

ACCES for Pet Health

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Yes, Dogs and Cats DO Donate Blood

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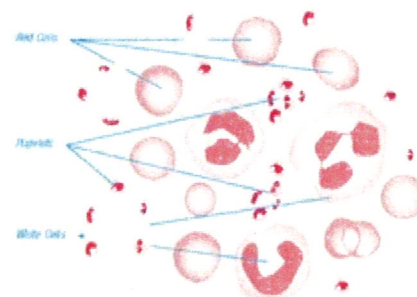


One thing that surprises many people when I talk about our hospital is the fact that we run a community dog and cat blood donor program and the fact that dogs and cats *need* and *can* receive transfusions. Dogs and cats are subject to many of the same injuries and diseases as people and thus blood products are an important treatment, especially in the emergency unit and in our ICU.

Blood is composed of three main parts: Red blood cells, plasma, and platelets. The main

job of red blood cells is to carry oxygen from your lungs in your blood stream to all the cells of your body. Without oxygen, your cells cannot perform their jobs well and with prolonged lack of oxygen, cells will die.

Platelets are small particles in your blood that are crucial to help plug holes and stop bleeding. Without platelets, you can bruise more easily than normal and even spontaneously bleed. Plasma is the protein component of your blood. Your blood proteins help maintain your fluid balance (albumin), help fight infection (globulins), and are important for controlling the way your body makes and destroys clots. Each of these components can be given together in a whole blood transfusion or the blood can be separated and only one of the components given.



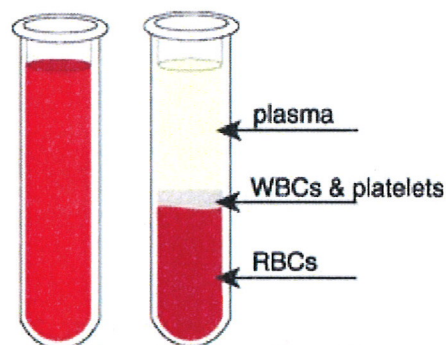
Pet blood contains many parts, just like human blood.

In most dogs, 35-40% of the blood is composed of red blood cells. This percent is known as the packed cell volume, or PCV. The lack of red blood cells, or a low PCV, is called anemia. When either dogs or people are anemic, they tire more easily and sometimes feel

out of breath. Dogs and people can become anemic for three main reasons:

- 1) Blood loss such as after some type of injury or occasionally from internal bleeding
- 2) Destruction of red blood cells. This happens when your blood is infected by a blood parasite but can also happen with some immune diseases and in some types of cancer.
- 3) Your bone marrow is not making new red blood cells. This can also happen with some types of cancers, with kidney disease, and with some types of immune problems.

We normally recommend a red blood cell transfusion when the PCV falls below 15-20%. It is amazing how much stronger an animal feels once its PCV is closer to normal after a transfusion.



Pet blood can be separated into different components. These components can be used separately as needed.

Plasma transfusions are given mostly when animals are not clotting their blood normally. Some animals are born with inadequate clotting proteins. Two common diseases are von Willebrands disease and Hemophilia. Animals with either of these diseases need to have the clotting proteins replaced before they can have any type of surgery, or they could

bleed severely. Unfortunately, we sometimes don't find out the animal has a clotting problem until they bleed excessively during a spay, neuter or dental cleaning. In these cases, a plasma transfusion can often help to get the bleeding to stop. The other common time we give plasma to correct the bleeding that occurs if an animal eats rat poison. The most common type of rat poison interferes with the body's ability to clot. It takes several days for the poison to work but then animals can bleed spontaneously. Plasma transfusions are life saving in these situations.



Rat bait poisoning is a common cause for transfusions in ER hospitals, as pets often like to ingest it due to its color and taste.

Platelet transfusions are more difficult as platelets die if they are put in the refrigerator or freezer and must be in motion constantly to remain functional. However, in some situations, a platelet transfusion can be lifesaving.

We currently administer about 300 transfusions a year and each year publish a calendar with our success stories. Recently, we had a small dog who presented for spontaneously bleeding due to an immune problem affecting its platelets. The dog bled so severely shortly after it was admitted that it collapsed and was near death. We were able to give the dog a whole blood transfusion from one of our donors and the dog was much more stable within a few hours. We were able to get the immune system problem treated and the dog is at home doing well.

Our ability to have blood available to give these transfusions is based on our blood donor program. Next week, I'll talk about our program.

Posted by [Christina Ryan](#) at March 30, 2009 12:00 a.m.

· [Return to Yes, Dogs and Cats DO Donate Blood](#)