

## Urinary Incontinence

### Causes:

When the dog wants to urinate, urine saved in the bladder passes to the outside of the body through a small tube called the urethra. A normal dog can easily control this action. Urinary incontinence is uncontrollable or involuntary leaking of urine from the bladder. Small quantities of urine will leak from the urethra when the incontinent dog is resting or sleeping and the dog will often lick at the vulva or penile opening.

Urine is prevented from leaking out of the bladder in normal dogs by a band of muscular tissue at the base of the bladder that acts like a valve (a sphincter). Certain hormones are very important to this control: in the female, estrogen is the most important hormone causing continence, in the male, testosterone.

As the dog ages, production of both hormones naturally decreases, and additionally, the main sites of their production, the ovaries in the female and the testicles in the male, are surgically removed when the dog is spayed or neutered. Rarely, urinary incontinence can occur in younger animals due to congenital anatomic abnormalities. Also rarely, older dogs can have injury to the nerves or urinary incontinence due to tumors or polyyps. Occasionally, in the male, prostate disease can lead to urinary incontinence.

### At risk:

Hormone responsive incontinence is more common in the female dog than the male, and more common in spayed or neutered dogs. If the cause is old age, the dog is often eight to nine years of age. In spayed females, the problem occurs around three to five years of age. Surprisingly, in males, whether they are neutered or not, the condition is very rarely seen in dogs younger than ten years of age.

### Additional concerns:

Dogs suffering from urinary incontinence have more of likelihood for secondary bladder infections. For this reason, a urinary sample is evaluated prior to starting medication. Occasionally, urine leakage can cause a urine scald on the skin. Urine is fairly caustic and can cause severe irritations. Placing petroleum jelly around the urethral opening to protect the skin may help, as will topical anti-inflammatory/antibiotic crèmes.

Dogs who do not respond 100% to medication may still leak small amounts of urine. In this case, dog bloomers/panties with absorbent pads or even human diapers with a hole for the tail can be used to soak up the urine

### Treatment:

Phenylpropanolamine (PPA) is a non-hormonal medication that will tighten the urinary sphincter and is very well tolerated in the dog. Since the cause of urinary incontinence is often hormonally derived, replacements with hormones may also be used. Estrogen can be replaced with the compound diethylstilbestrol. After a brief period of daily doses, the medication is decreased to once weekly. In dogs, side effects are very rare due to the minute levels of hormone given. Treatment with either the PPA or diethylstilbestrol is usually for life.