



Polydipsia in Dogs and Cats (Increased drinking) Fact Sheet

When a pet starts drinking more than usual, there may be a serious underlying disease.

What is the normal amount for a dog or cat to drink?

Textbooks reference normal water intake for dogs as 20-70 ml/kg body weight per day. Marked variation may be seen between individuals and the amount of water taken in food, and water lost through activity and/or panting etc, will be a major influence. Intake is considered definitively increased at over 100 ml/kg/day, but some pets will have notably increased drinking whilst still drinking less than this amount; the pet always has to be considered as an individual.

Why might my pet be drinking more?

Water balance is tightly controlled by the body through regulation of water intake and water loss in urine. In health, lack of water intake or excessive water loss means the pituitary gland in the brain releases 'anti-diuretic hormone' or ADH. ADH tells the kidneys to conserve water and make concentrated urine. In these circumstances, the thirst centre in the brain is also stimulated and this stimulates drinking.

Increased drinking can occur either because the concentrating mechanisms of the kidney fail, because the kidneys do not respond to ADH, because ADH is not produced or released, or because there is an excessive stimulus to drinking (primary polydipsia).

Loss of concentrating mechanisms in the kidney and/or failure of response to ADH can occur through kidney damage, high blood calcium, liver failure, kidney infection, diabetes mellitus (sugar diabetes), pyometra (womb infection), overactive adrenal glands, over active thyroid glands and certain intoxications.

Failure of release or production of ADH (central diabetes insipidus) can occur because of brain damage through trauma, infection or cancer. Some animals are born with a defect in ADH production and release.

Causes of primary polydipsia in dogs and cats are obscure, although we have recognised this in association with gastrointestinal disease and urinary tract disease.

How are underlying causes of polydipsia in dogs and cats investigated?

At first presentation, it is typical to investigate increased drinking with standard blood and urine screens, which can readily identify common causes such as kidney failure. Subsequently, depending upon findings from the clinical history, tests may include; diagnostic imaging, such as ultrasound, to examine liver, kidneys and adrenal glands; urine analysis and urine culture; and tests of hormonal function.

When other possibilities are eliminated, the ability of the kidneys to concentrate urine and respond to ADH may be examined by a water deprivation test. In this test, if urine fails to concentrate after a significant restriction, synthetic ADH is administered and urine concentration measured. If urine concentrates during water restriction, concentrating mechanisms are considered to be functioning and the problem is considered to be a primary polydipsia, in which case tests of urinary disease and/or gastrointestinal tract disease may be indicated.

What treatments are available?

The treatment for polydipsia in dogs and cats is highly dependant upon the underlying cause. In certain diseases it may not be realistic to expect to be able to modify water intake. In chronic kidney failure, for example, free access to water is a part of treatment, and treatment is aimed at supporting kidney function and maintaining quality of life for as long as possible.

What is the outlook?

The outlook fundamentally depends upon the diagnosis and varies from very good to very poor. In a number of conditions, the outcome can be favourably influenced by early diagnosis, so increased drinking is usually considered an important sign and an indicator of the need for investigation.

If you have any further questions about polydipsia in dogs and cats you should speak to your veterinary surgeon who will be able to discuss this with you more fully.

If you are concerned about the health of your pet, you should contact your veterinary surgeon.