



Registered charity no: 209642

Your Cat

POLYCYSTIC KIDNEY DISEASE (PKD)



The Animal *Health* Trust is an internationally recognised centre of excellence in the field of veterinary medicine.

It has pioneered many breakthroughs in relation to improving the prevention, diagnosis and treatment of animal disease and injury and is entirely dedicated to improving the health and welfare of cats, dogs and horses.

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Telephone:

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Email: fundraising@aht.org.uk

Visit our website: www.aht.org.uk

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This leaflet has been produced collaboratively with the Feline Advisory Bureau.

The Feline Advisory Bureau is a charity dedicated to the health and welfare of cats.

For further information please log-on to:
www.fabcats.org





Your Cat &

POLYCYSTIC KIDNEY DISEASE (PKD)



Animal **Health** Trust
the science behind animal welfare

Your Cat &

POLYCYSTIC KIDNEY DISEASE (PKD) IN CATS

What is polycystic kidney disease?

Polycystic kidney disease (PKD) is an inherited condition that causes multiple cysts (pockets of fluid) to form in the kidneys. These cysts are present from birth, but are initially very small or microscopic. With time they gradually enlarge and may eventually cause severe disruption, leading to kidney failure. As the cysts grow quite slowly, most cats will not develop kidney failure until around seven or eight years of age. However, in some cats, the disease progresses quicker and kidney failure will occur at a much younger age; whereas in others it progresses more slowly.

How common is PKD in cats and can it be controlled?

Unfortunately, because it is inherited, PKD has now become common in some cat breeds. Persians and Exotic Shorthairs have the highest frequency of problems and studies from around the world have shown that, in these breeds, the disease affects around one in three cats. Other breeds that have used Persian bloodlines in their development (and breeds such as British Shorthairs that have allowed out-crossing to Persian cats) may also have a proportion of affected cats, but in unrelated breeds it is an extremely rare condition. Many breeders of Persians and other cats are now

aware of this problem and are aiming to avoid breeding from affected cats. The Feline Advisory Bureau (a charity dedicated to promoting cat welfare) has set up a UK screening programme (FAB PKD Scheme) to identify affected cats and to allow selective breeding (see below).

How is PKD inherited?

PKD is believed to be the result of a single, so-called 'autosomal dominant' gene abnormality. This means that:

- Every cat with the abnormal gene will have PKD; there are no unaffected carriers of the gene.
- Every breeding cat with PKD will pass the disease on to a proportion of its kittens, even if it is mated with an unaffected cat.

All genes are inherited in pairs (two copies), but it appears that in cats where both copies of the PKD gene are abnormal, severe disease occurs resulting in death of the affected kitten before birth. All affected cats are therefore considered to have one normal copy of the gene and one abnormal gene ('heterozygous'). Because the abnormal gene is 'dominant', even though there is only one copy of it, it still results in the development of disease.



Why has PKD become so common?

Because PKD doesn't usually cause kidney failure until quite late in life, affected cats may have been used to breed a large number of litters of kittens before the disease is recognised.

Can PKD be cured?

Unfortunately no treatment can prevent the development of kidney failure in PKD cats. Once kidney failure develops, this can be managed to improve the quality of life for affected cats, but the disease will inevitably progress as the cysts enlarge.

How can cats be diagnosed and what can be done about PKD?

All cats that carry the abnormal gene are affected with PKD, and it is possible to identify affected cats before they reach breeding age and thus have the option of having them neutered and not breeding from them. Affected cats can either be detected through ultrasound scanning of their kidneys (a simple and safe procedure which requires no anaesthetic), or through a blood test or cheek swab to detect the presence of the abnormal gene. Accurate results of any test are extremely important and the FAB PKD Screening Scheme involves a panel of approved, highly-qualified veterinary ultrasonographers who are able to perform



kidney scans accurately and can issue a FAB-approved certificate stating the result of the scan for that particular cat. The gene test is available from a number of laboratories including the Animal Health Trust and the Langford Feline Diagnostic Service in the UK. If requested, results of these tests can also be passed on to the FAB. The FAB PKD Scheme includes a register of cats that are known to have tested negative for the disease and cats on that scheme have to be identifiable with a microchip. Further details of the scheme are available from the FAB web site (www.fabcats.org). Blood samples or cheek swabs for gene testing can be collected and submitted by your veterinary surgeon. Details of the submission process are available on the AHT website at www.aht.org.uk