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Urethral Incontinence in Dogs

What is urethral incontinence?

Urethral or urinary incontinence is the loss of voluntary control of urination. It is usually observed as involuntary urine leakage.

What are the clinical signs of urethral incontinence?

The most common clinical sign is pooling or spotting of urine underneath the dog when it is sleeping or relaxed. Many dog owners report finding wet spots on the bedding or floor where the pet has recently been laying down or sleeping. Occasionally owners will report dribbling of urine while the dog is walking or after she urinates. In many instances the dog seems unaware of what is happening. It is estimated that urethral incontinence may affect over twenty percent of all spayed female dogs, especially large-breed dogs. Urethral incontinence is most common in middle-aged to senior, medium to large-breed female dogs although any dog may be affected.



What causes urethral incontinence?

There are several potential causes of urinary incontinence. These include:

- *Neurological Causes* including spinal injuries, disruption of the nerves controlling the bladder and brain diseases or lesions.
- *Bladder Storage Dysfunction* including bladder hypercontractility in which the bladder contracts frequently resulting in small amounts of urine leakage.
- *Urinary tract infections or bladder tumors*, or any condition that compresses the bladder from the outside
- *Urethral disorders* in which the muscles that close the urethra fail to tightly contract and urine leakage occurs. This is one of the more common causes and is often associated with hormone responsive urinary incontinence, urinary tract infection or inflammation, prostatic disease in male dogs and vestibulovaginal anomaly in females.
- *Anatomic Abnormalities* such as a congenital defect, an injury or surgery that has caused damage or altered the normal bladder function. Ectopic ureters (ureters that are not in the correct anatomical location due to a birth defect), urethral hypoplasia, and vulvar or perivulvar conformation abnormalities are some of the anatomic abnormalities that can cause urinary incontinence.

- *Urine Retention* results when a dog will not urinate due to stress, fear or behavioral abnormality and ultimately urine leakage occurs when the pressure inside the bladder exceeds urethral outlet resistance.
- *Mixed Urinary Incontinence* occurs in both dogs and humans and is the combination of multiple factors affecting normal urination. Combinations of urethral and bladder storage dysfunction and anatomic and functional disorders are most likely to occur.

How is urethral incontinence diagnosed?

Urethral incontinence is diagnosed based on clinical signs, medical history and blood and urine tests. Bladder radiographs and ultrasonography are often performed to search for bladder stones or other abnormalities affecting urine storage and outflow. Neurological tests such as examination of the anal and tail tone, perineal sensation and various spinal reflexes will be performed if a neurological disorder is suspected. Urethral catheterization may be required if urine retention is observed, to determine if there is an obstruction or other urethral abnormality present. Cystoscopy may allow the veterinarian to see an abnormality within the bladder or urethra. In certain cases, specialized testing such as measuring the pressure within the bladder is performed.



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How is urethral incontinence treated?

"Treatment will be based on your pet's specific diagnosis."

Treatment will be based on your pet's specific diagnosis. Medications that increase urethral sphincter tone such as phenylpropanolamine (PPA) or imipramine, or hormone replacements such as estrogen or diethylstilbestrol (DES) are commonly used alone and in combination. Many dogs that respond poorly to PPA alone will benefit from a combination of PPA and DES. Approximately 70% of all cases respond well to medical therapy alone. GnRH analogs may be considered in severe or refractory (failure to respond) cases. With long-term usage, the patient's blood and urine should be periodically tested to ensure that there are no untoward side effects. Your veterinarian will prescribe the best treatment for your pet's individual needs.

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New research has focused on collagen injections and a novel substance called Tegress. These surgical solutions hold promise and should be discussed with your veterinarian to determine if any of the surgical specialists in your area are performing these procedures.

What is the prognosis for urethral incontinence?

While the prognosis is determined by the specific cause, in general the prognosis is good. Control of urine leakage will vary from dog to dog but most dogs can be managed successfully with medications, lifestyle changes such as more frequent trips outside to urinate, and close monitoring.

This client information sheet is based on material written by: Ernest Ward, DVM

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