

**Stoney Creek Veterinary Hospital
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Doggie Blood Donors...Are They the Right Type?

Through natural disasters, wars and even terrorist attacks, victims have always counted on blood banks to provide these lifesaving fluids. Countless human lives have been saved, but what about our pets? If your dog needs blood, is your veterinarian prepared? Will your cat need a "kitty blood drive"?

Colby didn't appear nervous at all. He remained still as the nurse stuck a needle into his vein and continued to calmly lie there as his blood flowed into the collection bag. It was as if he knew his donation could potentially save a life. When his contribution was complete, the nurse helped him off the table and Colby ran to his owner, tail wagging the whole way!

Historically, Colby's gift of life would be used at his own veterinarian's office, likely to save a dog who suffered a severe traumatic accident. Many veterinarians kept a clinic cat or used their own dogs for blood transfusions. But now, Colby's blood could make it across town or even across country.

Companies like the Animal Blood Bank (www.animalbloodbank.com) in Dixon, California now warehouse critically needed blood products for dogs, cats, and even livestock. These services allow veterinarians access to critically needed blood without the need to stockpile it in their hospitals. The demand for blood products for our pets has continually increased as more owners consider life-saving measures for critically ill or injured pets.

Additionally, since some blood products have short shelf lives, busy animal doctors don't have to worry about expired product when an emergency arrives. Finally, these companies can help insure that your pet receives the right blood type and help avoid any serious transfusion reaction.

Like humans, individual dogs and cats have different blood types. For our feline friends, it is pretty straightforward. Most cats are type A with a small percentage type B and a very few cats are the rare type AB.

Severe transfusion reactions can occur especially if type A blood is given to a type B cat. The anti-A antibodies will destroy the donated blood, usually within hours and death of the cat is the usual result.

Certain cat breeds are more likely to have type B blood than others. Whereas almost no Siamese cats have type B blood, 20-45% of Cornish or Devon Rex cats could exhibit this blood type. Bengals, and Birman are breeds that may show the AB type.

Dogs, on the other hand, are a little more complex. To date, more than a dozen blood group systems have been identified. The naming of blood types was so confusing that

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the International Society of Animal Genetics stepped in and standardized the nomenclature. Dog blood types are now categorized by the Dog Erythrocyte Antigen (DEA) system. Erythrocyte is the medical term for red blood cell.

One group that appears to be problematic is the DEA 1.1 group. This blood type is important because a dog who receives DEA 1.1 positive blood will produce a strong antibody response to the blood. About half of the dogs in North America are DEA 1.1 positive. Although an initial blood transfusion might go smoothly, any subsequent transfusions this dog may need could result in a severe reaction and destruction of the dog's blood cells.

To help provide better care, blood banks now offer a variety of blood products tested to accurately identify the animal's blood type. This service helps to preclude any potential mismatched blood, but is it always enough?

Sadly, the answer is no. Beyond just typing, any potential blood from a donor should also undergo a major and minor blood cross match (BCM) prior to any transfusion. Because of the unknown history of many pets and the expense and difficulty of fully typing the blood, some donors could cause severe reactions and even death if their blood is used. In cross matching, the recipient's plasma is incubated with the red blood cells of the donor (major cross match) and then the donor's plasma is incubated with the recipient's red cells (minor cross). If any clumping of blood cells is seen, especially in the major cross match, the recipient is at risk for a severe reaction and the donor's blood shouldn't be used.

While these protocols of blood typing and cross matching reflect the highest standards in veterinary care, some pet owners could be concerned about the costs. A typical single unit of canine packed red cells costs in excess of \$150 and large dogs might need 4 or 5 units before they are stable.

Although this might seem pricey, an accurate "type and cross match" actually prevents many potential reactions. In turn, this provides good piece of mind to veterinarians and pet owners and a greater chance of success for the patient!

Like Colby who was mentioned above, your pet could be a hero as well. Ask your veterinarian about animal blood drives in your area and the requirements for donors. Your pet's gift could help another family keep their pet a little while longer!