

# Inherited Disorders in Cats

92% of the UK cat population are British Shorthair or crossbred but pedigrees are becoming more and more fashionable with the result that the incidence of inherited disorders are also on the increase. For that reason, both breeders and pet owners need practical advice on the selection of breeding stock and domestic pets. The process is by no means simple because the types of inheritance are variable

and therefore the methods of detection need to be selected according to breed and associated disorders.

## Breed Predisposition to Disorders

The number of breeds are endless and so too are known disorders. The most common disorders associated with popular breeds and breed types are shown in Table 1.

As a simple rule, any cat that is the product of active selection for extreme or unusual physical traits within the breed or breed type is more likely to suffer from genetic disorder and this applies equally to crossbreds and pure breeds. The Burmese Head Defect, Scottish Fold and Manx Syndrome are classic examples. White coated, blue eyed cats of all breeds are prone to inherited deafness

including the British Shorthair.

It is evident from the data that some breeds do appear to be more prone to inherited disorders than others but readers should remember that the more popular the breed, the more they are reported to veterinary surgeons and the organisations that monitor them. A long list of potential disorders should not deter you from having the cat that you love it simply means that you need to select carefully the breeder and ensure that you get the information you need before you purchase.

Responsible breeders will use registration, recording and strict breed selection criteria to reduce the incidence of serious diseases along with DNA testing to ensure that they only breed from healthy individuals that do not carry the defective genes.

## The Nature of the Disorders and Means of Control

Inherited disorders can be classified according to the severity of the condition and the stage of maturity that they emerge:

- 1. Diseases that cause early mortality**
- 2. Diseases that are progressive and cause suffering &/or death in later life**
- 3. Diseases that can be managed with veterinary intervention**
- 4. Diseases that can be managed at home with veterinary advice**

Category 1 is clearly of major concern to the breeder and urgent refinement of the breeding programmes being implemented are required to reduce and hopefully eradicate these disorders from the breed. If the gene is a dominant one, the disease is self-limiting because

**Table 1: Breed Predisposition to Disorders**

TOP 10 BREEDS	INHERITED DISORDERS	NATURE OF THE DISORDERS
British Shorthair (crossbred)	Gangliosidosis Mucopolysaccharidosis Polycystic kidney disease Polydactyl cats Inherited deafness	Nerve disorder Enzyme deficiency Kidney disorder/failure Extra toes Deafness
Bengal	Burmese Flat Chest Hypokalaemia  Polycystic kidney disease Rod cone degeneration	Deformed rib cage & spine Low Potassium leading to muscle weakness Kidney disorder/failure Gradual blindness
Persian	Adenocarcinoma Alpha mannosidosis  Polycystic kidney disease Rod cone degeneration Umbilical hernia	Intestinal cancer Enzyme deficiency causing serious multiple organ failure & dementia Kidney disorder/failure Gradual blindness
Ragdoll	Hypertrophic cardiomyopathy	Heart disease affecting blood vessels & heart valves
Sphynx	Hypertrophic cardiomyopathy	Heart disease affecting blood vessels & heart valves
Maine Coon	Hypertrophic cardiomyopathy Spinal Muscular dystrophy	Heart disease affecting blood vessels & heart valves Progressive muscle wasting
Norwegian Forest	Glycogen storage disease (type IV) Hypertrophic cardiomyopathy	Stillbirths or premature deaths Heart disease affecting blood vessels & heart valves
Burmese	Burmese Flat Chest Head Defect  Hypokalaemia  Polycystic kidney disease	Deformed rib cage & spine Malformation of the head & early death Low Potassium leading to muscle weakness Kidney disorder/failure
Siamese	Asthma & allergy Gangliosidosis Mediastinal lymphoma Mucopolysaccharidosis  Niemann-Pick Disease  Pyloric stenosis  Rod cone degeneration Umbilical hernia	Allergic reactions Nerve disorder Feline leukaemia Stunted growth & skeletal abnormalities; enlarged liver Tremors of the limbs & head; lack of balance Narrowing of the tract between the stomach & the gut Progressive blindness
Oriental cat	Flat Chest Progressive retinal atrophy	Deformed rib cage & spine Progressive blindness

Source: International Cat Care, GCCF and Veterinary Cardiovascular Society



A broad head, long tail, well sprung ribs & a leg at each corner means a cat is fit for life!