

# Feline Elimination Problems – VT VMA – Feb 2023

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## Feline Elimination Problems

- Most common feline behavior problem for which owners seek assistance
- Major reason for relinquishment or euthanasia
- Consists of house soiling and urine marking
- **House soiling (*periuria*)**
  - Urinating or defecating on horizontal surfaces outside the litter box
- **Urine marking (*spraying*)**
  - Spraying urine on a vertical surface
  - Some cats mark on horizontal surfaces
  - Middening = fecal marking (rare)

## History

- *Most critical diagnostic tool for determining cause of elimination*
  - When and where problem began
  - Changes in cat's environment
  - Urine and/or feces
  - Surfaces / locations soiled
  - Frequency of house soiling
  - Other cats in home
  - Solutions attempted

## Identifying the Perpetrator

- Direct observation
- Videotaping

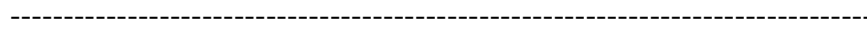
## Determine the Scene of the Crime

- Have owners draw a map of the house
  - Site of soiling
  - Site of litter box
  - Favorite resting spot of each cat
  - Windows, doors, beds, etc. indicated
  - Feeding stations

**House Soiling or Marking?**

- Surface where urine is found
  - Vertical versus horizontal
  
- Posture
  - Standing with tail twitching = spraying
  - Squatting = elimination (sometimes marking)
  
- Volume of urine
  - Usually smaller amount voided with spraying

Urine marking	House soiling
Vertical surfaces (+/- horizontal surfaces)	Horizontal surfaces
Marking behavior (territorial, hormonal, or anxiety-induced)	Elimination behavior ( <i>can be</i> social or anxiety-induced)
Most common in intact males and females in estrus followed by neutered males	All cats
Adult cats	Any age
Stands, tail erect, backs up, treads with rear legs, sprays urine	Squats
Urine, rarely feces	Urine and/or feces
Prominent upright surfaces; doors, windows, new objects, owner’s possessions, furniture	Elimination in a variety of areas



**Feline House Soiling**

- Elimination outside the litter box
- No gender differences (males = females)
- Random, or a specific location or surface (substrate)
- Risk factors
  - History of previous urinary tract infection
  - Use of scented litter
  - Not covering eliminations
  
- Long-haired cats may be predisposed to fecal soiling

### **Feline House Soiling Differentials**

- Medical problems
- Litter box aversions
- Substrate aversions / preferences
- Location aversions / preferences
- Accessibility
- Geriatric issues
- Anxiety – Social interactions
  - Ambush by other cat
  - New pet, new person, new baby
  - Passive or active inter-cat aggression
  - Change in owner's schedule or long absence

### **Litter Box Aversions**

- If cat urinates AND defecates outside litter box, often a problem with the box
- Hygiene
  - Odor: waste, disinfectants
- Type / size of box
- Negative experience associated with box

### **Substrate Aversion**

- Type of litter matters:
  - Clumping vs. non-clumping
  - Activated carbon litter preferred over regular clumping litter, baking soda
  - Scented vs. unscented
  - Texture / size of granules
- Depth of litter
  - Deeper usually better, especially for defecation

### **Litter Brands**

- Tidy Cats® Free & Clean®
- Ever Clean®
- Fresh Step® with Carbon
- World's Best Cat Litter™
- Swheat Scoop®

### **Location Aversions**

- Environment near litter pan
- Traffic or noise
- Other animals
- Negative association
  - Pain while in box
  - Medicated in box
- Accessibility

### **Substrate Preference**

- Carpet
- Bed or couches
- Clothes or shoes
- Plastic bags
- Soil in house plant
- Hard surfaces – porcelain

### **Location Preferences**

- Easier access
- Outdoor cat does not want to go outdoors in bad weather

### **Feline House Soiling**

- Eliminating on horizontal surfaces can be marking behavior
  - High cat density
  - Stress/anxiety: investigate other changes in cat's behavior

### **Feline House Soiling Treatment Overview**

- Rule out medical issues
- Remove the cause
- Re-establish litter box use
- Prevent access to soiled areas

### **Medical Causes**

- Diabetes
- Renal disease
- Urinary tract disease
- Metabolic disorders
- Incontinence
- Musculoskeletal disorders
- Neurologic disease
- GI tract disease
- Anal gland disorders
- Neoplasia
- Cognitive dysfunction

### **Rule Out Medical Problems**

- Urinalysis
- Culture
- Radiograph or ultrasound
- Endoscopy
- Assess water intake and urine frequency
- Assess dysuria
- Stool evaluation

### **Remove the Cause**

- Treat medical condition
- DO NOT PUNISH!
- Treat underlying anxiety / social issues
  - Consistent & predictable environment
  - Schedule time for daily interaction
  - Environmental management
    - Ensure access to litter box

### **Re-establish Litter Box Use**

- Add litter boxes
  - 1 box per cat *plus 1*
  - Bigger is better
- Litter cafeteria to determine litter preference
- Do not use liners
- Litter box hygiene
  - Scoop 1-2x daily (discard non-clumping daily)
  - Wash pans weekly with mild dish detergent, then replace litter

### **Prevent Access to Soiled Areas**

- Change *behavioral function* of soiled areas
  - Place food bowls, bedding, toys, etc., in area
- Make areas *undesirable*
  - Scat mat
  - Plastic carpet runner, nubby side up
  - Foil, plastic, or double-sided sticky tape
- Make areas inaccessible
  - Barriers
  - Water in bathtub
  - Place litter box over soiled area

### **House Soiling Treatment**

- Confine cat to small area temporarily
  - Reinforces habit of using litter box
  - Let cat out to socialize and play, but must be supervised 100%
  - Reward for using box
- Large cage with perch or shelf
  - Cover floor with litter
  - Gradually introduce litter box

### **Cleaning Soiled Areas**

- Bacteria / enzyme combinations
    - Anti-Icky-Poo®
    - Nature's Miracle®
    - KOE® (Kennel Odor Eliminator)
    - Feline Odor Neutralizer™
    - Planet Urine (UrineOut™ Powder)
    - Zero Odor®
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### **Urine Spraying**

- Urine sprayed on vertical surfaces
  - Some mark on horizontal surfaces
- Sexually dimorphic behavior
  - Males > females
  - Intact > neutered
- Related to number of cats in the home

### **Who Sprays?**

- 100% intact males
- Intact females in heat
- $\geq 10\%$  of castrated males
- $\leq 5\%$  of spayed females

### **Why Do Cats Spray?**

- Sexual communication
- Territorial – in response to odor or sight of outside cats
- Multiple cat household – high population density
- Anxiety – usually social issues
  - Coping mechanism or sign of stress (displacement behavior)?
- Environmental stimuli
  - Household changes, new person, novel objects
- Relationship with owner
  - Schedule / interaction changes
  - Use of punishment

### **Treatment of Spraying**

- Identify and remove triggers
- Neuter
- Deter outside cats from visiting
- Block window view
- Separate household cats
- Indoor/outdoor access
- Piddle Pants™
- Decrease cat population
- Litter box hygiene
- L-shaped boxes or spray panel
- Medication (CBC/chem panel first)
  - SSRI (fluoxetine, paroxetine)
  - TCA (clomipramine)
- Feliway® as adjunct
  - Cat may be less likely to spray over cheek gland secretions

House soiling	Urine marking
Elimination behavior – <i>can be</i> anxiety-induced	Marking behavior – hormonal, territorial signaling, or anxiety-induced
Address cause – medical, aversions, preferences, accessibility, stress	Identify and remove triggers
Re-establish litter box use	Neuter; litter box hygiene
Prevent access to soiled areas	Block access to outdoor cats; separate indoor cats
Medication – rarely needed (unless social issues)	Medication – usually needed

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## Canine House Soiling

### Canine House Soiling Differentials

- Incomplete house-training
- Marking behavior
- Excitement urination
- Submissive urination
- Medical
- Separation anxiety, noise / storm phobia
- Cognitive dysfunction
- Management-related problems
- Location or surface preferences

### Medical Causes of Canine House Soiling

- Diabetes insipidus
- Diabetes mellitus
- Drug induced
- Hepatic insufficiency
- Hyperadrenocorticism
- Hypercalcemia
- Hypoadrenocorticism
- Hypokalemia
- Neoplasm
- Pyometra
- Renal insufficiency
- Urinary incontinence



- Anomalies
- Estrogen responsive
- Neurogenic
- UTI

### **Canine House Soiling**

- Punishment after the fact
- Learned non-elimination – walk ends when dog eliminates
  - Dog is rewarded with longer walk for NOT eliminating outside
- Smaller core area for small breeds

### **Treatment of Canine House Soiling**

- Medical workup
- Constant supervision
- Reinforce elimination in appropriate area
- Confinement
  - Crate training – take outside every hour
- Supervision!
  - Umbilical cord
- Increase frequency of walking
  - Take out for 5 minutes every 2 hours
- Paper training – must re-train to go outside
- Doggie door
- Behavior modification
  - Reward for eliminating in proper place
- Control feeding schedule – post-prandial elimination
- Lower fiber diet
- Clean soiled areas
- Prevent access to inappropriate areas

### **Submissive Urination**

- Usually puppies and young female dogs
- Related to social status

- Identify and avoid all stimuli or situations that trigger urination
- Avoid direct approaches
- DO NOT PUNISH!!!
- Differential reinforcement / response substitution
  - Perform behavior incompatible with urination
- Obedience training to build confidence
- Patience!

### **Excitement Urination**

- Dog is highly aroused or conflicted
- Lack submissive behaviors
- Identify and avoid triggers
- Keep greetings low-key
- Treatment similar to that with submissive urination

### **Marking**

- Usually intact male
- Territorial or anxiety
- Castration reduces marking in 70-80% of dogs
- Clean areas / block access
- Provide a place for dog to mark with impunity
  - Stake in yard for marking – reward behavior

### **Litter Boxes for Dogs**