



### ABOUT THE DISEASE

**Urinary incontinence** is the involuntary leakage of urine, which is most often seen in middle-aged and older female canine patients. When female canine patients are spayed, there is a risk that urethral tone decreases in the year following the surgical procedure and upwards of 20% may develop **urinary incontinence** within three years. Patients who are spayed before their first heat cycle will have a lower probability of it developing.

While spontaneous urination can occur anywhere, commonly caregivers find that patients have urinated on their bedding. The development of painful skin irritation caused when urine has contact with skin (urine scald) may also be present.

Commonly misinterpreted, **urinary incontinence** needs to be differentiated from other behavioral urinary issues or an underlying medical condition. Any underlying medical condition that causes increased water loss through the kidneys, or increased water intake, will often lead to patients voiding urine inappropriately but is not considered incontinence.

Please see documents under the [\*Endocrine System\*](#) and the [\*Urinary System\*](#) for additional information.

In most cases of true **urinary incontinence**, patients often have either a hormone imbalance or mechanically develop a weak bladder sphincter tone. In rarer circumstances, patients may have a spinal cord lesion leading to nerve dysfunction.

### OBTAINING A DIAGNOSIS

Diagnosis is entirely one of exclusion. Meaning, several different types of blood and urine tests (which may include a urine culture) have to be performed to determine any other underlying urinary or metabolic disease.

When other diseases are not found, a positive response to medical management is a useful diagnostic tool.

### TREATMENT

Up to of 60% of spayed females' **urinary incontinence** will respond to an estrogen supplementation (estriol).

Up to of 90% of spayed females' **urinary incontinence** will respond to a medication which strengthens the tone of the urinary bladder sphincter (phenylpropanolamine, PPA, Proin).

If patients fail with both medications, make sure no other underlying disease is present. If no other underlying disease is present, then patients often require both medications.

Diapers and urinary aids are not long-term solutions. They are temporary solutions while attempting to achieve a diagnosis, and waiting for medication(s) to take full effect. Urinary aids often increase the probability of skin and bladder infections.

### TIPS FOR SUCCESS

- Always attempt to find underlying causes to patient's inappropriate urination.
- Medical management is the preferred method; urinary aids are not.