

Diode Laser Usage in Veterinary Surgery

Benefits for Animals

Explanation for Owners

Veterinary laser surgery provides the same benefits to pets that human patients have enjoyed for over thirty years: Less pain, less bleeding, less infection, reduced swelling and discomfort after surgery, and the ability to resume normal activities sooner.

The veterinary laser can perform a wide variety of surgical procedures on cats, dogs, horses, birds, and other animals. It can be used to make unique bloodless surgical incisions as well as to erase unhealthy tissue (e.g. tumours) without the excessive loss of blood typical of conventional scalpel based surgery. The laser seals small blood vessels as it cuts, which significantly simplifies the surgical procedure. The laser ablation is so precise that it can selectively remove only a few cells at a time, and the laser beam seals nerve endings, so patients are much more comfortable after treatment. The laser beam kills any bacteria in its path, and also seals lymph nodes, resulting in less post operative swelling and infection.

Reduced Bleeding:

When making an incision, Diode Lasers cauterise and seal blood vessels up to 1.8mm in diameter. The laser energy facilitates hemostasis and provides the surgeon with a virtually bloodless surgical field.

Reduced Infection:

Diode Lasers act as an antimicrobial/anti-bacterial agent by producing extremely localised high temperatures. As the laser beam penetrates the incision site, the high surface temperature effectively eliminates existing micro-organisms, resulting in a sterile surgical environment. The ultra-violet light produced also has effective anti-bacterial properties.

Reduced Pain:

Diode Lasers seal nerve endings that are severed as it incises through tissue. This dramatically reduces the amount of post-operative pain that an animal feels following surgery.

Reduced Swelling:

Traumatic physical contact between the laser and the surgical region is never established with Diode Laser technology. The beam of infrared laser light penetrates the tissue via the ablation/vaporisation of cells and thoroughly seals the lymphatic vessels within the surgical field. Because the crushing, tearing and bruising of tissue associated traditional surgical methods does not occur with laser surgery, there is a decrease in the post-operative inflammation of incisions.

Extreme Surgical Precision:

Our Diode Laser produce a highly monochromatic, coherent beam of light that is accurately delivered to a point of focus. The accuracy of this focused beam of energy allows for the vaporisation of cells while causing minimal damage to the adjacent healthy surrounding tissues.

Laser-appropriate General Surgical Procedures

Amputations, Anal saculectomy, Castration, Ceremonious adenocarcinoma, Chemodectoma removal, Chronic ulcer debridement and sterilisation, Colorectal tumour debulking or resection, Cranial cruciate ligament rupture debridement, Declaw (feline onychectomy), Cystotomy, Deep mass removal, Dewclaw removal, Everted sacculae resection, Enterotomy, Fibrosarcoma, Graft bed preparation-infected wounds, Granulation tissue shaving, Hemangiopericytoma, Hepatic carcinoma – hepatic lobectomy, Lipoma & Liposarcoma resections, Mast cell tumours, Operculectomy, Penile amputation, Perianal fistulas, Perianal tumours, Perianal urethostomy stricture revisions, Pericardectomy, Rhabdomyoma of flank, Spaying, Subtotal prostatectomy, Tendon sheath tumours hemangiopericytoma, SCC and infiltrating lipoma, Thyroidectomy, Transitional cell carcinoma of bladder, Traumatic wound debridement, Tumour bed ablations, Tumour/mass removal, Urethral prolapse resections, Urinary bladder polyps, Vital pulpotomy, Vaginal Fold Excision, Vaginal tumour excisions - leiomyoma.

Laser-appropriate Dermatology Surgical Procedures

Localised demodex, Acral lick granuloma ablation, Cutaneous masses: skin tags, papillomas, Epibulbar melanoma, Hyperkeratosis of digital pads /nasal planum, Hemostasis, Malignant melanoma, Squamous cell carcinoma removal, Wound management (acute and chronic), Viral papillomas, Pigmented viral plaques, Actinic keratosis, Pinnal tumours, Feline ceruminous cystomatosis, Calcinosis circumscripta, Follicular cysts and tumours, Gingival hyperplasia and epulis, Nodular sebaceous hyperplasia, Plasma cell pododermatitis.

Laser-appropriate Ophthalmic Surgical Procedures

Cherry Eye, Conjunctiva treatment, Distichia, Ectopic cilia, Entropion, Eyelid tumour removal, Hemangioma removal, Keratectomy, Lacrimal Punctotomy for Epiphora, Mast cell tumours, Meibomium Gland Excision, Squamous cell carcinoma removal, Scleral corneal mass removal, Epiphora.

Laser-appropriate ENT and Oral Surgical Procedures

Acanthomastous Epulis, Aural Hemotoma, Bulla curettage, De-barking, Ear canal ablation, Ear canal polyps, Ear crop, Correction of faulty ear carriage, Epulis removal, Everted laryngeal sacculae, Gingival hyperplasia, Gingivectomy/plasty Incisional Biopsy, Laryngeal granuloma, Laryngeal scar removal, Laryngeal web revision, Lymphocytic plasmacytic stomatitis, Nasal Hyperkeratosis, Nasal Planum Resection, Oral mass excision, Osteosarcoma of palate, Partial mandibulctomies, Periodontal flap surgery, Partial maxillectomies, Proliferative otitis - sterilisation and ablation, Ramulas, Salivary gland removal, Salivary mucoceles, Soft palate resection, Squamous cell carcinoma, Stenotic nares, Sublingual tissue folds, Sublingual Sialocele, Tissue Sculpting, Tongue lesions, Tonsillectomy, Throughing for crown impressions, Ventriculochordectomy.

Laser-appropriate Avian and Exotic Surgical Procedures

Adrenal gland removal, Amputation, Anal sac removal, Avian pox lesion removal, Bumblefoot, Canthoplasty for lid deformities, Castration, Caesarian section, Constricted toe syndrome, Diptheroid membrane obstructing, Choanal opening, Eyelid polyp removal, Fibrosarcoma removal, Gonadectomy, Granulation tissue ablation, Histiocytoma of forepaw, Hysterectomy, Lipoma removal, Liver mass removal, Lymph node biopsy, Nasal polyp removal, Ovary ablation, Papilloma removal, Renal adenocarcinoma, Sebaceous adenomas, Skin incisions, Stripping of tendons, Synovial cell sarcoma removal, Traumatic wound debridement, Uterine adenocarcinoma, Vocal fold excision, and Xanthoma removal.

Laser-appropriate Equine Surgical Procedures

Ablation of penile and cervical lesions, Acute Scrotal Hernia Repair, Basal Cell Mastocytoma, Castration, Cryptorchidectomy, Entrapped epiglottis procedure, Ethmoid hematoma, Fibroma/Neurofibroma, Granulation tissue removal, Guttural pouch membrane ablation, Lymphoid polyps, Melanoma, Neoplasia, Palmer digital neurectomy, Proud Flesh, Removal of Hydroceles, Scirrhus cord resection, Sarcoid removal, Squamous Cell Carcinoma, Umbilical hernia repairs.