

# “Transfusion Medicine: A General Overview”

*DID YOU KNOW?*

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Transfusion therapy involves the safe and effective replacement of blood and blood components in order to support critically ill patients. There are many different veterinary blood products available today including fresh whole blood, packed red blood cells, fresh frozen plasma, frozen plasma, canine albumin and Oxyglobin. The transfusion of blood products or whole blood is warranted in a variety of clinical situations including acute or chronic anemia, coagulopathies, hypoproteinemia, and less frequently thrombocytopenia and thrombopathia. In deciding when and which blood product to use, it is important to consider the underlying disease process, the cardiovascular status of your patient, and prognosis.

## **General Administration Tips**

Use aseptic technique when handling blood products and the patient. Blood products have the potential to be an ideal medium for bacterial growth. Administration should occur within 4-6 hours of collection or thawing to decrease the incidence of bacterial contamination and retain in vivo efficacy of coagulation factors if applicable. Never add calcium containing fluids such as Lactated Ringer's or Dextrose solutions to any blood product in order to avoid citrate toxicity. Always use a filter when administering blood products. Initially start transfusing slowly while closely monitoring for reactions. Be careful to avoid volume overload, especially in patients with concurrent cardiac disease or renal failure. Transfusion patients should be blood typed, and cross matching your recipient with donor blood is recommended when a blood product has been administered previously.

<b>Blood Components</b>	<b>Products Delivered</b>	<b>Indications</b>
Fresh Whole Blood	Red blood cells Some platelets Clotting factors Plasma protein	Massive blood loss; a need for clotting factors (von Willebrand disease; DIC; liver disease, anticoagulant rodenticide toxicity; hemophilia A; other factor deficiencies); oncotic support
Packed Red Blood Cells (pRBCs)	RBCs, some plasma protein and clotting factors, some Platelets (if less than 72 hours old)	Anemic patient in order to improve oxygen delivery
Fresh Frozen Plasma (FFP)	Plasma proteins Clotting factors	Hypoproteinemia, oncotic support, and/or coagulopathic patient
Frozen Plasma (includes >1 year old fresh frozen plasma)	Plasma protein Clotting factors II, VII, IX and X	Hypovolemia, hypoproteinemia, anticoagulant rodenticide toxicity and hemophilia B
Canine Albumin	Albumin	Hypoalbuminemia Oncotic Support
Oxyglobin	Hemoglobin (bovine origin) in a modified lactated ringers solution	Used to improve oxygen delivery and provide oncotic support

**If we can help you with your cases don't hesitate to call 24/7!!**

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