



My Cat is Peeing all over the House

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Murphy

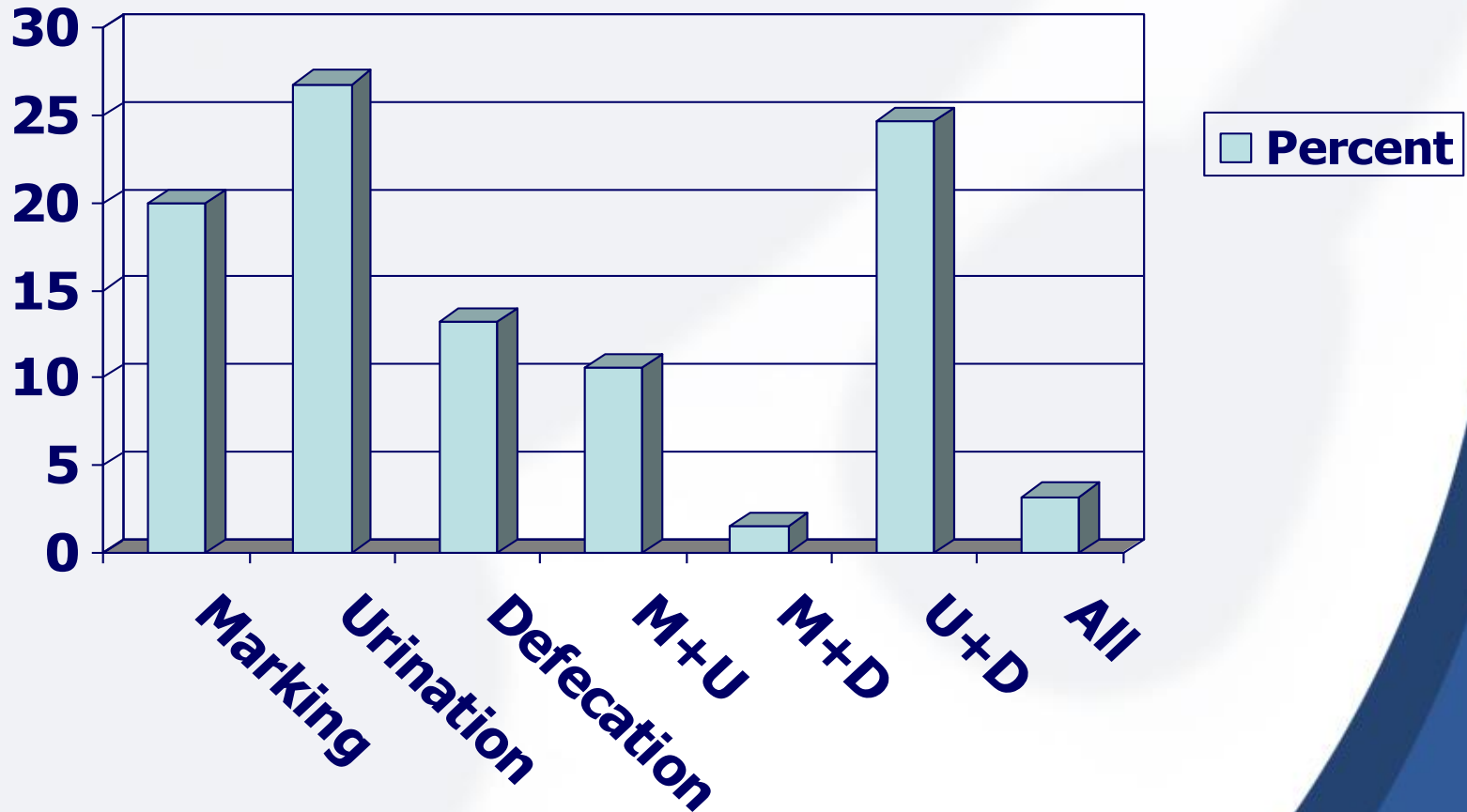
4.5 yr old, MN, Persian, 7#



- Presenting complaint:
 - Urinating on horizontal surfaces
- Occurrence
 - Daily
 - Onset – always
- Observation of behavior
 - Scratches surface, squats and urinates

Type of elimination problem

(N=340)



History

- Obtained at 8 months of age from breeder
 - Two previous homes
- Lives with John and Kate
- Zach – previous cat
 - 6 yo, MN, Persian
 - New home



History

- Zach was attacking Murphy
 - Started 3.5 years ago
 - Sent to stay with friends 1 year ago
- No effect on house soiling

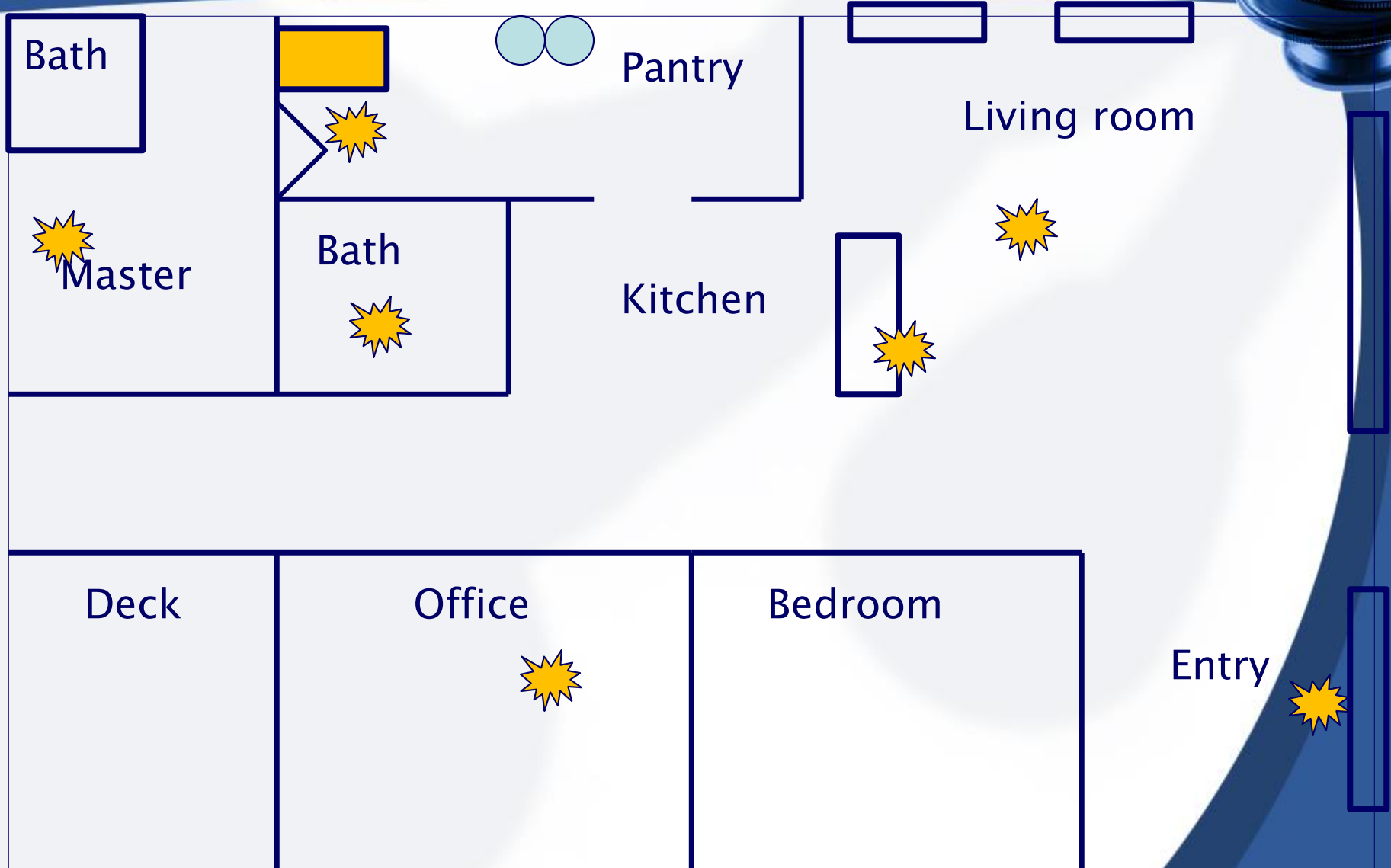


Environment



- 1200 sq foot home
 - No access to bedroom, office, media room
- Outdoor access
 - On leash
- Preferred location
 - Living room

Floor Plan



Inappropriate Elimination

- Bath mats
- Suitcase
- New objects
- Door mats
- Area rug
- Comforter
- Cardboard Boxes
- Newspapers
- Gym bag
- Cat carrier
- Couch
- Beds
- Purse



Environment – Litter Box



	Box
Type	Open
Age	3 years
Location	Near stairs
Litter type	Clumping clay
Additives	Liner
Scooping	Daily
Emptying	Every 2 months

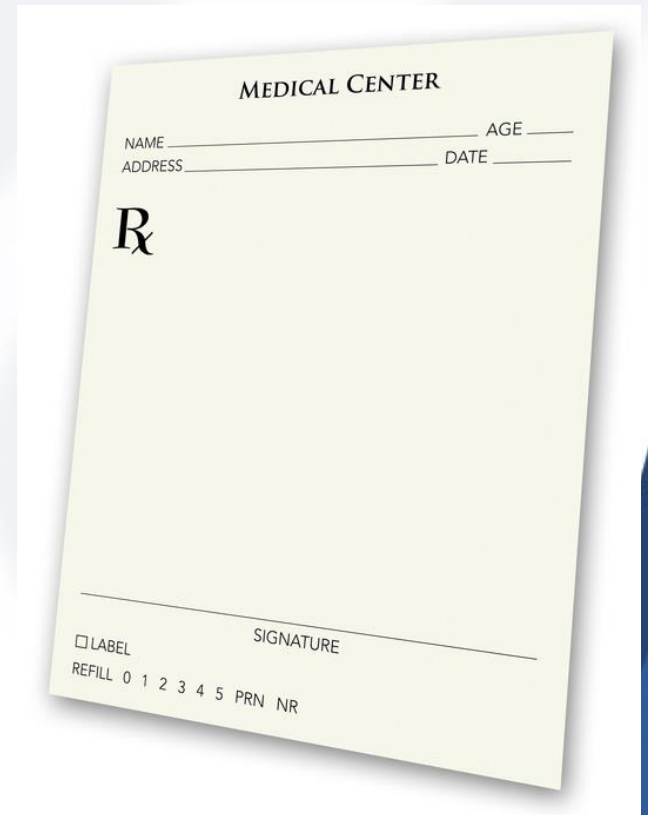

Elimination Behavior

- Leaves stool uncovered
- Scratches on wall, edge of box
- Eliminates just after box is cleaned



Previous Treatments

- Feliway spray and diffusers
- Closing doors
- Cat repellent
- Sticky Paws
- Nature's Miracle
- Added second litter box



MEDICAL CENTER

NAME _____ AGE _____
ADDRESS _____ DATE _____

Rx

SIGNATURE

LABEL
REFILL 0 1 2 3 4 5 PRN NR

Diagnostic Process



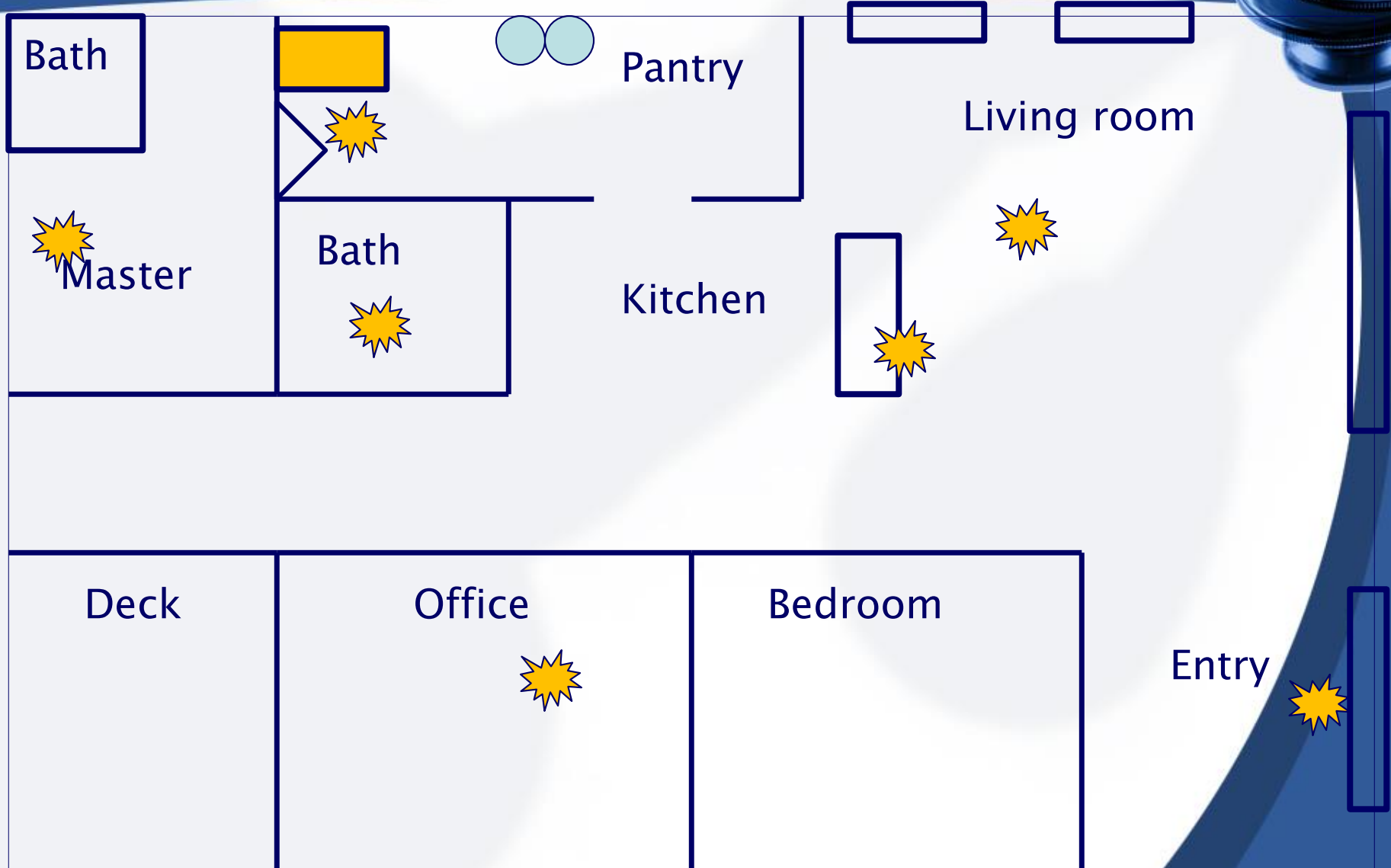
- Rule out medical conditions
- Take detailed behavior history
- Determine frequency of problem
 - Progress can be assessed

Differential Diagnoses



- Litter box
 - Size
 - Hygiene
 - Covered
- Location avoidance
 - Lack of access/inconvenient
- Location preference

Floor Plan

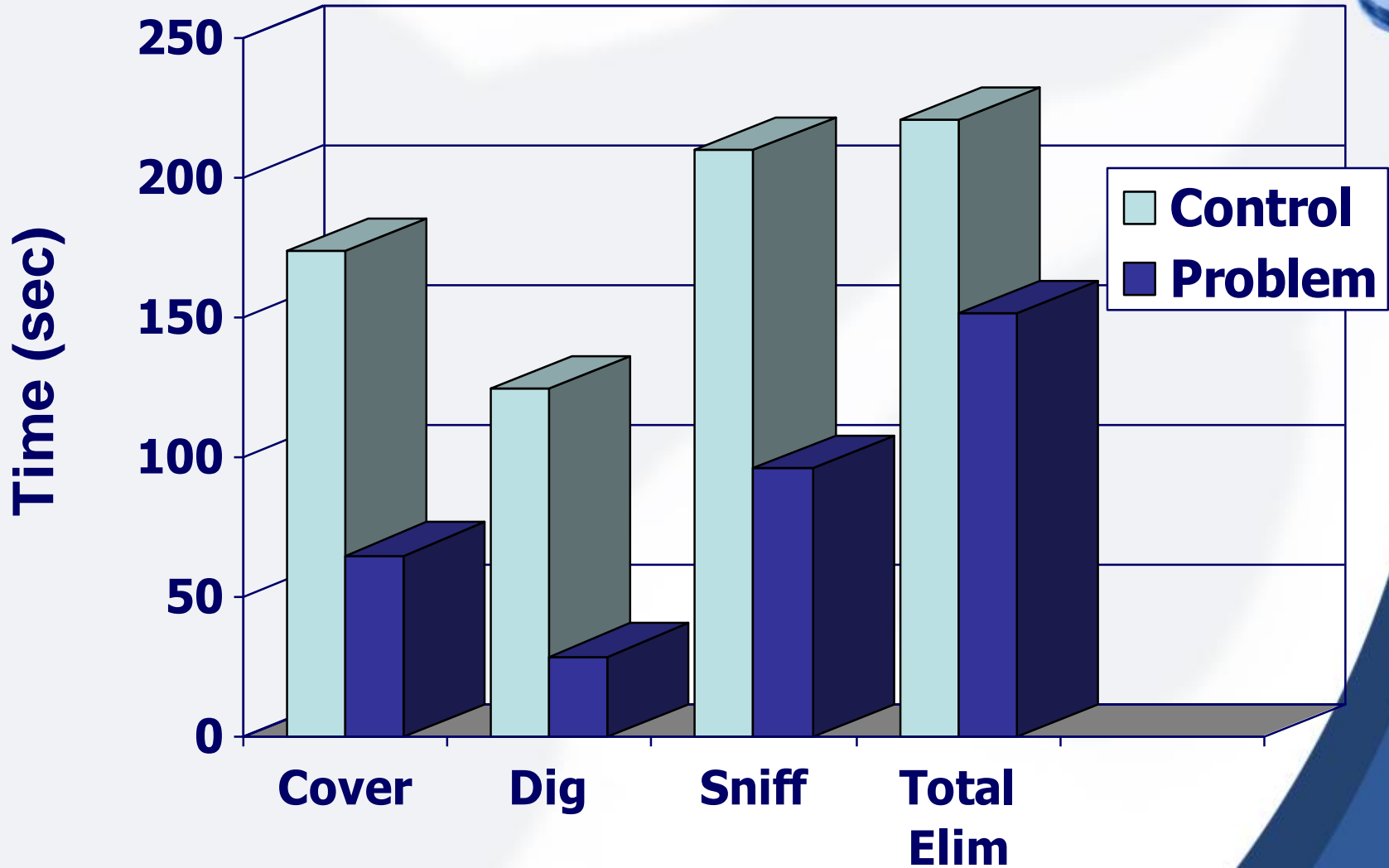


Substrate Aversion

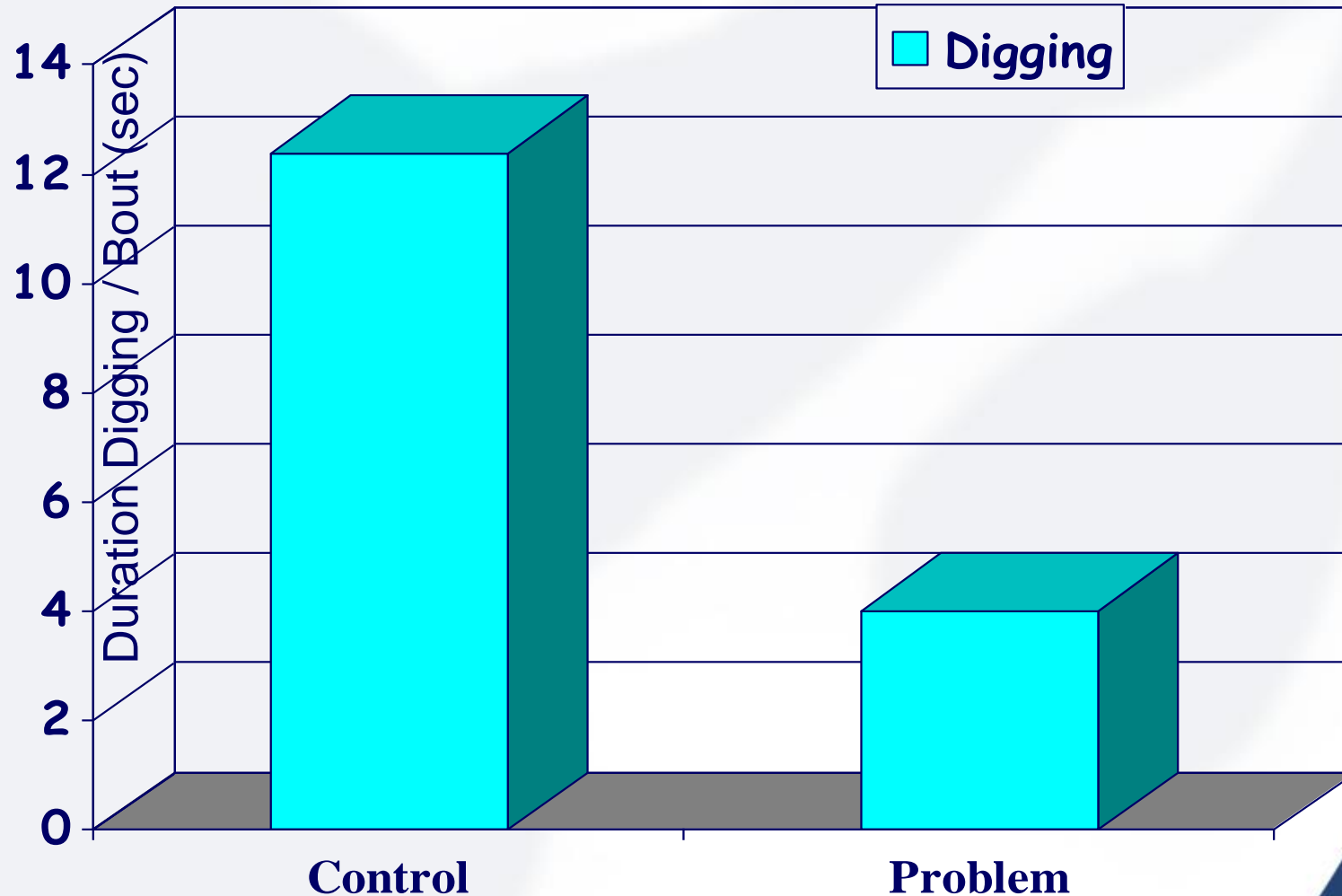
- Avoids touching litter
- Shakes paws
- Stands on edge of box
- Fails to cover



Litter Box Activity



Digging in Substrate ($p=0.001$)



Diagnosis – Substrate Aversion



- Long-haired cat
- Litter box hygiene
- Disturbances near litter box
 - Altercations with other cat

Simple Treatment Steps



Compliance is achieved when

- Specific and consistent recommendation is made
- Client accepts that recommendation
- Follow-through occurs

Initial Treatment Plan

- **Litter box**
- **Litter preference trial**
- **Soiled areas**
- **+ / - Medication**



Litter Box Size

- For large cats, even largest commercially available box may be too small
- Purchase plastic storage boxes





35" x 16"



23" x 16"



40" x 25"

Long Hair

- Litter and waste material may get caught in toes and perineal area of some long-haired cats
- Keep long hair between toes and in perineal area trimmed short



Litter Box Hygiene



- Frequent cleaning
 - Check and scoop twice daily
 - Change clumping litters monthly
- Avoid scented litters, additives, and liners

Substrate



Which litter type do most cats prefer?

- A. Pellets
- B. Clumping Clay
- C. Wheat
- D. Clay (non-clump)
- E. Crystals (silica)



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Borchelt P, Vet Clinics North America 1991
Neilson JC, Pearl vs. Clumping, ACVB Proceedings, 2002

Substrate Aversion



- Litter smorgasbord
 - Begin with two or more readily available brands
 - Offer different litter types in same location simultaneously
 - Keep log of usage
- Most cats prefer fine textured, unscented, clumping litter

Substrate Preference Test

- Offer substrates that resemble preferred substrate
 - Current litter
 - Wheat: SWheat Scoop, Wheat 'n Easy
 - Corn cob: WBCL, Cobby Cat
 - Paper: Pa-Purr, Yesterday's News
 - Cedar: Feline Pine
 - Cloth: diapers, training pads
 - Sand



Substrate Preference

- Cats can develop preferences for substrate other than litter
- Likely if cat uses multiple sites, but is consistent regarding type of substrate



Substrate Preference



- Isolate from substrate or prevent access to substrate
- Allow on substrate only under supervision
- Gradually allow out with decreasing amounts of supervision if inappropriate behavior does not resume

Medication Options



- Buspirone Buspar[®]
- Paroxetine Paxil[®]
- Fluoxetine Prozac[®]
- Sertraline Zoloft[®]
- Gabapentin Neurontin[®]

Maintenance Drugs



Standing Therapies

- Treatment of chronic conditions
 - Relief of mild to moderate anxiety
- Slow onset of action
 - 4–8 weeks to see maximum effects
- Daily dosing
 - Steady state plasma levels
- Supportive of behavior modification
 - May enhance learning
- Rare to see tolerance

Pheromone Therapies



Pheromones

- Nonvolatile, bioactive compounds
- Activate vomeronasal organ sensory neurons
- Regulate social behaviors and neuroendocrine release

Commercially-Available Pheromones

- Feliway
 - Facial pheromone
- Feliway Multicat
 - Appeasing pheromone



Follow-Up, 4 weeks

- No episodes since consult
- Owners removing targets
- Two large litter boxes
 - Murphy loves them
- Preference trial
 - Clumping clay
 - Covering both urine and stool



Follow-Up, 10 weeks

- Owners took 3-week vacation
 - Murphy had pet sitter
 - 2–3 accidents



Follow-Up, 5 months

- Moved one month earlier and Murphy started house soiling again
 - Couch
- Treat sofa with AIP
- Rx buspirone
 - 2.5 mg bid po



Buspirone (Buspar[®])

- Direct-acting 5-HT_{1A} receptor agonists
- Dopamine (D2) receptor antagonist
 - Anxiolytic properties similar to BZD
 - Non-sedating, non-habit-forming



Buspirone – Side Effects



- Friendliness (to owners)
- Agitation
- Sedation
- GI upset
- Increased assertiveness

Follow-Up, 7 months

- Several accidents
 - Yoga mat
 - Rug
 - Door mat
 - Blanket on floor
- Change to paroxetine
 - 2.5 mg daily po



Treatment Failures



- Review behavior and environmental modification protocol
- Switching versus Augmenting
 - If one drug does not work, another one might
 - Even drugs with same mechanism will sometimes have very different effects in individual patients

Paroxetine (Paxil®)



- Selective serotonin reuptake inhibitor

Paroxetine – Adverse Events



- **Gastrointestinal**
 - Constipation
 - Inappetance

Follow-Up, 9 months

- Several episodes of urination
 - Area rug
- Switched to fluoxetine
 - 2.5 mg daily po



Follow-Up, 11 months



- No accidents, complete resolution
 - Introduced two new rugs
 - Vacation
- Continue medication 2 months past complete resolution
 - Taper dose by 50% x 30 days

Duration of Treatment



- Expected duration
- Follow-up and reevaluate
- Limit number of refills
- Plan for tapering or weaning medication

Lifelong treatment with medication
should be the exception, not the rule