

PK (Pyruvate Kinase) Deficiency

courtesy of Animal Info Publications

Author: Rae Joy

What is PK (Pyruvate Kinase) Deficiency

This is a type of anaemia - also known as congenital haemolytic anaemia. PK is an enzyme that is essential for the maintenance of healthy red blood cells. A deficiency of PK is a hereditary problem that causes a shortened life span of red blood cells and low numbers due to their early destruction. The Beagle is one of 4 breeds in which this disease can occur, however it occurs most commonly in the West Highland White Terrier and the Basenji. (CHID database)



What are the signs or symptoms?

Anaemic dogs appear to be very lethargic, weak with rapid breathing and a faster than normal heart rate. The mucus membranes inside the mouth will appear paler than normal. Because PK deficiency appears in dogs from 4 months to 1 year of age the lethargy and weakness should be quite noticeable. It is also associated with bone and liver problems that will usually cause death by 4 years of age.

How is it diagnosed?

The disease is diagnosed by a blood test. Your veterinarian will determine the need for the blood test based on the clinical signs.

How is it treated?

Unfortunately there is no treatment for this disease. However it is easily prevented by responsible breeding.

How can you avoid buying a dog with PK deficiency?

Dogs that have been identified as carriers of this disease or as affected should not be allowed to breed. There is genetic testing available which can be done at any age to determine a dogs status for PK deficiency. However, only PennGenn currently provide DNA testing for the disease in Beagles.