

# **WHY** Is My Dog Having Urinary Accidents?

Paula I. Watkins, DVM

We love our dogs because they are intelligent, loving and very loyal. Dogs tend to look up to their masters, being willing to love them as if they were a fellow pack member. Owning a dog can be a wonderful experience...until the urinary accidents begin to occur...

*A glimpse into the veterinary exam room:*

**Dr. W:** Good morning Mrs. B! How are you and Miss Kiki doing today?"

**Mrs. B:** "Well, Kiki had a couple accidents in the house this week. We didn't think too much about it because we were gone last week and we thought she was mad at us, but my husband is getting pretty upset with her."

**Dr. W:** "Is Kiki squatting a lot in the yard when she goes out to potty?"

**Mrs. B:** "Yes she is, she squats about 15 times all over and it seems as though she straining. Once in the house I noticed a little bit of blood in her urine."

**Dr. W:** "Is she drinking a lot more water than she used to, or urinating more in volume?"

**Mrs. B:** "She is drinking more, but I think it's because it is hot out."

**Dr. W:** "Ok, we need to get some urine from Kiki to run a few tests. Depending on what the urinalysis says, we may need to run some blood work. The first 3 most common problems that come to my mind with the history you are giving me are urinary tract infections, diabetes, or possible problems with her kidneys."

**<In the laboratory>** The urine we collected had a lot of obvious blood in it. While the urinalysis was running, an x-ray was performed to exclude the possibility of bladder stones as a complicating factor. The urinalysis showed an excessive amount of red blood cells, white blood cells, a normal specific gravity, and no glucose.

**Dr. W:** "Good news, Mrs. B, Kiki's kidneys are concentrating normally, she doesn't have any sugar in her urine which means she doesn't have diabetes, and no bladder stones; but, she does have a lot of red blood cells, white blood cells, and bacteria indicating that she does have a urinary tract infection. We will put her on a 2-3 week course of antibiotics, which will be medication given twice daily. We will also need to check her urinalysis again before we stop her antibiotic treatment."

It seems at our office about 80% or all urinary work-ups will have a final diagnosis of a urinary tract infection (excluding other diagnoses discussed later). Urinary Tract Infections (UTI's) are extremely common and it is almost certain that at some point in your pet's life, you will be having the same conversation as Mrs. B. If the final diagnosis is not urinary tract infection, there are numerous other possible causes.

**Acute or Chronic renal failure** Most people think kidney failure means that the kidneys stop working and that they stop producing urine and stop urinating. However, the truth is exactly the opposite. The kidney's 'job' is to conserve water for the body and to put concentrated (dark yellow) urine in the grass. When the kidneys begin to have problems or I like to say "forget what their job is", they start urinating and drinking \*more\* water. This is diagnosed with blood work in conjunction with a specific gravity (measure of how concentrated the urine is) on the urinalysis.

**Diabetes mellitus** (also called "sugar" diabetes) This is a complex metabolic disorder involving the pancreas and it's ability to produce insulin and/or the body's ability to respond to insulin. Hallmark signs of this disease are drinking and urinating more than normal. The tests for diagnosis are blood work and urinalysis together. The pet will have increased glucose (sugar) in the blood \*and\* urine. Treatment usually consists of an integrated plan involving dietary modification and insulin.

**Diabetes insipidus** (also called "water" diabetes) This is a rare condition and is difficult to diagnose. The disorder results in the inability of the body to conserve water. There are two kinds, relating to either a problem with the brain, or the kidneys.

**Cushings/Addisons Disease** These diseases are caused by abnormalities in the adrenal glands, which are two glands that lie on top of the kidneys. Cushing's Disease (Hyperadrenocorticism) and Addison's Disease (Hypoadrenocorticism) result from the body producing too much or too little cortisol. Cortisol is a steroid

hormone which is secreted by the body in times of stress. This is diagnosed by the use of special medications and the associated response in blood work.

**Urinary incontinence** This is the inability to voluntarily control the storage and elimination of urine. There may be many causes for this, primarily neurological related, but can also be responsive to hormone replacement. The most common complaint associated with older females is that she is “dribbling urine while she is asleep and she doesn’t know she is doing it”. Recently, I had an owner tell me this and we ruled out all other causes of medical problems, then we did a trial dose of Proin (phenylpropanolamine), which is a synthetic hormone. The dog responded within *days* to the medication and her response was, “I wish I had told you about this problem years ago”.

**Prostatic Diseases in the intact male** A number of diseases can affect the prostate. They can be caused by bacteria with possible abscessation, neoplasia, or inflammation. Clinical signs can vary from blood tinged urine, painful defecation, fever, to pain while walking. All intact male dogs with recurrent urinary tract infections should have their prostate evaluated. The best method for evaluating the prostate is the ultrasound, although some information may be gained by manual examination, radiographs, and/or evaluation of the prostatic fluid. Antibiotics and/or castration may be recommended to you for these problems.

**Uterine infections (pyometra) in un-neutered female** Females that still have their uterus are subject to a life-threatening infection called a pyometra. This is where the uterus fills with purulent material or “pus” and must be operated on immediately. Fortunately for the family that is adopting the greyhound, this is not an issue because they have usually already been spayed by the time of adoption.

**Spay incontinence** These dogs can begin to show incontinence at any point, either immediately or years later after their surgical procedure. There's some epidemiological data from Europe that letting them have a heat helps; however, therein lies the increased possibility of mammary cancer for each heat that the animal goes through. It has been theorized that removal of the hormonal influence on the smooth muscle of the ureter and urethra is what is responsible for the incontinence after surgery. Hormonal replacement remains the mainstay treatment.

Some medications and injections that are given notoriously increase water consumption and increased urinary output, such as steroid therapy, diuretics, and some hormones. Activity Level (heavy exercise), environmental factors (high temperatures), diseases which may cause vomiting and diarrhea, or salty foods may also cause the same symptoms.

The most common causes of increased drinking and increased urination have been discussed; however, there are a few other zebras that veterinarians and specialists have in the back of their minds when working through a diagnosis. These include: hypercalcemia (usually secondary to renal disease or cancer), hepatic (liver) insufficiency, upper/lower urinary tract cancer, spinal nerve degeneration/disc herniations, and psychogenic polydipsa (just drinking too much water for no other known reason possibly boredom).

Although a medical problem is most likely to blame, elimination problems can be behavioral and/or medical. Veterinarians work out all medically related aspects then begin to investigate behavior-related urinary problems. Unfortunately, some elimination problems can also have a learned component. Usually at that point, the owners are advised to begin a log of the pet’s accidents: times, dates, locations, last access to outside, their reactions, etc. Behavior modification is usually employed at this point. Urinary accidents can be extremely frustrating and require diligence on behalf of the owner and veterinarian to rectify.

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