



Erythrocyte Pyruvate Kinase Deficiency (PK Deficiency) in Felines

Introduction

Erythrocyte Pyruvate Kinase Deficiency (PK Deficiency) is an inherited hemolytic anemia that occurs in Abyssinian, Somali and some domestic shorthair cats. The deficiency of this regulatory enzyme causes an instability of red blood cells which leads to anemia. The anemia is intermittent, the age of onset is variable and clinical signs are also variable. Symptoms of this anemia can include: severe lethargy, weakness, weight loss, jaundice, and abdominal enlargement. This condition is inherited as an autosomal recessive.

The VGL offers a DNA test for PK deficiency to assist owners and breeders in identifying affected and carrier cats. The test uses DNA collected from buccal swabs avoiding invasive blood collection. Breeders can use this test as a tool to avoid breeding carriers together which would produce 25% affected offspring.

PK Deficiency results are reported as:

Test Result	PK deficiency status
N/N	no copies of PK deficiency, cat is normal
N/K	1 copy of PK deficiency, cat is normal but is a carrier.
K/K	2 copies of PK deficiency, cat is or will be affected. Severity of symptoms cannot be predicted.