



DANADA VETERINARY HOSPITAL, P.C.

Platelet Rich Plasma (PRP) and Stem Cell Therapy

Platelet Rich-Plasma:

Platelet Rich Plasma (PRP) is a procedure in which a blood sample is taken from your dog or cat, then filtered to remove inflammatory cells and isolate the platelets. The resulting PRP is rich in anti-inflammatory factors and growth factors. When the PRP is injected into affected areas, it interacts with damaged tissue to decrease pain and inflammation, activate and accelerate healing, and protect existing cells. A proper analogy is that PRP does for injuries what fertilizer and water can do for injured plants. PRP is most commonly used for osteoarthritis, and orthopedic injuries such as cranial cruciate tears. It can also be used topically to stimulate healing of skin wounds, eye ulcers, and gingival disease.

PRP offers natural, non-invasive, non-surgical therapy that can speed up healing and offer sustained pain relief for 1-2 months without medicine. It can be utilized in place of, or in conjunction with surgical and medical management of injuries. It may also help to speed up rehabilitation after injury or orthopedic surgery.

One blood sample can typically yield more plasma than is needed for a single treatment. Extra PRP can be frozen for up to 90 days, meaning that a single sample could be used to provide up to three treatments 6 weeks apart.

The initial blood sample and treatment takes about 2-4 hours. Follow-up treatments using frozen PRP require approximately one hour. Light sedation may be necessary for joint injections.

When is PRP not recommended?

PRP is not recommended for animals with bleeding disorders, auto-immune disease, systemic infections, or malignant tumors.

Stem Cell Therapy:

Stem cells are undifferentiated cells that can turn into a variety of different tissue types when they need to. Stem cells are harvested from a patient's adipose (fat) tissue rather than from embryonic cells. The cells are processed on-site, then combined with PRP (see above) and injected into the joints. When the stem cells interact with inflamed tissue, they are stimulated to become the types of cells that are damaged. They also communicate with other cells in the body to bring healing factors and inflammation relief to the site of injuries.

In short, the PRP portion of the therapy helps with initial pain and inflammation and helps the stem cells get where they need to go. The stem cell portion promotes regeneration of tissue to repair the damaged joints. Using the same analogy as above, if PRP is like adding fertilizer and water, stem cells are like planting new seeds and hiring a gardener.

Cells are injected into the affected joints as well as administered intravenously (via IV catheter). The IV portion can go to areas of inflammation that are not reachable from the surface.

Stem cells are mostly used for osteoarthritis. However, it can also be used as a “Plan B” for cruciate disease when surgery is not an option. It may have additional benefits for chronic degenerative diseases such as kidney disease and pancreatitis, and other inflammatory diseases such as atopic dermatitis, and IVDD but these treatments are considered compassionate use only and require approval from a stem cell advisory board.

Stem cell therapy offers an all-natural, non-medicated way to not only manage pain, but also repair/restore an injured joint. Stem cell harvesting requires a minor surgical procedure to harvest fat from behind the shoulder or from just under the abdominal wall. This procedure does involve anesthesia. Cells are processed on site over a period of 1-2 hours. Then, the patient is lightly sedated again for injection of the cells into the appropriate locations.

Approximately 90% of clients whose pets are treated with stem cell therapy for arthritis report that their pet experiences improved quality of life after the treatment. Typical benefit lasts for 1-2 years following treatment. For cruciate disease, approximately 70% of treated animals can return to a level of activity that their owners feel is acceptable. The best results occur when stem cell therapy is combined with rehab therapy.

Extra cells can also be stored (“Banked”) offsite and retrieved later if a repeat procedure is necessary.

When is stem cell not appropriate?

Stem cells should not be used in patients with malignant tumors as it can stimulate these tumors to grow. It should also not be used, or should be used only as a last resort, for patients with autoimmune disease, blood disorders, or systemic infections. Lastly, patients who are not healthy enough for a 15-minute anesthetic procedure should not undergo stem cell therapy.