



1333 Plaza Blvd, Suite E, Central Point, OR 97502 * www.mountainviewvet.net

Urine marking

Spraying

Affected Animals:

Any cat that is at least six months old, the age at which most cats reach sexual maturity. Unneutered males are most likely to spray. Neutered males, unneutered females, and neutered females also may exhibit this behavior.

Overview:

A very common behavioral problem of cats, urine marking accounts for 40 percent of the feline cases brought to veterinary behavioral specialists, according to a recent study. Cats "spray," or conduct in urine marking, when they deposit their urine on prominent objects in order to communicate with other cats. Characteristically, while urine marking, the cat assumes a standing posture and squirts a horizontal stream of urine onto a vertical surface; thus the term "spraying." This behavior, which is normal, is considered problematic to owners when the cat marks indoors, since urine ruins walls, furniture, carpets, and floors; outdoor urine marking, however, is an expected behavior. Male cats that have not been neutered are most likely to urine mark -- and unfortunately, the urine of a male cat is especially pungent and resistant to odor removers.

Clinical Signs:

Owners may observe their cat "spraying," notice a urine odor, or find evidence of urine on vertical surfaces. Sometimes the urine may be found on horizontal surfaces, but in these instances the urine usually has been deposited on such objects as shoes, clothing or new or unfamiliar items.

Symptoms:

See Clinical Signs.

Description:

Urine marking is a normal social behavior of domestic cats which serves several communication functions depending on the context in which the spraying occurs and the temperament and physiology of the individual cat that is spraying. Contrary to popular belief, spraying does not function to exclude other cats from the marking cat's territory; other cats approach rather than avoid sprayed sites. One possible function of urine marking is to serve as an "advertisement" to a potential sexual partner during the mating season, as the urine gives information about the cat's identity, age, and mating status.

Diagnosis:

Before a behavioral diagnosis is made, the regular veterinarian must rule out possible medical problems that might be causing the cat's spraying behavior, such as urinary tract and metabolic diseases. Blood tests, a urinalysis, and other diagnostic procedures may

be ordered.

The next step is for the behavioral veterinary specialist or veterinarian to distinguish between urine marking and urination by either observing the cat's posture or by noting the location of the deposited urine -- whether it is on a horizontal or vertical surface. A diagnosis of urine marking can be made if, while urinating, the cat stands with its rear legs very straight so that its hindquarters are slightly higher than the rest of its body. A marking cat also holds its tail either straight up or directed forward at a 45 degree angle, quivers its tail, and makes treading movements with its feet. Occasionally, a cat may mark in a squatting posture. In addition, subtle behavioral differences from those manifested during urination may be observed. For example, the marking cat usually only sniffs the area before expressing urine rather than both before and after, as occurs with urination.

Prognosis:

Castration stops or greatly reduces urine marking in 87 percent of intact males that spray. Generally, cats will cease spraying within two weeks after undergoing this procedure; however, improvement may not occur for up to six months in some cats. The use of medication such as Valium or Buspar along with environmental and behavioral controls results in a 75 percent reduction of spraying in most cats. Unfortunately, urine marking does tend to recur, despite the initial success of treatment. Continuous treatment with medication does not necessarily prevent recurrences and is not recommended due to the increased likelihood of side effects with prolonged usage.

Transmission or Cause:

Genetic differences in cats are partially responsible for the individual differences in spraying behavior among cats. Facilitated by the male hormone testosterone, urine marking occurs primarily as a response to stimuli from other cats because the presence of urine odor may initiate and perpetuate spraying within the household. Thus, cats that live in multiple cat households are much more likely to spray than cats that live in single cat homes; the incidence of spraying in single cat households is 25 percent, while in households or facilities containing 10 or more cats, the incidence is measured at 100 percent. Once spraying develops within the home, there is often a learned association between spraying and specific sites, which then become established "marking-posts."

Treatment:

For unneutered cats, neutering by itself is often effective in eliminating or greatly reducing urine marking. In neutered cats that spray, however, environmental, behavioral and pharmacological management is required.

Urine marking occurs in sexual, territorial and competitive contexts. Treatment requires first identifying the specific social or environmental factors that trigger the marking and then both limiting the cat's exposure to those factors and reducing its response to them.

Environmental management involves making changes in the household that reduce the cat's exposure to arousing stimuli. For example, when the presence of stray or neighbor cats triggers spraying, it is necessary to either block the cat's view of those cats or to use repelling devices to keep the other cats away. Sometimes it is possible to work out a "traffic control" schedule with neighbors to reduce the cats' exposure to one another.

In multiple cat households, reducing the number of cats can be helpful, but this option often is undesirable to owners. Hostility between household cats must be identified and reduced, using behavior modification, spacing techniques, and medication. Fortunately,

by increasing the availability of vertical space, the impact of having multiple cats within the same house may be diminished; providing access to elevated perches and hiding places often is beneficial. Setting out multiple food and water bowls and litter boxes also may help reduce competition among the cats and consequently the motivation to urine mark.

If specific sites are used as marking-posts, the cat's access to them must be blocked. Another option is to change the sites' significance to the cat: Feliway, a synthetic facial pheromone behavior modification product that is now available from veterinarians, is helpful in converting urine marking posts to face-rubbing posts. It is also important to eliminate the odor of urine in order to manage a cat's marking behavior. Odor removal products obtained through a veterinarian often provide the best results. In cases in which urine has soaked through to the carpet padding or has permeated wood flooring, removal and replacement may be required to eliminate the odor.

A cat's response to arousing stimuli also can be reduced through a desensitization process developed in conjunction with an individual behavior modification program developed by a professional with experience in veterinary behavior. Punishment is not helpful and in fact may increase the frequency of spraying.

Pharmacological treatment is necessary in the management of spraying that is unresponsive to neutering and other treatments. There are several different classes of drugs that can be beneficial: benzodiazepines such as Valium, tricyclics such as Elavil, selective serotonin re-uptake inhibitors such as Prozac, and Buspar, a drug in the class of azaperones. The decision use to drugs should not be decided casually, as there are potential side effects with all of these medications.

Prevention:

Neutering is a recommended preventive measure because intact male cats have the highest incidence of urine marking. Limiting the number of cats in the household also will help limit the social stimuli associated with marking behavior. In multiple cat households, it is helpful to reduce the potential for competition and thus a need to mark territory by providing adequate vertical space, perches, hiding places, and multiple litter boxes and feeding bowls.