing

Surgical Incisions  
Clean Wounds with Abrasions  
Contaminated Wounds  
Burns  
Bite Wounds  
Snakebites

#### Skin Conditions

Acral Lick Dermatitis  
Allergic Dermatitis  
Burns  
Cat Bite Abscess  
Eczema  
Eosinophilic Granuloma - Indolent Ulcer  
Eosinophilic Granuloma - Plaque  
Frostbite

Miliary Dermatitis (Feline)  
Moist Dermatitis (Hot Spots)  
Otitis Externa  
Panniculitis - Diffuse  
Panniculitis - Septal  
Pododermatitis  
Pyoderma  
Pyotraumatic Dermatitis  
Seborrhea

#### Musculoskeletal Disorders

The goal in laser treatment for musculoskeletal conditions is to 1) Reduce pain and inflammation, 2) Restore range of motion, 3) Restore the strength of the tissues, 4) Improve the quality of life.

Laser Assisted Rehabilitation goals are 1) Restore mobility post surgery, 2) Improve function and quality of movement after an injury, 3) Manage acute and chronic pain, 4) Improve quality of life for the geriatric and arthritic patients, 5) Increase strength, range of motion, endurance and performance, 6) Reduction of pain, swelling and complications, 7) Overall increased speed of recovery, 8) Improved and prolonged quality of life.

Laser Assisted Rehabilitation decreases pain, swelling, muscle spasm, atrophy, muscle contracture, and scar tissue. It increases muscle strength, rate of tissue healing, rate of recovery range of motion, and coordination.

#### *Muscle and Ligament Disorders*

Cruciate Ligament Injury and Surgery  
Tendon Injury / Ligament Injury  
Hip Dysplasia  
Elbow Dysplasia  
Disc Disease  
Degenerative Myelopathy

#### *Orthopedic Disorders*

Osteoarthritis  
Hip Dysplasia  
Elbow Dysplasia  
Trauma / Fractures  
Intervertebral Disc Disease  
Degenerative Joint Disease (DJD)  
Post Operative Hip Surgeries (Total Hip Replacement, FHO)

#### *Neurological Disorders*

Back Pain / Neck Pain  
Loss of Motor Control  
Peripheral Nerve Injuries  
Paralysis

#### *Geriatric Disorders*

Muscle Weakness  
Arthritis  
Chronic Neurologic Conditions

#### **Surgical Laser**

With our surgical laser we have greatly expanded our capabilities to provide a wide array of procedures. We are able to perform surgical procedures with minimal tissue trauma and bleeding, such as laser declaws in cats. We are pleased to have the opportunity to provide more and safer surgical options for our patients.