

Thrombocytopenia in Dogs

What is thrombocytopenia?

Thrombocytopenia is a decrease in the number of blood platelets or *thrombocytes* circulating in the blood.

What are platelets?

Platelets are fragments of cytoplasm from cells called *megakaryocytes* that are produced in the bone marrow. Platelets clump together to seal broken or leaking blood vessels and prevent blood loss. They are an important factor in the blood clotting mechanism, and thrombocytopenia can lead to spontaneous bleeding or bruising.

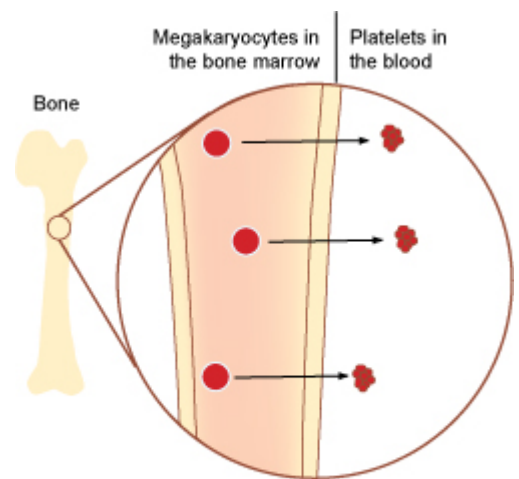
What causes thrombocytopenia?

Any severe or prolonged blood loss, increased internal destruction of platelets, or impaired bone marrow production can lead to short-term (acute) or longer term (chronic) deficiency of platelets.

What diseases or conditions are associated with thrombocytopenia?

"Many severe diseases have thrombocytopenia as one component of the condition."

Many severe diseases have thrombocytopenia as one component of the condition. For example, certain infections, neoplasia (cancer), immune system disorders, and pancreatitis can result in thrombocytopenia, as can drug therapies such as some anti-cancer treatments.



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How common is thrombocytopenia?

Thrombocytopenia is quite common. Some surveys have shown as many as 5% of all dogs admitted to veterinary hospitals have a low platelet count.

How is thrombocytopenia diagnosed?

"This condition is easily diagnosed with a simple blood test."

This condition is easily diagnosed with a simple blood test. Platelet counts are often performed in conjunction with a complete blood cell count (CBC). Platelet counts of less than 20,000 to 30,000 per microliter of blood (normal platelet counts are 175,000 – 500,000) make spontaneous hemorrhage likely. Additional diagnostic tests are used to investigate the underlying causes of the problem.

How is thrombocytopenia treated?

If blood loss is acute or sudden, a blood transfusion may be required to stabilize the patient. Usually, other treatments are aimed at the underlying causes of the problem.

Can there be bleeding disorders with normal numbers of platelets?

Yes, if platelet function is impaired. This can be a side effect of a number of drugs including some antibiotics. There are inherited platelet defects such as *von Willebrand's Disease* (see separate handout on this topic), that are common in certain breeds of dogs, especially Doberman pinschers. Congenital platelet defects also occur in Otterhounds, Great Pyrenees, American Cocker Spaniels and Basset Hounds. Diagnosis requires tests of platelet function. There are no specific treatments other than transfusions as needed.

This client information sheet is based on material written by: Ernest Ward, DVM

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