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

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

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
- ≥ 10% of castrated males
- ≤ 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

| Elimination behavior – can be 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