

Housoiling—Cats:

Inappropriate Urination and Defecation and Urine/Fecal Marking

Basics

OVERVIEW

- Urinating, marking territory with urine, or defecating in a location that the owner considers inappropriate; defecation is the act of having a bowel movement
- Housoiling includes inappropriate urination or defecation outside the litter box and urine marking or fecal marking (where bowel movement is deposited in prominent locations outside the litter box)
- Inappropriate urination is characterized by the cat simply squatting and urinating on horizontal surfaces outside of the litter box
- Urine marking occurs most commonly when the cat sprays urine on vertical surfaces outside the litter box; also known as “urine spraying”
- The “lower urinary tract” includes the urinary bladder and the urethra (the tube from the bladder to the outside, through which urine flows out of the body)



GENETICS

- Not specifically identified
- Persians and Himalayans that exhibit inappropriate urination should be tested for polycystic kidney disease, a genetic disorder

SIGNALMENT/DESCRIPTION OF PET

Species

- Cats

Breed Predilections

- Housoiling may occur in any breed
- Persians, Himalayans, and their crosses may be more likely to exhibit housoiling than other cat breeds

Mean Age and Range

- Inappropriate urination/defecation can occur at any age; marking behaviors typically seen in cats over 6 months of age

Predominant Sex

- Housoiling can occur in either sex, intact or neutered; an “intact” cat is capable of reproduction
- Urine spraying is more common in intact and neutered males than in females

SIGNS/OBSERVED CHANGES IN THE PET

Inappropriate Urination

- Sudden (acute) or long-term (chronic) problem
- Urination in the vicinity of the litter box may suggest dissatisfaction with qualities of the litter box (such as location of the box, type of litter, frequency of cleaning of the litter box)
- Signs of lower urinary tract disease (such as straining to urinate, blood in the urine [known as “hematuria”]) or generalized (systemic) illness (such as increased urination volume [known as “polyuria”], lack of appetite [known as “anorexia”], vomiting, diarrhea) may suggest an underlying congenital or medical problem
- Presence of abnormal physical findings depends on whether problem is a disease-related or behavioral problem

Urine Marking

- Marking may be a response to household disruption or another cat(s) in or outside the home
- Usually manifest as spraying—the cat moves so the rear quarters are close to a vertical surface, the cat stiffens its posture, raises and quivers its tail, and directs a small burst of urine toward the vertical surface
- Observation of urine marks on vertical surfaces or puddle at the bottom of the wall
- Urine marks around windows and door to outside suggest a response to the presence of an outdoor cat
- Urine marks on prominent furniture or other objects or urine sprayed on new objects brought into the home; horizontal marking on clothing or bedding may be associated with a particular person, visitor or novel objects
- Apparently neutered males that urine mark will be checked by the veterinarian to ensure testosterone levels are not elevated (as in cryptorchid, where testicles inside abdomen)

Inappropriate Defecation

- Straining to defecate; vocalizing when defecating; hard, dry or bulky feces suggest painful defecation
- Painful defecation may lead to avoidance of the litter box, as the cat may associate the pain with the litter box

Fecal Marking

- Feces deposited on prominent, conspicuous locations

CAUSES

Medical Causes

- Any disease causing polyuria, diarrhea or constipation
- Lower urinary tract disease (such as interstitial cystitis [inflammation of bladder] or bladder infection)
- Presence of stones (known as “uroliths”) in the urinary tract (condition known as “urolithiasis”)
- Diabetes mellitus (“sugar diabetes”)
- Excessive levels of thyroid hormone (known as “hyperthyroidism”)
- Feline leukemia virus (FeLV) infection
- Feline immunodeficiency virus (FIV) infection
- Liver disease
- Senility or decline in thinking, learning, and memory, frequently associated with aging (known as “cognitive dysfunction”)
- Caused by or related to medical treatment (known as an “iatrogenic abnormality”)—administration of fluids, steroids, medications to remove excess fluids from the body (known as “diuretics”)
- Painful muscle/skeletal condition that makes it difficult to posture for voiding or get in and out of the litter box
- Hormonal

Behavioral Causes: Inappropriate Urination and Defecation

- Soiled litter box
- Inadequate number of litter boxes or locations (one litter box per cat plus one is recommended)
- Litter box located in remote or unpleasant surroundings or subject to interference by dogs or children
- Inappropriate type of litter box—a covered litter box may maintain odors at an offensive level or may be too small to allow large cats to move around comfortably; a covered litter box allows other cats, pet dogs, and young children to “target” the cat as it exits
- Time factors—daily or weekly patterns of inappropriate urination suggest an environmental cause; sudden (acute) onset in a cat that previously has used the litter box reliably suggests a medical or social problem

- Type of litter—litter type that is unacceptable to the cat (for example, scented litter may not be acceptable); preference tests indicate that most cats prefer unscented, fine-grained (clumping) litter; change in litter box habits that coincide with introduction of a new litter type suggest an association with the change of litter
- Sudden shift from using litter in the litter box to urinating in an unusual location (such as urinating in a porcelain sink) suggests a lower urinary tract disorder
- Location—urination outside the litter box may suggest a location preference or influential social factors; if in the vicinity, may indicate cat dissatisfaction of state of box hygiene or qualities of the box
- Social dynamics—consider social conflicts between cats and any changes in the social world of the cat at the time the problem started (such as addition of a new cat to the household)

Behavioral Causes: Marking, Urination and Defecation

Probability of urine marking or spraying is directly proportional to the number of cats in the household

- Presence of outdoor cats may elicit urine marking or spraying around doorways and windows
- Urine marking or spraying may be a response to another cat in the home or outside the home
- Urine marking or spraying on grocery bags or new furniture suggests olfactory marking, associated with arousal in response to new stimuli
- Urine marking or spraying on clothing or bedding may be associated with specific people or visitors

RISK FACTORS

Inappropriate Urination/Defecation

- Inadequate or infrequently changed/cleaned litter box (or boxes)
- Litter box features (such as litter type, scent, box size or style)

Urine Marking

- Male
- Sexually intact
- Multiple-cat household
- History of urine marking by a parent of the cat

Treatment

HEALTH CARE

- Treat any underlying medical condition
- Use environmental and behavioral therapies before or with medical treatment (see www.vet.osu.edu/indoorcat); environment should include safe resting places, separate resources, positive interactions with people and other pets
- Restrict the cat from rooms in which urine housesoiling occurs
- If immediate cessation of the problem is required in a multi-cat household, it is helpful to confine the cat to one room in the owner's absence; provide a litter box, water, food, and resting sites in this room; the cat can be let out of the room when the owner returns and is available for strict supervision of the cat
- Clean urine “accidents” with an enzymatic cleaner specific for this purpose

Inappropriate Urination

- Scoop out the litter boxes daily and clean thoroughly weekly and refill
- Avoid deodorizers, scented litters, or other strong odors in the vicinity of the litter box
- Move food bowls away from the litter box
- Provide at least one litter box per cat, distributed in more than one location, and avoid high traffic or noisy areas
- If the litter box is covered, provide an additional large, plain, uncovered litter box filled with unscented, fine-grained, clumping litter, with no liner; use a diary to track preferences
- Additional boxes may be provided, using a different type of litter in each (so-called “litter box buffet”) to evaluate the cat's preference for litter box type and litter
- If one site in the home is “preferred” by the cat for inappropriate urination, place another litter box over this site—after the cat uses this box regularly, move it gradually (1”/2.2 cm a day) to a site more acceptable to the owner

Urine Marking

- If signs suggest that the cat is spraying in response to cats outside the house, prevent visual or olfactory access to those cats, or trap and remove the outdoor stray
- Reduce cat numbers where possible, to reduce conflicts
- An environmental product (Feliway®), a concentrate of synthesized feline facial pheromone, is available commercially as a treatment for urine marking—the product is sprayed regularly or diffused in the environment and may improve urine spraying in up to 75% of cases
- Litter box management, as described above can decrease urine marking
- Spend time interacting with the cat daily to focus the affected cat's attention away from other cats; incorporate games that provide stalking and pouncing exercise; avoid scolding or punishment, cats do not do this to be spiteful; maintain a predictable environment; work to resolve inter-cat conflict in the home
- Medications play an important role in the control of urine marking

SURGERY

- Neuter intact male cats and spay intact female cats—this curbs spraying behavior in up to 90% of males and 95% of females that spray

Medications

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered as all inclusive.

- No drugs are approved by the federal Food and Drug Administration (FDA) for the treatment of urine marking in cats; your veterinarian will discuss the risks and benefits of medical treatment; sedation or altered social behavior may be side effects
- Selective serotonin reuptake inhibitors (SSRIs), such as fluoxetine and paroxetine
- Tricyclic antidepressants (TCAs), such as clomipramine and amitriptyline
- Buspirone
- L-theanine, alpha-casozepine are natural supplements; may decrease cat anxiety

Inappropriate Urination

- Medications usually are not indicated, except in treatment-resistant cases or when inappropriate urination is associated with generalized anxiety or heightened arousal
- Medications to decrease arousal and anxiety

Urine Marking

- Medications may be needed to decrease arousal, in order to decrease the frequency of urine spraying
- Pheromone therapy reduces urine spraying

Inappropriate Defecation

- Medication usually is not indicated

Fecal Marking

- Medications may be needed to decrease the arousal that drives this behavior

Follow-Up Care

PATIENT MONITORING

- Regular follow-up is essential
- Keep a daily log of elimination (that is, urination and defecation) patterns so that treatment success can be evaluated and appropriate adjustments in treatment can be made
- Number the litter boxes and count and record the number of urinations and defecations in each box and outside the litter boxes each day
- For marking behavior, after 2 months of successful medication management, as a trial, the veterinarian may gradually decrease the medication over 2 weeks; if marking recurs, medication may need to be continued; consult with your pet's veterinarian

- An annual physical examination and blood work (complete blood count [CBC] and serum biochemistry profile) and urinalysis are recommended for monitoring when medications are being used

PREVENTIONS AND AVOIDANCE

- Neuter cats
- Restrict cat numbers to decrease the probability of urine marking
- Discuss litter box selection, location, and cleaning routines with your pet's veterinary staff to avoid housesoiling problems

POSSIBLE COMPLICATIONS

- Treatment failure may result in the cat being euthanized, relinquished at an animal shelter, or released outside

EXPECTED COURSE AND PROGNOSIS

- Client expectations must be realistic—immediate control of a long-standing problem of housesoiling is unlikely; the goal is gradual improvement over time
- Prognosis for improvement is good if underlying reasons are known and managed

Key Points

- Urinating, defecating, or marking territory in a location that the owner considers inappropriate
- Early identification and treatment of housesoiling problems improve treatment success
- Housesoiling is not done to be spiteful or vindictive
- Avoid scolding or punishing the cat, as such actions will cause the cat to avoid you, the caregiver
- Understanding the underlying motivation for the housesoiling behavior is critical for treatment success
- Create a harmonious, predictable environment to decrease anxiety and arousal that may contribute to housesoiling
- Client expectations must be realistic—immediate control of a long-standing problem of housesoiling is unlikely; the goal is gradual improvement over time