



## ACCES Recommended Cryoprecipitate Administration Protocol

Cryoprecipitate is a precipitate of fresh frozen plasma, and is enriched in clotting factors such as Factor VIII and von Willebrand's factor. Cryoprecipitate (or cryo) is a blood product that is especially useful for patients who are hemophiliacs, have von Willebrand's disease, low fibrinogen levels, or bleeding from excessive anticoagulation. It can be given repeatedly, so multiple transfusions of clotting factors are possible without the high volumes needed for a similar amount of plasma. Cryoprecipitate can also be given as a preventative measure before doing surgery on a dog that is at higher risk for bleeding due to a disease such as von Willebrand's.

The initial dose of cryoprecipitate is 1 unit/10kg, so multiple units of cryoprecipitate are usually needed for one patient. Each ACCES unit is made from a 240 mL bag of fresh frozen plasma. If it is known ahead of time that the patient will be given cryoprecipitate, it is best to know their blood type and have other blood products available in case of emergency. All ACCES cryoprecipitate units are made from donors who are the universal blood type, DEA 1.1, 3, 5, and 7 negative.

### To store cryoprecipitate:

Cryo is only viable for one year after the date the plasma from which it was made was originally donated. Do not use after the expiration date. Please store in the freezer, at zero degrees Fahrenheit.

### To administer cryoprecipitate:

- Allow units to thaw to room temperature slowly. They can be thawed by taking out of the freezer and set on the counter. A warm water bath, not to exceed 98 degrees Fahrenheit is also acceptable. **DO NOT** put the cryoprecipitate in the microwave to thaw! Please allow the units to reach room temperature before proceeding; no frozen crystals should remain in the bag.

- If more than one unit will be used for the recipient, it is necessary to first combine the units by washing them into one bag before transfusing. This ensures that the vast majority of the clotting factors are transfused into the patient. This is done by drawing up one unit of cryoprecipitate in a 60 ml syringe, then flushing it into the second unit. Wash the bag by gently rolling it around in your hands, then draw both units out and flush them into the third bag and repeat. When all the units have been combined, flush them into the first bag and gently roll around. Hemonate spikes are available through the ACCES blood bank to ease this process if desired.

- It is preferable to administer the cryoprecipitate as soon after it has thawed as possible. If being given prior to surgery on an animal that is at risk for bleeding out, it is most beneficial if given quickly. The entire transfusion must be given within four hours of thawing the cryo. A baseline TPR, and one every 15 minutes during the first hour of the transfusion should be monitored, and at least once an hour following. The animal should also be closely monitored for any signs of a transfusion reaction.

- The cryoprecipitate, like any blood product, should be put on a filtered administration set before administering. These are available through ACCES if needed.

- Cryoprecipitate only affords four hours of protection from when it was given, so if an animal is post-operative, strict confinement is recommended for 4-5 days after surgery.

- **If you have any questions, please feel free to contact ACCES at any time.**

### *References:*

Jane Wardrop, DVM. Washington State University, personal communication.

Day, Michael, Andrew Mackin, and Janet Littlewood. Manual of Canine and Feline Haematology and Transfusion Medicine British Small Animal Veterinary Association, 2000.

### Washing Process:

