

Walker Valley Veterinary Hospital

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URINARY INCONTINENCE

When a house pet develops urinary incontinence, many owners fear the worst. Assumptions that incontinence signifies senility or irreparable age related change may lead to delay in medical consultation, relegation of the pet to an outdoor life, or even euthanasia. In reality, urinary incontinence is usually one of easiest problems to solve so it is crucial that veterinary assistance be sought before an owner's patience is completely worn and before any permanent decisions about the pet's future become topical.

CAUSES OF INCONTINENCE

It is important to differentiate incontinence (involuntary urine leakage) from behavioral urinary issues ([submissive urination](#)), [simple lack of house training](#), [territorial marking of unneutered males](#) or [anxious cats](#), or the senile loss of house-training from [Canine Cognitive Dysfunction](#). Animals may urinate in the house voluntarily and this is different from incontinence. Watch your pet closely to be sure what you are seeing is really incontinence and if it is, the good news is that most cases are easily resolved with simple inexpensive medications.

There are several important causes of incontinence and most of these are ruled in or out with a urinalysis and urine culture. The urinalysis reveals cell types and biochemical elements in the patient's urine while the culture isolates and bacteria growing in the urine. The bacterial species grown are identified and tested for their sensitivity towards different antibiotics, the end result being confirmation of the presence of infection and a list of appropriate antibiotics.

Most cases of incontinence are due to:

- Infection in the urinary tract (usually bladder infection)
- Excessive consumption of water
- Weak bladder sphincter (especially common in female dogs)
- Spinal cord disease

BLADDER INFECTION

This is a common cause of urinary incontinence in young adult female dogs and geriatric cats. This condition is usually easily diagnosed by urine culture, though often signs of infection such as white blood cells or bacteria are actually visible in the urinalysis. A urine culture will confirm the infection, identify the organism, and list usually several antibiotics which will be effective. An antibiotic is selected based on expense, potential for side effects, and convenience of usage. After

a short course (generally somewhere between one and three weeks) of medication, ideally a second urine culture is done to confirm that the infection has truly been cleared up. If a bladder infection is the cause of incontinence, most patients show improvement in their incontinence and comfort after only a few doses of antibiotics (but it is still important to finish the entire course so as to avoid recurrence).

EXCESSIVE WATER CONSUMPTION

Some animals drink so much water that their bladders simply overflow too easily. While some owners have noticed that their pets seem to be drinking more than usual, our experience is that most owners are surprised when the urinalysis shows excessive water consumption. Dilute urine is obvious on the urinalysis through a measurement called “specific gravity” which compares the amount of dissolved biochemicals in the urine to that of pure water (which has no dissolved biochemicals). A urine specific gravity nearly the same as water, confirms excessive water consumption; blood tests may be indicated to go with the urine tests to determine the cause.

Causes of excessive water consumption include:

- [Diabetes Mellitus](#)
- [Cushing’s Syndrome](#)
- [Hyperthyroidism](#) (cats)
- Bladder Infection (see above)
- Diabetes Insipidus
- [Kidney Failure](#)

There are other causes as well but 90% are ruled in or out by a blood panel and urine culture.

WEAK BLADDER SPHINCTER

Aging, obesity, reduced sensitivity of neurologic receptors in the sphincter and possibly other factors all contribute to this condition which is especially common (up to one in five affected) in female dogs. Once other more serious conditions have been ruled out, the weak sphincter may be treated symptomatically with one of several medications.

- **Estrogens**
It is not entirely clear how estrogens are helpful in this treatment. Originally, estrogens were given to post-menopausal women with urinary incontinence and the treatment was simply extrapolated to dogs. It is possible that estrogens are important in the maintenance of neuroreceptors in the bladder sphincter and without estrogens the receptors become unresponsive to the transmission of the “storage” message from higher neurologic centers. In dogs, [DES](#) (diethylstilbestrol) is the most common estrogen used, though it is now only available through [compounding pharmacies](#). A higher dose is used to begin therapy and finally a maintenance dose of usually every few days is used to maintain continence. In male dogs, testosterone seems to be more effective than estrogens, possibly through action on the prostate which sits at the neck of the bladder and

incorporates the sphincter.

- **Alpha-Adrenergic Agonists**

These medications act by enhancing release of the neurotransmitter chemicals that act on the receptors of bladder sphincter. Effectively, they turn up the volume dial on the “hold it” message from the high neurologic areas. The usual medication for canine use is [phenylpropanolamine](#), currently available in liquid and chewable tablets and is typically given two or three times daily. Ephedrine and pseudoephedrine, common decongestants, may also be used. Side effects can include irritability, appetite suppression (phenylpropanolamine was the active ingredient in many human diet pills until recently), and blood pressure changes. Most dogs (male and female alike) tolerate phenylpropanolamine uneventfully.