



**Urinary incontinence means the 'loss of ability to control of urination' and can be caused by a variety of diseases. Incontinence is quite common in dogs but is usually more of a nuisance to the owners, than a cause of distress to their pet. Urinary incontinence is more common in females than males because of the anatomical differences in the urinary tract - especially the shorter urethra in the female. It is rarely seen in cats.**

### **How does the bladder work?**

In the normal animal urine is produced in the kidney. It drains through tubes from the kidneys to the bladder (the ureters). Urine is stored in the bladder until a convenient time for voiding. The bladder is an expandable bag that slowly stretches as it fills with urine. Urine leaves the bladder and drains to the outside through another tube (the urethra).

In the normal animal urine is kept in the bladder because the urethra is flattened. The urethral wall is made of elastic tissue and muscles that normally keep it flattened so that urine cannot flow. The muscles in the wall of the urethra are stronger in entire females (because of the hormones in the blood). When they have been spayed female dogs have lower oestrogen levels and because the urethra muscles are weaker they may be more prone to leaking urine.

When the bladder is full the bladder wall is stretched and the animal has a feeling that the bladder needs to be emptied. Contractions of the bladder muscle increase the pressure in the bladder and cause urine to flow out through the urethra. The impulse to void urine can be over-ridden by conscious control for some time (until the animal can reach an appropriate site for urination) but eventually the bladder must be emptied.

### **What is urinary incontinence?**

Incontinence can occur as a result of breakdown of any of the mechanisms that control normal urinary function. In most cases urine leakage occurs because the pressure in the bladder is higher than that in the urethra. This can be due to increased pressure in the bladder, ie bladder over-distension, or reduced pressure in the urethra, ie weakness of the urethral muscle.

### **Why is my dog incontinent?**

There are many causes of incontinence. Some animals are born with abnormalities in the urinary tract. Others develop problems later in life - neutered bitches are more at risk of developing urethral problems and, in entire male dogs, incontinence is often related to prostatic disease. Sometimes back problems can cause pressure on the nerves to the bladder resulting in incontinence.

Some breeds and types of dog are more at risk of developing incontinence. The most common cause of urinary incontinence is urethral sphincter mechanism incompetence (USMI). This is most often seen in female, large breed dogs and often those breeds that have docked tails, eg Old English Sheepdogs and Rottweilers. In animals with USMI incontinence most often occurs when the dog is lying down.

Some animals have an underlying problem with the urinary tract so that it doesn't work as well as it should. However, they are able to control urination unless something else happens to make extra work for the urinary system. If these animals drink a lot they develop a very full bladder that puts extra pressure on the urethra.

### **How do I know if my dog is incontinent?**

If your dog is incontinent you may see urine dripping from its vulva or penis or, more likely, you will find wet patches where your dog has been lying. Sometimes there are only tiny wet patches or the bed may be soaked. Often the urine is quite dilute and might not smell very strongly.

The time of urine leakage may vary depending on the cause of the incontinence. If the muscles in the urethra are weak urine is more likely to leak when the dog is lying down (because pressure on the bladder is greater) or when the dog is excited (stress incontinence).

Dribbling of urine after urination is more often seen with infections (like cystitis), cancers and abnormal development of the ureters (ectopic ureters).



### **How will my vet work out what is wrong?**

The age of your pet when you first noticed the problem often provides a useful clue as to the cause of the incontinence. Young animals are more likely to have congenital problems such as ectopic ureters. It is important for your vet to have an accurate description of what the incontinence is like in your dog - so try to explain clearly what signs you have noticed. If your dog appears to be straining without passing any urine they may have a blockage or irritation in the bladder (cystitis) or urethra (urethritis).

A full physical examination will help to rule out potential causes of incontinence. Your vet will feel your dog's belly to see how big the bladder is. Your vet will need a urine sample from your dog to send for tests in case there is an infection. Routine blood screens are useful to rule out other diseases, particularly those resulting in excessive drinking which may make the incontinence worse.

### **Why are other tests needed?**

If your dog has urinary incontinence your vet will need to perform some tests to try to find out what is causing it. X-rays and ultrasound are the most important tests in investigation of incontinent patients. Special x-rays (where contrast is put into the urinary system) may help your vet to identify anatomical abnormalities in the ureters and bladder and your dog will need a general anaesthetic for these. In many cases of urinary incontinence x-rays are normal (but it is still important that they are done to ensure nothing serious or treatable is missed). Ultrasonography can also be helpful in assessing for ectopic ureters, bladder cancers, anatomical defects and chronic thickening of the bladder wall associated with trauma or infection.

If your vet has ruled out medical and structural problems they may want to try some treatment to see if the incontinence can be controlled.

### **Is there any treatment for incontinence?**

The treatment for urinary incontinence depends on the cause. A specific treatment plan should be worked out for individual cases. If an underlying condition is identified then this should be managed appropriately. If your dog has a number of problems that increase its chance of being incontinent, then removal of just one of them may be sufficient to resolve the problem. Urinary tract infections must be treated and anatomical abnormalities, eg ectopic ureters, can be corrected by an operation.

The most common cause of incontinence in bitches is a weakness in the outflow from the bladder (called USMI). There are some drugs that can help to tone up the muscle in the urethra and make the seal better. Phenylpropanolamine and diethylstilboestrol can improve contraction of the urethra. These medications may need to be continued permanently but if this is the case the minimum effective dose must be found.

### **Will my dog get better?**

If your dog has USMI and starts on medical treatment that controls the signs it is likely that they will need to continue to receive this treatment for the rest of their life. Your vet will want to monitor your pet's progress and will adjust the dose of treatment as needed.

**If you want any other information on health issues concerning your dog please contact Feldon Veterinary Centre on 01926 423161 and we will be happy to advise you.**