Urine Marking in Dogs

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Recently, a client complained that her male dog continues to mark her home with urine despite being neutered. Why is the urine marking continuing? What can be done?

Causes of Urine Marking

Urine marking can have many underlying motivations influenced by the home environment, social situation, and other animals in the home. Marking commonly occurs in response to new objects, novel odors, or to the sight of dogs outside. Some dogs may mark unfamiliar places such as the veterinary clinic or other homes.

In multiple dog homes, marking may occur in response to social changes/conflicts between dogs. History taking should focus on agonistic interactions between dogs including threats, avoidance, and actual fighting. In some situations, a dog may urine mark due to anxiety. Careful questioning is needed to determine the cause of the anxiety. Suspected causal factors include changes in owner scheduling, the addition of new family members (human or other pets); and changes in exercise, activity, or interactions. Urine marking is not commonly seen as part of a separation-related distress response.

Diagnosis of Urine Marking

Not all indoor elimination is urine marking. Medical problems such as cystitis, kidney dysfunction, endocrine abnormalities, or other metabolic problems must be ruled out if signs such as polyuria, dysuria, and polydypsia are present, or if indoor elimination has a sudden onset. Geriatric onset of house soiling or urine...
marking could be associated with cognitive changes.

History taking should include when and where the urine is found. The location of urine is one diagnostic criterion; it is most often found on a vertical surface. The amount of urine deposited while marking is normally small, often as little as a few drops. A large amount of urine deposited indoors usually signals house-training issues or disrupted access to the appropriate area for elimination, separation anxiety, or a medical problem.

The deposition of urine for marking is usually independent of outdoor access. A dog that is highly motivated to urine mark often will nearly empty its bladder outdoors, but due to residual amounts remaining in the bladder, may then urine mark inside. Although some dogs will seek out unused areas of the home, marking will usually occur in prominent locations.

Treatment of Urine Marking
Treatment includes castration, supervision, counterconditioning, attention to underlying anxiety, hormone therapy, and, in selected instances, distraction/punishment.

It is also important to clean soiled areas adequately. Products with enzymatic components seem to work best, and repeated treatment may be necessary to remove all staining and odor.

Castration
Two studies have looked at the effects of castration on urine marking. Hopkins found resolution or notable improvement in marking behavior in 50% to 60% of neutered dogs. In telephone interviews with owners, Neilson found that in 25% to 40% of dogs castration was effective in reducing the incidence of urine marking by 90%. In 60% to 80% of dogs, improvement was reported at the 50% level. Hopkins et al reported some dogs experienced a rapid decline in marking behavior following castration, while others showed a more gradual change. Both studies found that the decline was not related to the age of the dog at castration.

Supervision
Close supervision of the dog is an integral part of changing marking behavior. A leash or perhaps a collar with noisy bells can help the owner monitor the dog’s location. When it approaches an area where it has marked in the past, the dog should be distracted, asked to perform a task, and rewarded. For some, engaging in play at the location may help change its association from marking to something else (play). Over time, these tactics may prompt the dog to associate a different outcome or task with the location.

Addressing Anxiety
Many dogs that mark are anxious, so creating predictable routines and teaching the dog how to relax upon a verbal command can be useful. Owners can establish a command-response relationship where the dog earns all things by performing a task and waiting calmly for what it wants. Teaching a dog to settle or relax in a set location (bed, mat) can help the dog learn to associate calm and quiet behaviors with good things and rewards. In some cases, a head collar can facilitate supervision and teaching relaxation. Daily exercise and attention at regular times also help a dog feel calm and relaxed.

Counterconditioning
Counterconditioning can be useful if the owner can predict what circumstances elicit the marking behavior. Common circumstances include new objects, company, and visits to unfamiliar homes. The dog is then taught a competing response, such as sit/stay (a behavior that is incompatible with leg lifting and urine marking), for a food or play reward. If this is done repeatedly, the desire to urine mark in response to these situations may decrease and the dog may cease urine marking.

Distraction/Punishment
In some cases, distraction or punishment can be effective, but this requires excellent supervision of the dog so that the behavior can be interrupt-