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A Client's Guide to Natural Healing

Autologous Conditioned Plasma (ACP)



Healing after an injury involves a well-orchestrated and complex series of events where proteins in the blood have primary roles, promoting effective repair. Many proteins involved in the healing process come from the components of blood called platelets.

Platelets are small, colorless, cell fragments in the blood. They are formed in the bone marrow and are freely passing through the bloodstream in a resting state. However, when an injury occurs, the platelets become activated and start to gather at the injury site to release beneficial proteins called growth factors. This is the beginning of the healing process.

For many years, blood products have been used in different types of therapies. New research and technology have uncovered the beneficial effects of platelets and expanded the application of blood products for use in orthopaedic procedures in people, dogs, and horses.

What is Autologous Conditioned Plasma (ACP)?

Autologous Conditioned Plasma is a specific blood product made by concentrating a patient's own platelets and growth factors in a small volume of plasma (yellow colored fluid portion of blood in which whole blood cells are suspended). ACP can then be used as a concentrated version of the patient's own growth factors to improve signaling and recruitment of cells to an injury site and optimize healing. ACP is one of the platelet-rich plasma (PRP) products, which are being successfully used to assist in the treatment of orthopaedic injuries in human and veterinary medicine.

How does the ACP process work?

The veterinarian or technician will take a blood sample using a needle and a specially designed syringe. The blood then goes through a rapid spinning process that separates and concentrates the platelets and other beneficial growth factors in the plasma portion of the blood. The plasma containing these platelets and growth factors is injected into the injured muscle, tendon, ligament, joint or wound. The entire ACP treatment process is usually done in less than 20 minutes.

What are the Clinical and Surgical Applications of ACP?

Tears, defects, degeneration, or inflammation of muscles, tendons and ligaments can often be treated successfully with ACP. ACP can also be an effective augmentation for surgical repair of these tissues.

ACP has shown significant promise for improving pain relief and function in the treatment of osteoarthritis. Having the potential to provide an autologous (the patient's own platelets and plasma), therapeutic option to help treat this common, debilitating disease is a welcome advance for veterinarians and clients.

Dogs and horses are often affected with wounds that do not heal well for a variety of reasons. ACP provides growth factors that promote healing of these difficult wounds.

ACP has been used for many years in orthopaedic procedures in people, including joint replacement, fracture repair, and joint fusions. ACP has been reported to improve bone and soft tissue healing in these types of cases. In addition, ACP may help prevent excessive blood loss, decrease the risk of infection, enhance wound healing, and reduce pain such that less pain-relieving drugs are required by the patient.

What are the risks associated with this treatment?

ACP uses the patient's own natural healing properties to treat the injury. Side effects utilizing ACP are very uncommon.

