

## **Vivastem™**

Stem cell fluid™ (animal derived product)

For animal use only

NOT for human use

**Caution:** Vivastem® is to be used only by or on the order of a licensed Veterinarian.

**Description:** Vivastem is a natural fluid obtained from healthy animals and is concentrated in factors released by stem cells. The method of obtaining Vivastem® was developed and patented by Vivastem® Laboratories LLC (patent pending). It is administered by injection in the subcutaneous tissue of horses, dogs or cats.

**Indications:** Vivastem® is recommended for the treatment of fractures and non infectious, acute joint injuries (eg arthritis) . Vivastem augments traditional orthopedic treatments including physical therapy. When administered within 4 -7 days following corrective surgery for acute or chronic joint disorders it improves and accelerates functional recovery.

**How supplied and mix:** Vivastem® is supplied as a kit in a freeze-dried form with another similar vial of water for injection to use for reconstituting. 5 cc freeze-dried vial is to be mixed with the 5 cc water for injection (supplied), 2 ½ cc freeze dried vial is to be mixed with the 2 ½ cc water for injection (supplied).

Use after mixing, making sure that all solid particles have dissolved. Once reconstituted use immediately.

### **Directions for use:**

Horse dose : Two 5 cc doses to equal 10 cc ( 10cc for horses over 900 lb): Aseptically reconstitute BOTH of the 5 cc vials of Vivastem powders. Mix one vial 5 cc Vivastem powder to one vial 5 cc water for injection. The mixture should be gently swirled (avoid frothing) then rested for 5 to 10 minutes. Swirl occasionally to be sure all solid particles are in contact with liquid enabling them to dissolve. Once all solid particles are dissolved aseptically draw BOTH 5 cc mixed vials in ONE syringe. The reconstituted Vivastem is a reddish-brown liquid and may be slightly cloudy (this is normal). Scrub area to be injected with disinfectant. Inject using a 18 gauge needle where the neck meets the shoulder subcutaneously in a fanning motion to spread out the liquid. Administering flunixin is suggested at recommended dose to aid in reduction of any possible soreness or edema post Vivastem® injection. Suggested timing of flunixin is day of injection and again in 24 hours if indicated. Light exercise post injection and turn out is found to reduce possible swelling and soreness at injection site.

Large dog dose ( 5 cc for dogs > 10K or 22 lbs in weight): Aseptically reconstitute the 5 cc vial of Vivastem powder. Mix the 5 cc vial of Vivastem powder to one 5 cc vial of water for injection (supplied). The mixture should be gently swirled (avoid frothing) then rested for 5 to 10 minutes. Swirl occasionally to be sure all solid particles are in contact with liquid enabling them to dissolve. Once all solid particles are dissolved aseptically draw into syringe and inject subcutaneously on the top of the rump of the dog.

Small dog and cat dose (2 ½ cc for dogs < 22lb or 10K in weight): Follow large dog mixing directions. Inject subcutaneously on the top of the rump of the dog and in scruff of the cat.

Dosing intervals for dogs and cats: In acute cases use two doses 14 to 30 days apart as need indicates. A third treatment may be indicated 8-12 weeks post second injection (as in ruptured cranial cruciate ligament) Subsequent doses may be given every 3-6 months as indicated. In milder cases only one dose may be needed.

In chronic indication (eg arthritis) dosing intervals can be 3-6 months in severe cases and 6-12 months in mild cases.

Contact veterinary support for specific recommendations on treatments of other orthopedic indications ([contact@vivastem.com](mailto:contact@vivastem.com)).

### **Allergic reactions:**

Horses: It is rare to see allergic reactions in the horse. In the rare case if it occurs it is in the form of edema. Exercise is helpful to reduce edema and NSAID or dexamethasone can be used for treatment.

Dogs: Delayed reactions in the form of facial swelling/edema, Urticaria and Pruritis can be observed. In most cases if it occurs it is 4-6 hours post injection. Rarely a localized reaction can occur 7-10 days post injection in the form of a sterile abscess. If abscess occurs it should be drained and patient placed on preventative antibiotics. Mature or debilitated patients could experience a 24-72 hours of lethargy and poor appetite (called Healing Crisis because it is associated with better healing) does not require intervention and will resolve on its own.

It is strongly recommended that the dog be pre-medicated with diphenhydramine at 2-2/kg IM before injection and then followed by oral diphenhydramine starting 4 hours post injection and continued every 6-8 hours for 48 hours.

Cats: Nausea or emesis is common which resolves without active intervention. Mild discomfort for 1-2 hours post injection has also been reported. It is strongly recommended that the cat be pre-medicated with one time dose of diphenhydramine at 2.2mg/kg IM before injection and with an antiemetic.

**Contraindications:** There are no known contraindications

**Side effects:** None observed

**Warning:** Not for use in humans

**Storage:** Vivastem™ kit should be kept refrigerated where it will remain stable for up to 2 years. Once reconstituted the product is stable for only 24 hours if refrigerated.