What is cystitis?

Cystitis is a general term referring to inflammation in the urinary bladder. The term cystitis does not imply a specific underlying cause.

In cats, diseases of the lower urinary tract (the bladder and urethra) are grouped under the term 'feline lower urinary tract disease' (FLUTD) as it can be difficult sometimes to distinguish between diseases of the bladder and urethra (the exit to the bladder), as many diseases will affect both structures.

What are the signs of FLUTD?

Typical signs in cats with FLUTD are those of inflammation and irritation of the lower urinary tract. The common signs are therefore:

- Increased frequency and urgency of urination.
- Difficulty in urinating (spending a long time straining on the litter tray while passing only small quantities of urine).
- The presence of blood in the urine.
- Occasionally complete obstruction to the passage of urine (straining persistently without producing any urine).

With the latter sign particularly (straining without the passage of any urine), it is important to seek urgent veterinary attention as complete blockage to the flow of urine can be a life-threatening complication if left untreated.

What causes FLUTD?

There are a vast number of potential causes of FLUTD, but in many cats there may be severe inflammation of the bladder and/or urethra without an identifiable underlying cause (so called 'idiopathic' FLUTD). These idiopathic cases have to be differentiated from other potential causes of the clinical signs though so that appropriate treatment can be given. Some of the potential causes of FLUTD are listed below:

- Idiopathic (inflammation for no known cause)
- Urinary calculi ('bladder stones')
- Bacterial infections
- Neoplasia (tumour)
- Anatomical abnormalities
• Urethral plugs (blockage of urethra with a mixture of crystals or small calculi/stones and inflammatory material)

**How is FLUTD diagnosed?**

The initial diagnosis of FLUTD is based on the identification of signs of lower urinary tract inflammation. The clinical signs displayed by the cat are often characteristic of FLUTD, but may have to be differentiated from straining to pass faeces (constipation). Furthermore the signs displayed do not help to differentiate the cause of FLUTD.

Initially, a cat with uncomplicated FLUTD may not require any treatment. However, if the signs continue, or if there is recurrence of the clinical signs further investigation may be required to identify the underlying cause of the FLUTD.

**What further investigations are required to diagnose the cause of FLUTD?**

Where clinical signs are persistent or recurrent, a number of investigations may be required to differentiate idiopathic FLUTD from the other known causes of urinary tract inflammation. These investigations may include:

- Laboratory analysis of a urine sample
- Bacterial culture of a urine sample
- Blood samples to look for other evidence of urinary tract disease or other systemic disease
- Radiographs (x-rays) of the bladder and urethra (performed under a general anaesthetic)
- Ultrasound examination of the bladder

The information from these investigations should help to identify a specific underlying cause if one is present. If these tests do not identify a specific cause then the FLUTD is classified as idiopathic.

**What is the treatment for FLUTD?**

The most important treatment for most cases of FLUTD is to increase the cat’s water intake. The easiest way of doing this is to feed a tinned food, rather than a dry food, and more water can also be added to the food. Some cats also need to be encouraged to drink more water and your veterinary surgeon can give you further tips as to how this may be achieved.

Further treatment depends on the underlying cause. For example:

- Cases of idiopathic disease may respond to treatment with anti-inflammatory or analgesic (pain-relieving) drugs, but it is crucial that you only use drugs specifically prescribed by your veterinary surgeon, as many human products are extremely dangerous to use in cats. For cats with persistent or recurring clinical signs a variety of other drugs may also be tried.
- Bacterial infections of the lower urinary tract, although uncommon in cats, will usually respond well to antibiotic therapy.
- If a cat develops a blocked urethra (this almost exclusively occurs in males), emergency treatment is required to remove the blockage, which may require flushing of the urethra while the cat is given a short anaesthetic.
- If bladder stones (calculi) are present they may have to be removed surgically or, depending on their type, they may be able to be dissolved by using a special diet, or dietary additive.
There is no universal treatment for FLUTD. Each case has to be investigated to determine the underlying cause, and then the treatment has to be tailored to the individual cat. Sometimes despite appropriate investigation and treatment clinical signs may still recur.

**How can FLUTD be prevented?**

It is impossible to completely prevent diseases of the lower urinary tract occurring. However, FLUTD is more common in cats that have a lower water consumption, cats from a multi-cat household, and in cats that are inactive and obese. All these factors may relate, at least in part, to the frequency with which a cat urinates. Avoidance of obesity and encouraging exercise may be of some help in preventing FLUTD, and as cats tend to drink very little the feeding of at least some tinned food rather than exclusively a dry cat food product will help to maintain a higher water intake.

If a cat develops urinary calculi (stones), the feeding of special diets (available from veterinary surgeons) may help to prevent recurrence of stone formation. In most other situations there is probably little necessity to alter the cat’s diet.