



# Don't leave me this way! How to approach canine separation anxiety

---

Katherine (Kat) Pankratz, DVM DACVB  
Animal Behavior Clinic, Portland, OR  
530-236-7833 | [Animalbehaviorclinic.net](http://Animalbehaviorclinic.net)

Session sponsor: VetStrategy

---



# Disclaimer:

---

This presentation contains many various examples of products

The presenter **IS** affiliated with one company (Calmer Canine, Assisi Animal Health) without any financial disclosures



# Learning Objectives



Recognize canine separation anxiety



Separation anxiety vs other diagnoses



Design a treatment plan

Terms and definitions vary amongst experts

---

Separation Anxiety

Separation-related disorder

Separation-related distress

Isolation distress



# Other species may also have separation anxiety

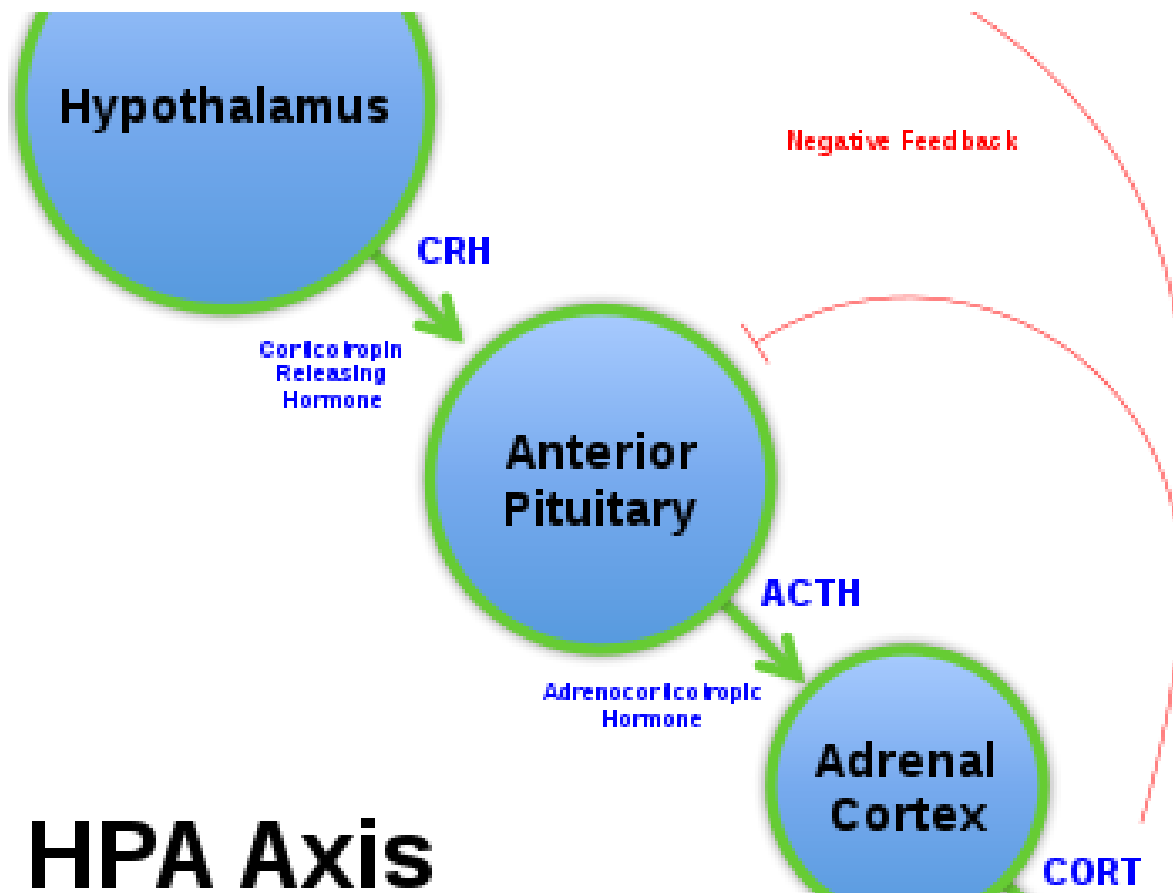
---

Schwartz S. Separation anxiety syndrome in cats: 136 cases (1991-2000). *JAVMA* 2002

Schwartz S. Reference point: separation anxiety syndrome in dogs and cats. *JAVMA* 2003



Canine separation anxiety (SA) is anxiety with owners absence (real or virtual)



Physiological & emotional distress in anticipation or actual absence





Influencers of SA  
include  
selective breeding,  
early experiences,  
& learned behavior

---

Prevalence



Separation anxiety  
is a very common  
behavior disorder

---

# Scope of the problem

---

Canine separation anxiety (SA) is anxiety with owner's absence (real or virtual) affecting 14-20% dogs

Ballantyne KC. *Vet Clin North Am Small Anim Pract.* (2018)

Bamberger M, Houpt KA. *Am Vet Med Assoc.* (2006)

Blackwell E, et al. *Vet Rec.* (2006)

Storengen LM, et al. *Appl Anim Behav Sci.* (2014)

McGreevy PD, Masters AA. *Appl Anim Behav Sci.* (2008)

# SA can occur in any age, breed, or sex

---



55% of dogs show signs  
before 3 years of age

Horwitz & Neilson. Blackwell 2007

# There may be some predisposing factors:

---

- Neutering
- Lack obedience training
- Adoption (shelter/rescue/stray)
- Left alone for extended time
- Changes in home
- Single-owner households
- Hereditary

Horwitz & Neilson Blackwell 2007  
Flannigan & Dodman. JAVMA 2001  
Clark & Boyer AABS 1993  
Blackwell et al. JVB 2008



Owners may  
misinterpret  
anxiety as  
“spite”

---

# Educating that not due to pet anger, too much love, boredom, or dominance

---



Appleby & Pluijmakers VCNA 2003  
Flannigan & Dodman JAVMA 2001





# SA may be under-diagnosed due to subtle signs

---

AS FEW AS 13% OF OWNERS MAY SEEK ASSISTANCE

Simpson BS. Canine separation anxiety  
Compend Cont Educ Pract Vet 2000

# Subtle signs contribute to underdiagnosis



Simpson BS. *Compend Cont Educ Pract Vet* 2000  
Palestrini C, et al. *Appl Anim Behav Sci.* (2010)  
Cannas S, et al. *J Vet Behav.* (2014)  
Scaglia E, et al. *J Vet Behav.* (2013)

# SA is a welfare issue for dog and client

---



# Clinical Signs

# Nonspecific clinical signs

---

- Vocalization
- Destruction
- Elimination
- Hypersalivation
- GI changes
  - Anorexia
  - Vomiting
  - Diarrhea
- Escape attempts
- Pacing/motor activity
- Fearful postures
- Aggression
- Self-mutilation
- Exaggerated greetings

Signs may begin before departure

---



Signs occur within minutes of departure,  
may wax/wane or continue unabated

---



Destruction



# Destruction is focused on exits or objects

---





Chewed  
objects are  
associated  
with owner

---

Confinement may limit destruction but intensify anxiety and escape attempts

---



# Vocalization

Anxious vocalization can be persistent and risk noise complaints

---

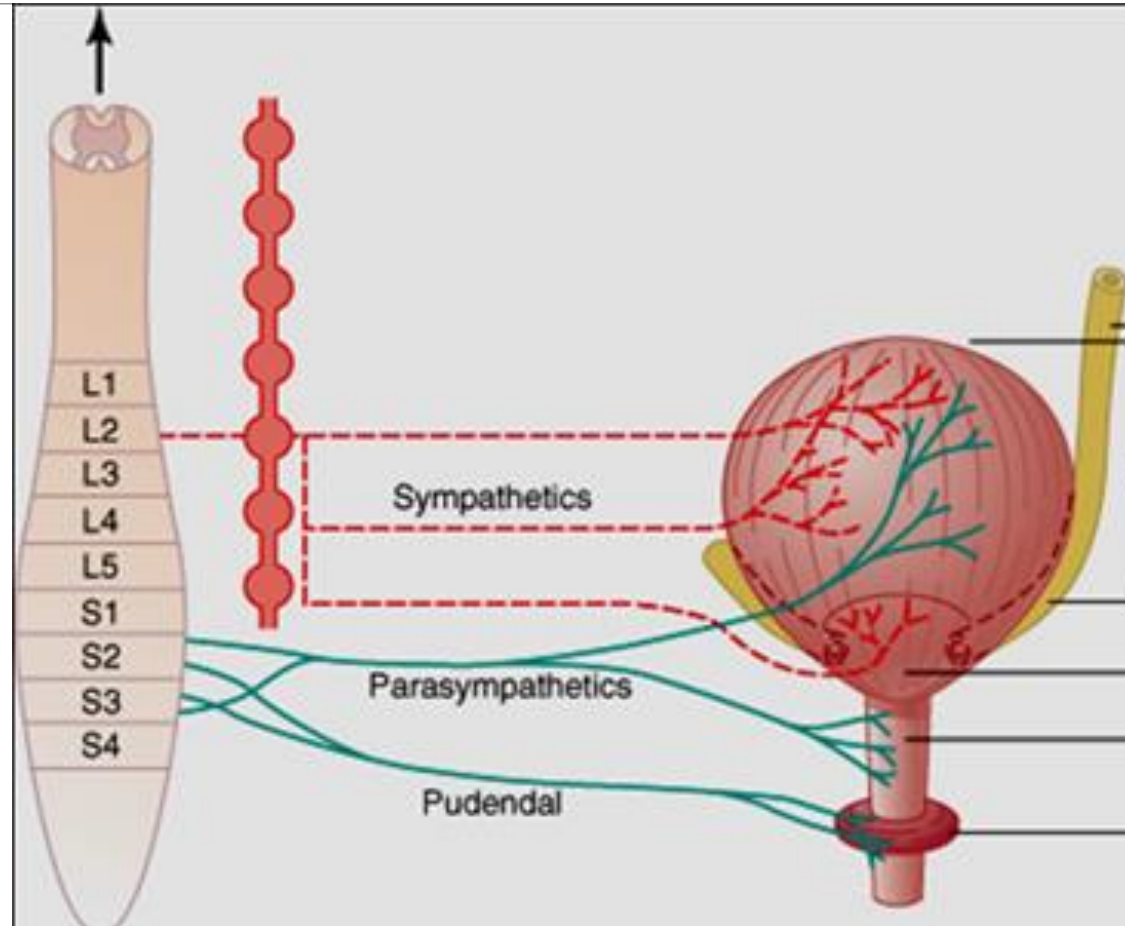


# House Soiling



House trained  
dogs may  
eliminate  
when anxious

# House soiling is due to autonomic arousal





# Hypersalivation



Hypersalivation can be extensive & may be pathognomonic

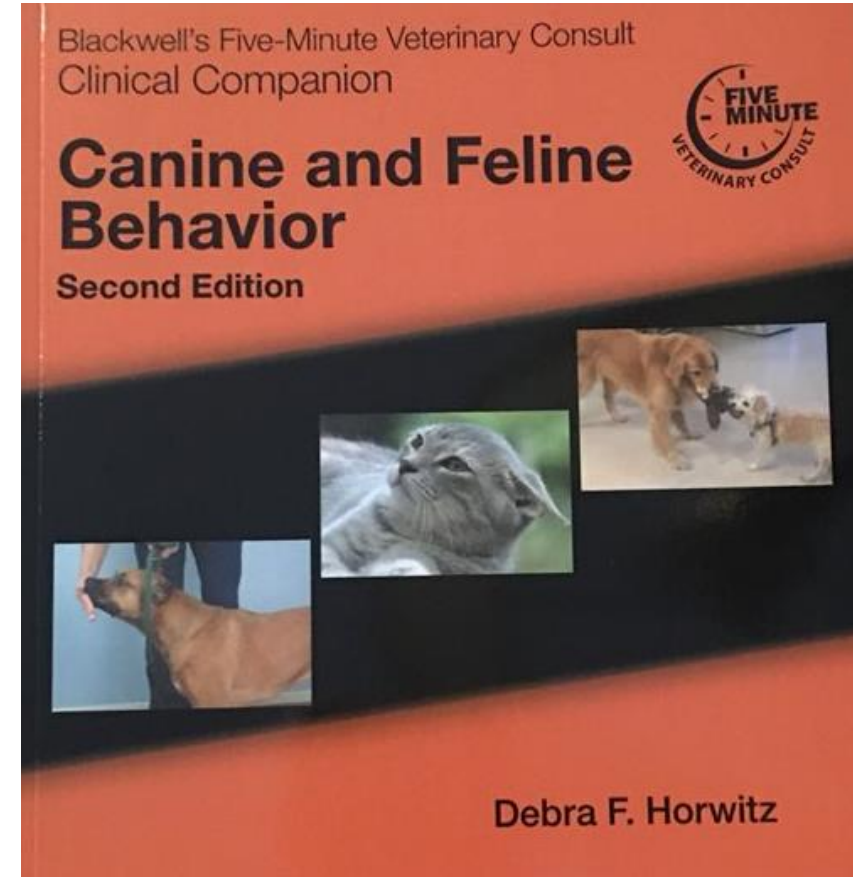
---

# Diagnosis

# Gather information for diagnosis

---

- Response to owner departure
- Response to owner return
- Changes at onset of problem
- Screen for other anxieties



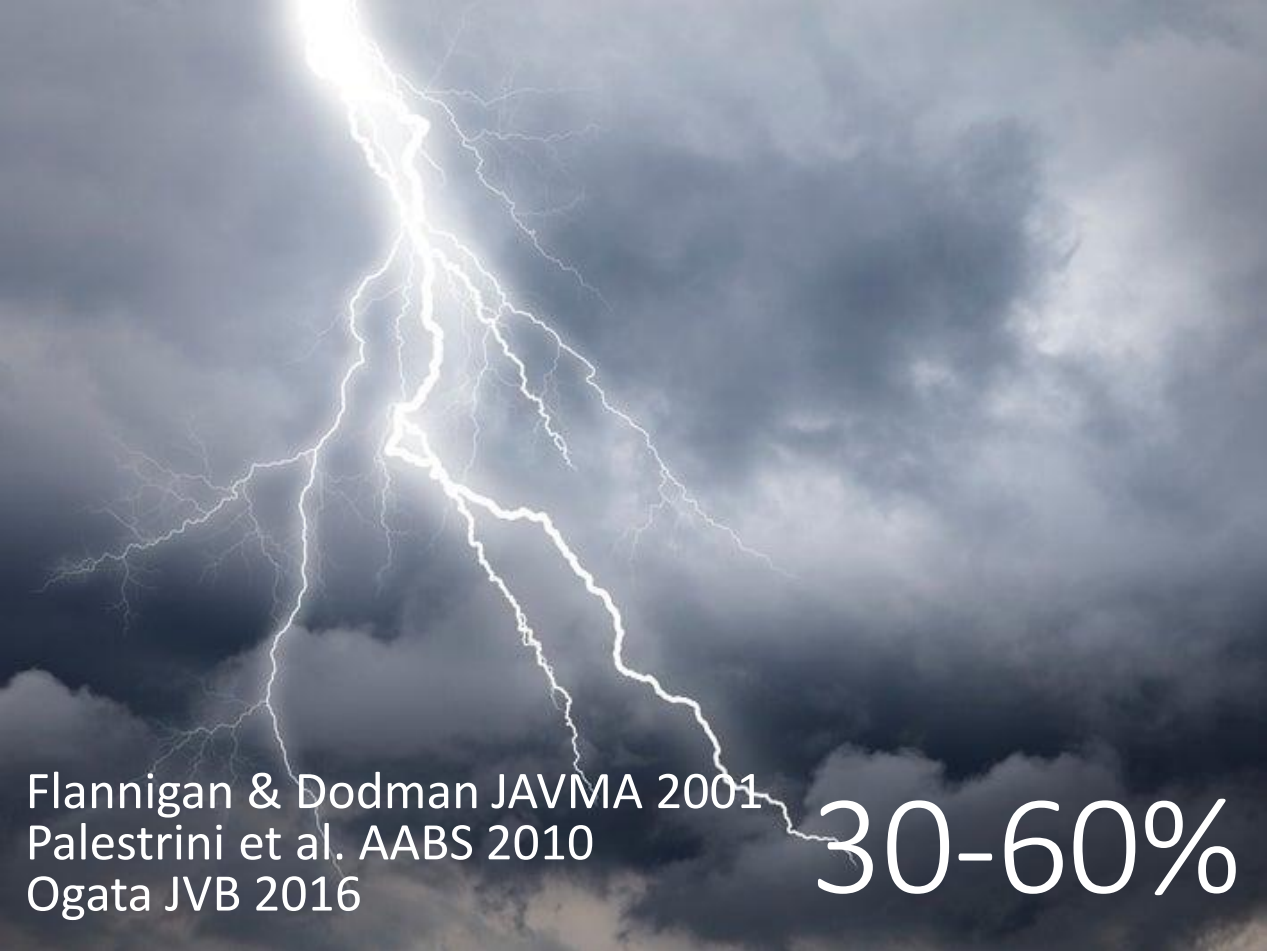


## Rule out SA differentials

---

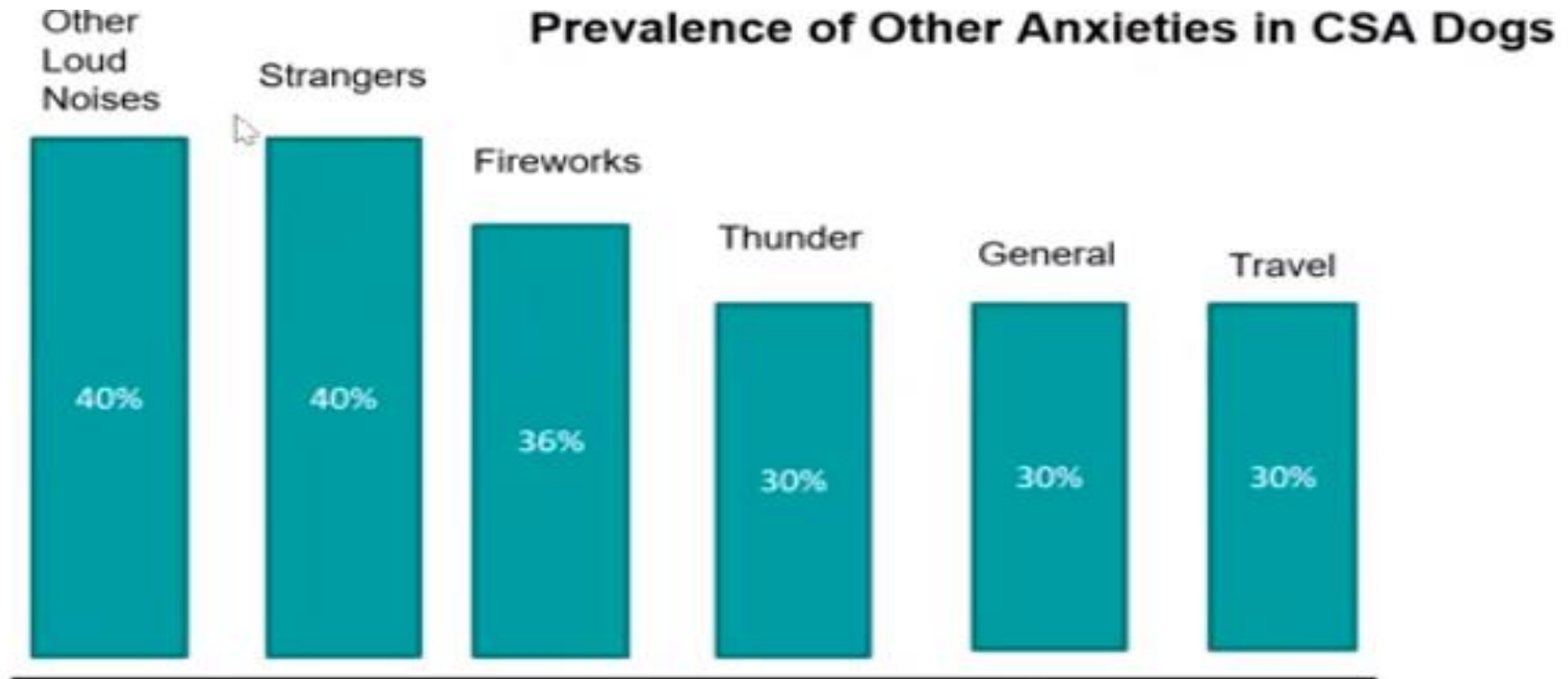
- Not exclusive with departures/alone
- Only occur with other events (storms)
- Only occur when confined

# Comorbidities



SA / Noise phobia / Confinement distress

# Comorbidities



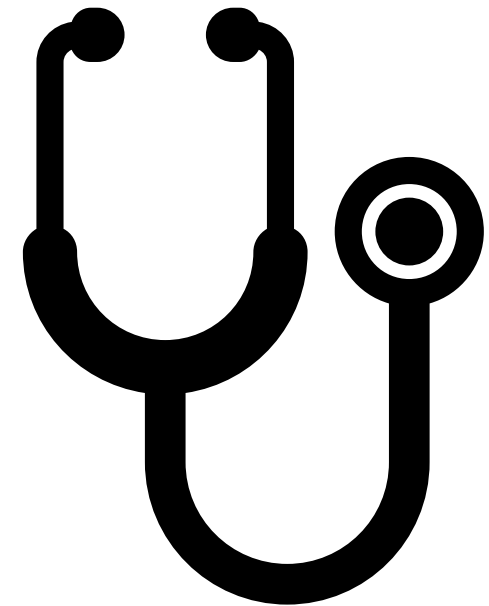
Source: Assisi Animal Health Dog Owner Survey 2020



# Screening diagnostics include:

---

- Physical exam
- CBC, chemistry, UA, thyroid
  - Screening & prior to behavior medications
- Additional diagnostics may be warranted
- Video of behavior when alone





Many ways to capture and send videos

# Video is required for accurate diagnosis

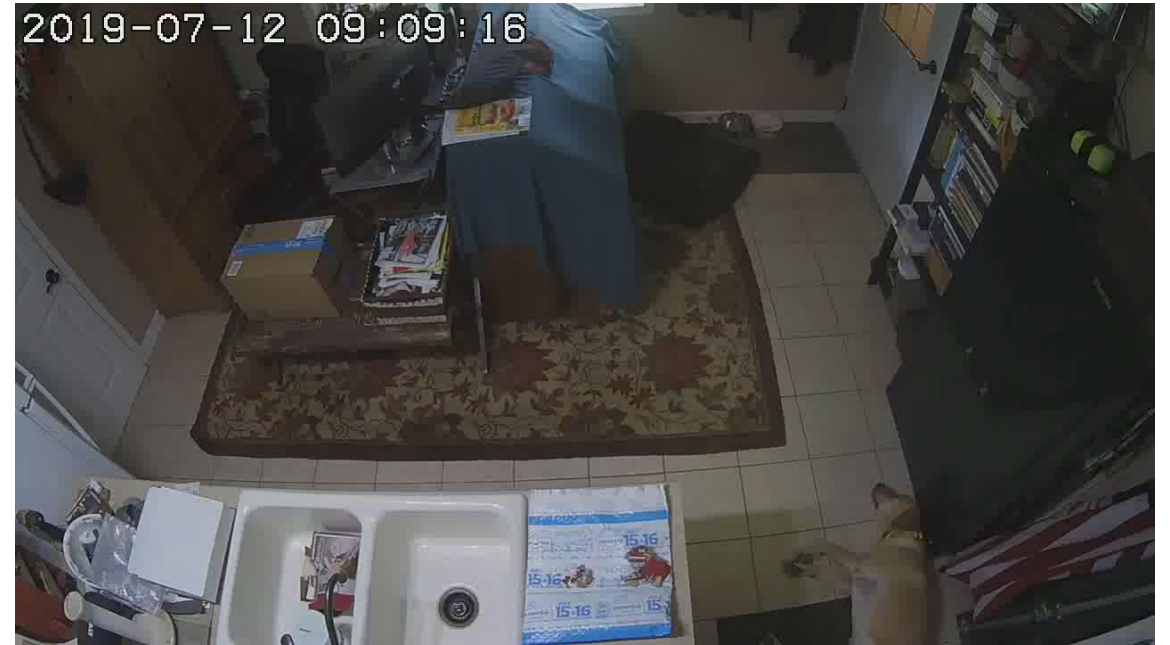
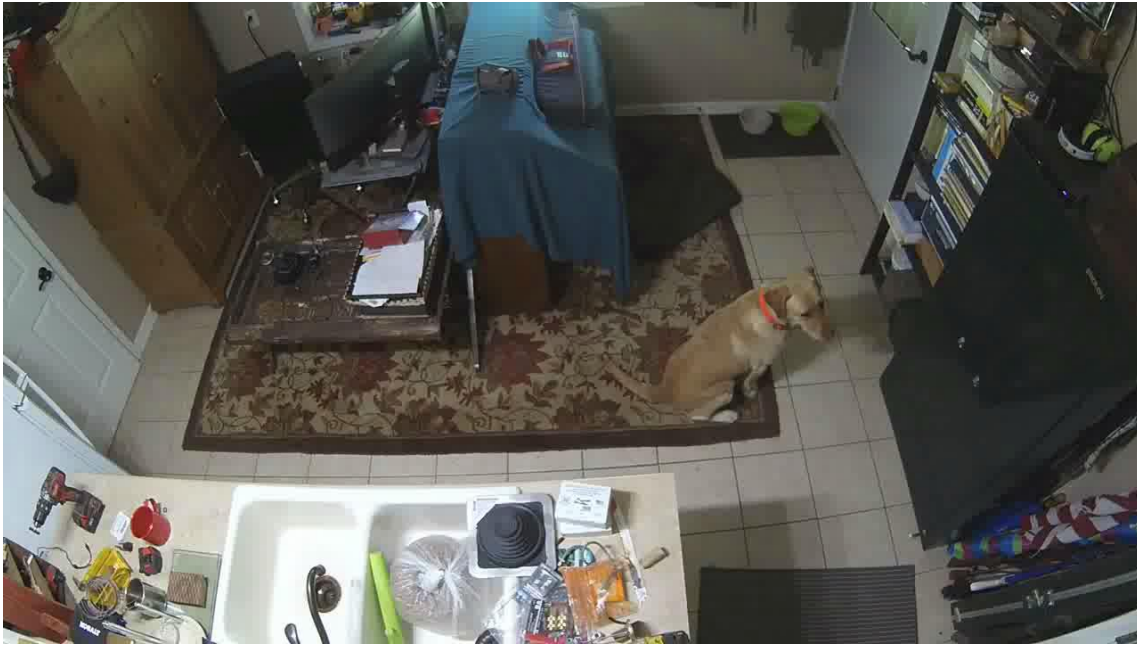
---



Palestrini C et al. Video analysis of dogs with separation-related behaviors. AABS 2010

# Video provides baseline for comparison

---



Treatment



Treatment delay compromises welfare

---

# 5 M's of Treatment Approach:

---

**M** Medical

**M** Motivation

**M** Management

**M** Modification

**M** Medication



## 5 M's of Treatment Approach:

---

**M** Medical – ruled out or treated

**M** Motivation – reunited with attachment figure

**M** Management

**M** Modification

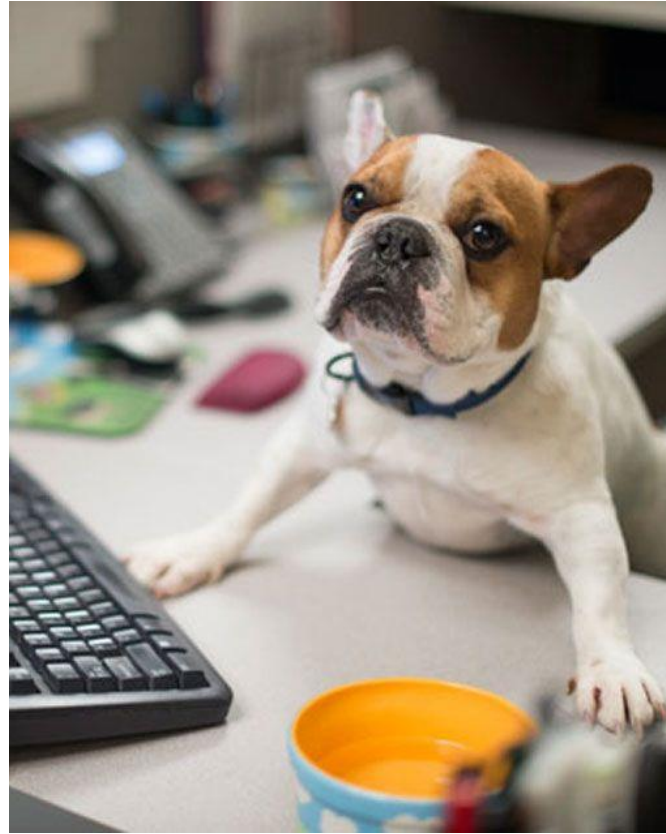
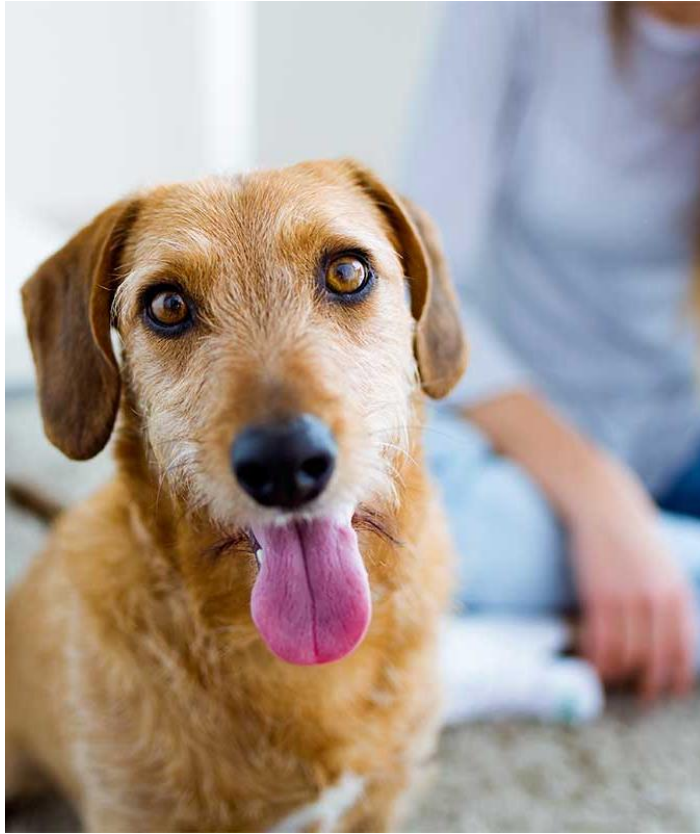
**M** Medication



Management

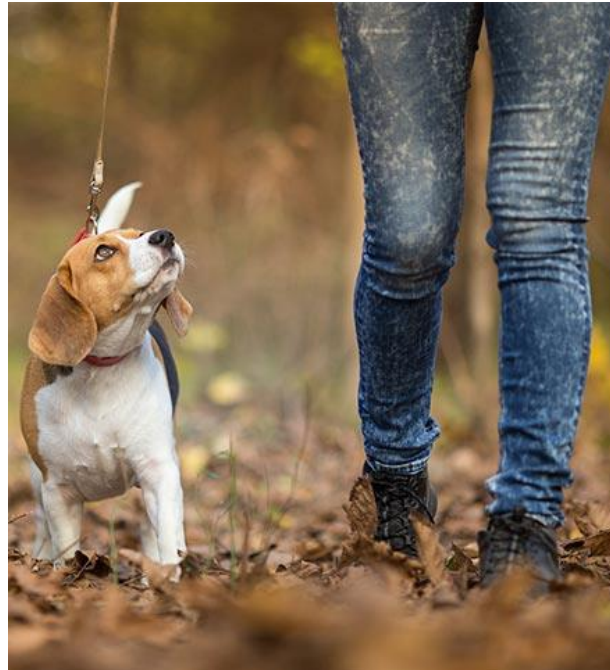
# Management: goal to avoid rehearsal

---



# If left alone, minimize departures

---



# Minimize environmental stressors

---



# Remove triggers of clinical signs

---



Melese AABS 1994



White noise may buffer external stimuli

# Provide for needs and a safe place

---

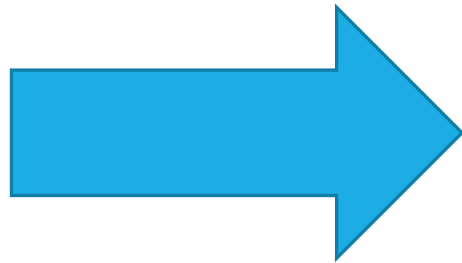


Modification



Modification: goal to change emotion

---





---

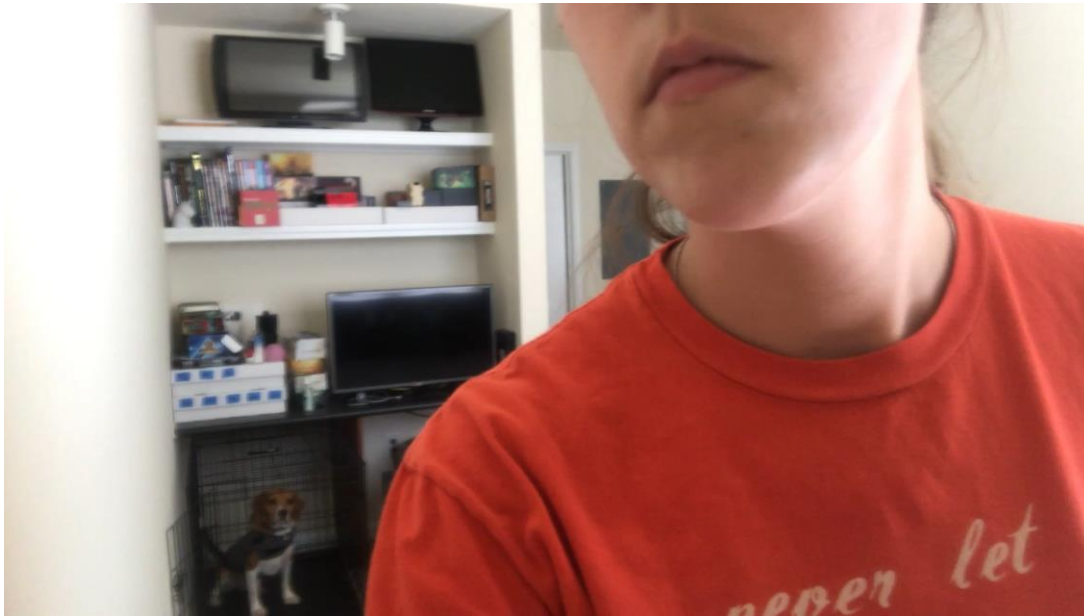
No Big Deal:  
low key departures  
& arrivals



# Counter- condition with Puppy Disneyland

# Coping skills include independence & diffusing departures/arrivals

---



# Independence changes relationship

---



Seksel K Vet Beh Chapt 2013

# Build distance/time away with rewards

---



Clark & Boyer AABS 1993

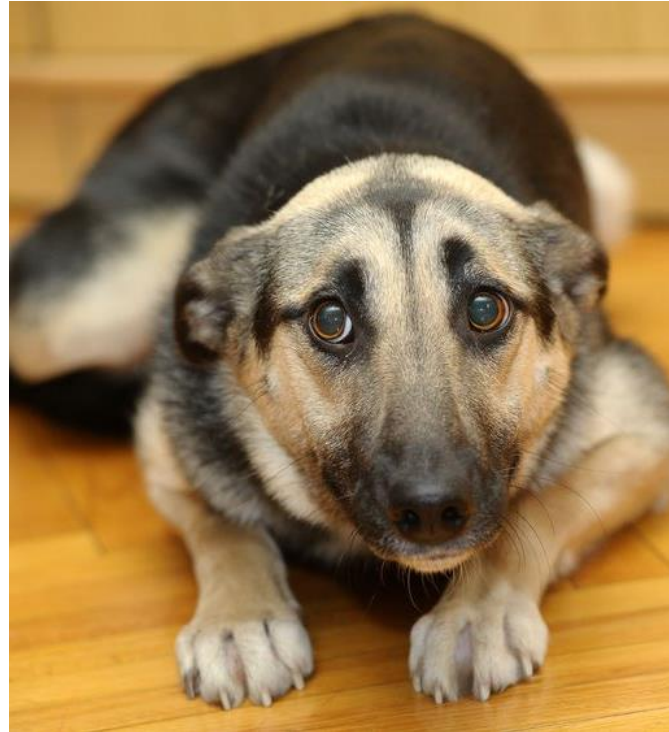
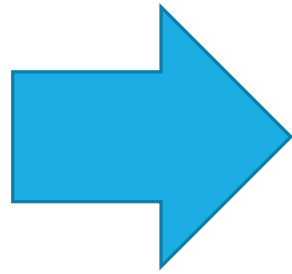
# Cautiously controlled planned training departures (don't go too fast!)

---



# Punishment is contraindicated

---





# Management + Modification

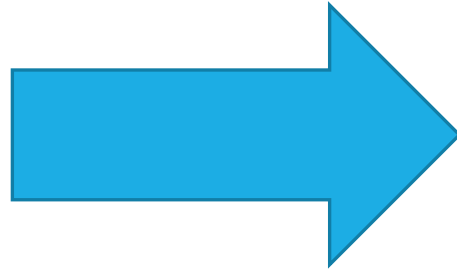
---



# Medication

# Medication: goal to decrease anxiety

---



# “Medication” go beyond pharmacology

---



**Pharmaceuticals**



**Nutraceuticals**



**Dog-Appeasing  
Pheromone**



**The Anxiety Wrap**



Polypharmacy may improve welfare

---

Some FDA labels, but most are extra-label

---



***CLOMICALM***<sup>®</sup>  
(clomipramine hydrochloride)

**Reconcile**<sup>®</sup>  
(fluoxetine hydrochloride)

# Treat the patient, not the diagnosis

---





***CLONICALM***<sup>®</sup>  
(clomipramine hydrochloride)

---



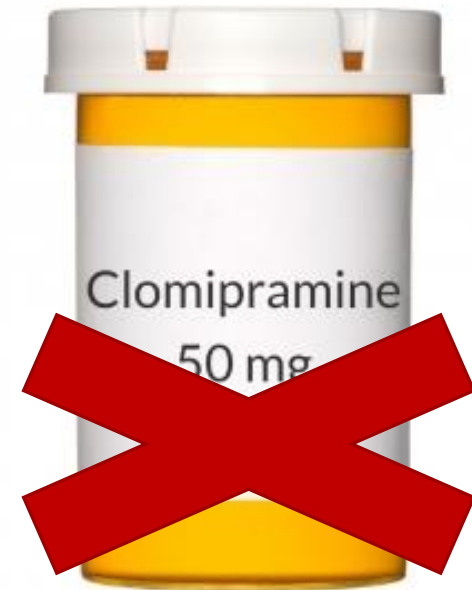
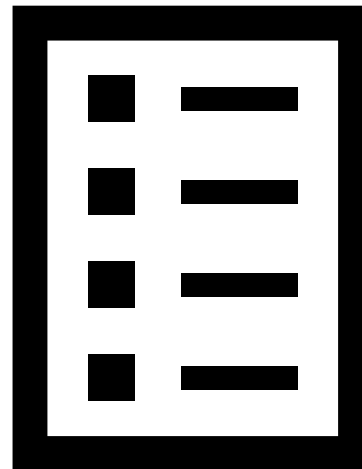
# Clomicalm: FDA label requirements

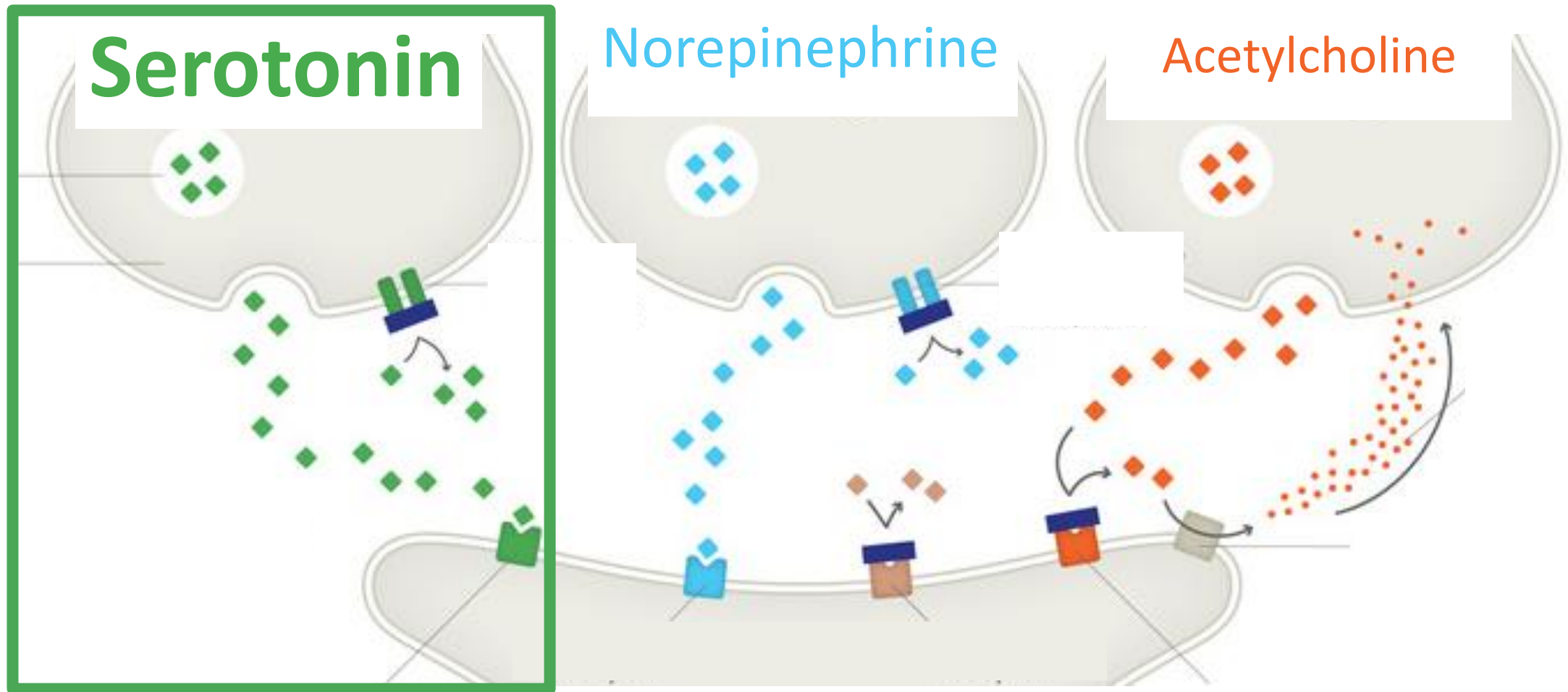


- DX: canine separation anxiety
- Combined with treatment plan



**TX Plan**

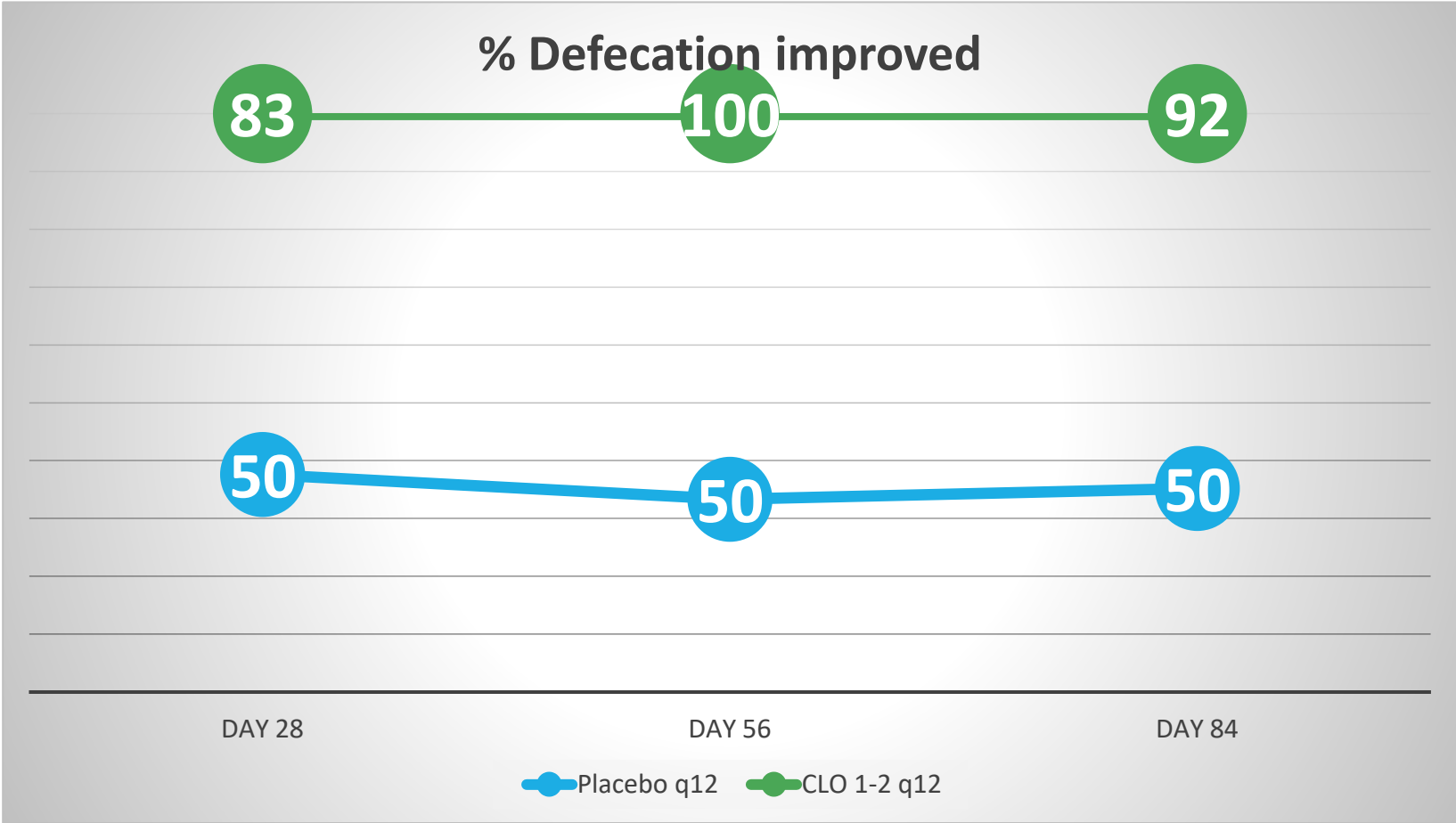




Clomicalm = tricyclic antidepressant (TCA)

---

# Faster and greater improvement



King et al. AABS 2000  
King et al. AABS 2004

# Clomicalm dosing information

---

- Dogs >6 months of age
- Dose: PO 2-4mg/kg/day (split dose)
- 4-6 weeks to effect
- Side effects: lethargy, vomiting
  - Reduce vomiting risk: give with food



# Caution with other serotonergic agents

---

Other Tricyclic Antidepressants (TCA)

Selective Serotonin Reuptake Inhibitors (SSRI)

Serotonin Antagonist & Reuptake Inhibitor

Monoamine Oxidase Inhibitors (MAOI)

**Reconcile<sup>®</sup>**  
(fluoxetine hydrochloride)

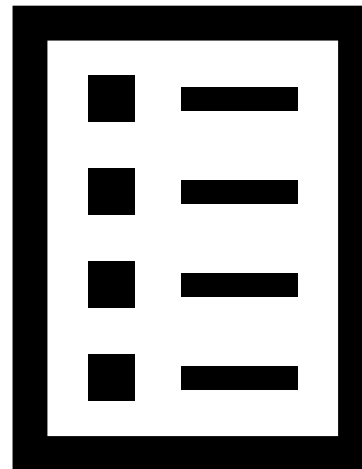
# Reconcile: FDA label requirements



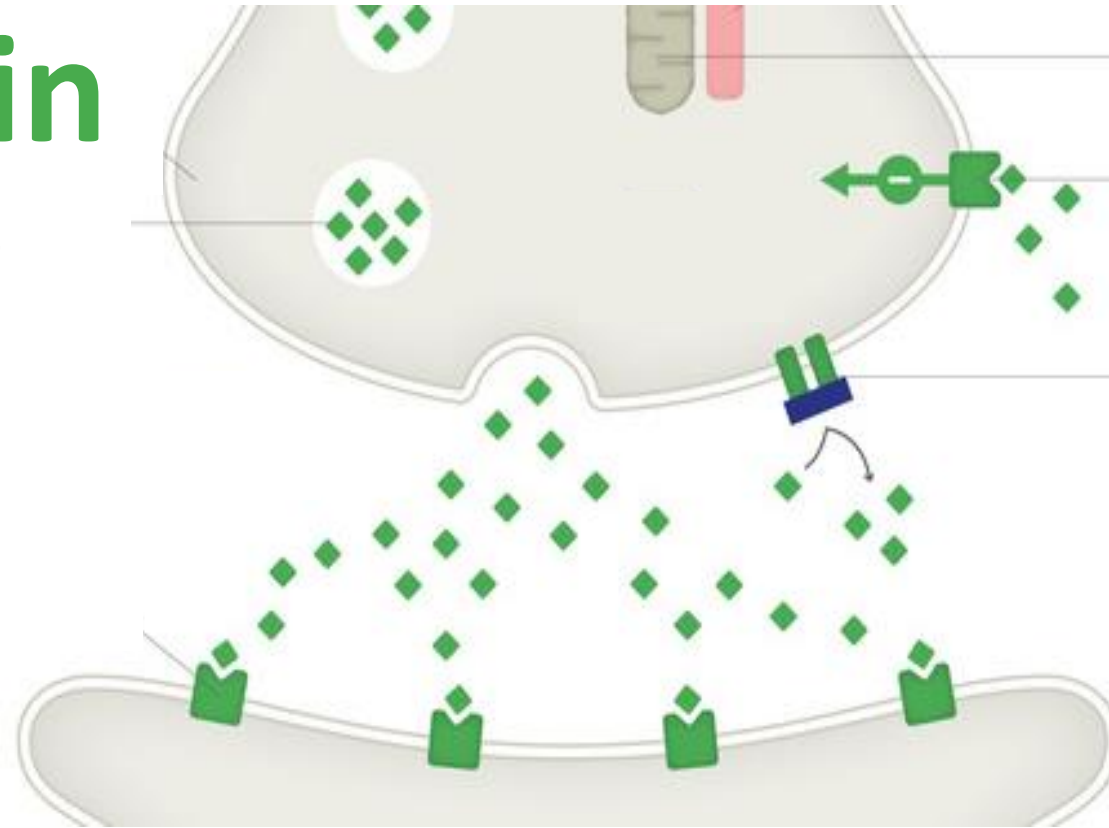
- DX: canine separation anxiety
- Combined with treatment plan



**TX Plan**



# Serotonin

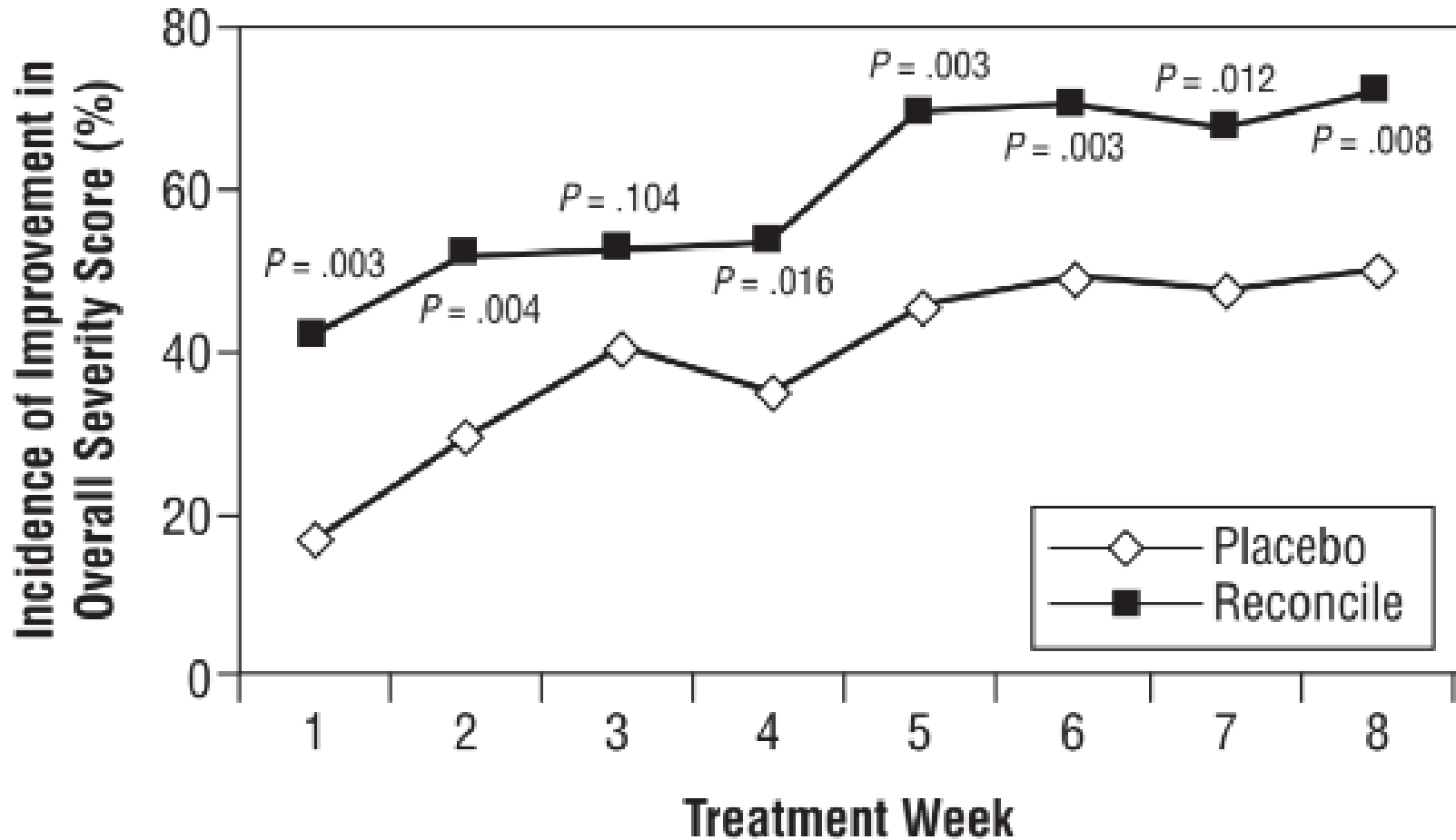


Reconcile = selective serotonin reuptake inhibitor (SSRI)

---



## The Percentage of Dogs with Improved Overall Severity Scores Was Highest in the Reconcile Group



Faster and  
greater  
improvement

Simpson et al. Vet Therapeutics 2007  
N=229

# Reconcile dosing information

---

- Dogs >6 months of age
- Dose: PO 1-2mg/kg/day
- 4-6 weeks to effect
- Side effects:
  - Lethargy
  - hyporexia



# Caution with other serotonergic agents

---

Other Selective Serotonin Reuptake Inhibitors (SSRI)

Tricyclic Antidepressants (TCA)

Serotonin Antagonist & Reuptake Inhibitor

Monoamine Oxidase Inhibitors (MAOI)

# Other Pharmaceuticals

Everything else is “extra-label”

---

Clomipramine  
Amitriptyline

Fluoxetine  
Fluvoxamine  
Sertraline  
Paroxetine

**Trazodone**

**Gabapentin**

**Benzodiazepines**

Alpha2 agnoists

Short acting anti-anxiety medications for distressing events (ie departures)

---

**Trazodone**

**Gabapentin**

**Benzodiazepines**

Alpha2 agonists



Ace is only  
to sedate

---

# Adjunctive Therapies



# Non-pharmaceutical options vary

---



**Nutraceuticals**



**Dog-Appeasing  
Pheromone**



**The Anxiety Wrap**

# Nutraceuticals for other types of anxieties

L-theanine



L-theanine  
With other things



Alpha-Casozepine





# Adaptil (CEVA) may benefit canine SA

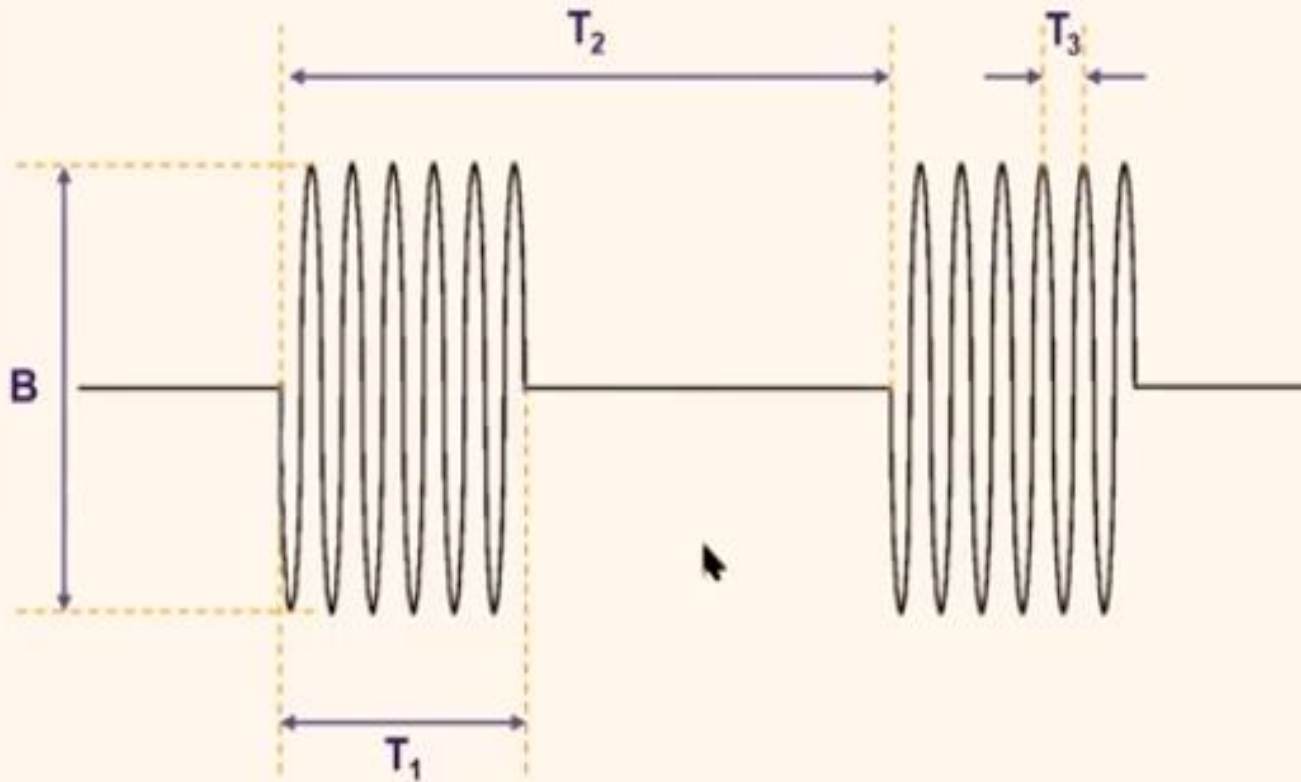
Gaultier et al. Vet Rec 2005



# Pressure wraps may benefit anxious dogs

---

KING ET AL. JVB 2014

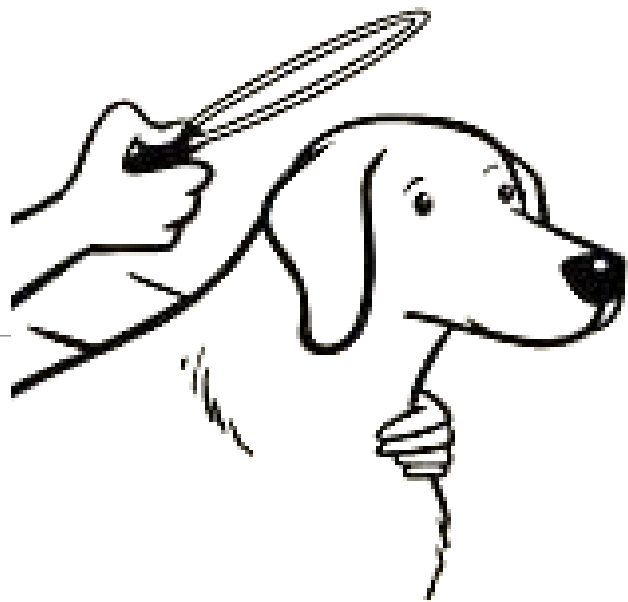


# Pulsed electromagnetic field (Calmer Canine) improves SA

---

Gruen Proceedings Int Vet Beh Sym 2019

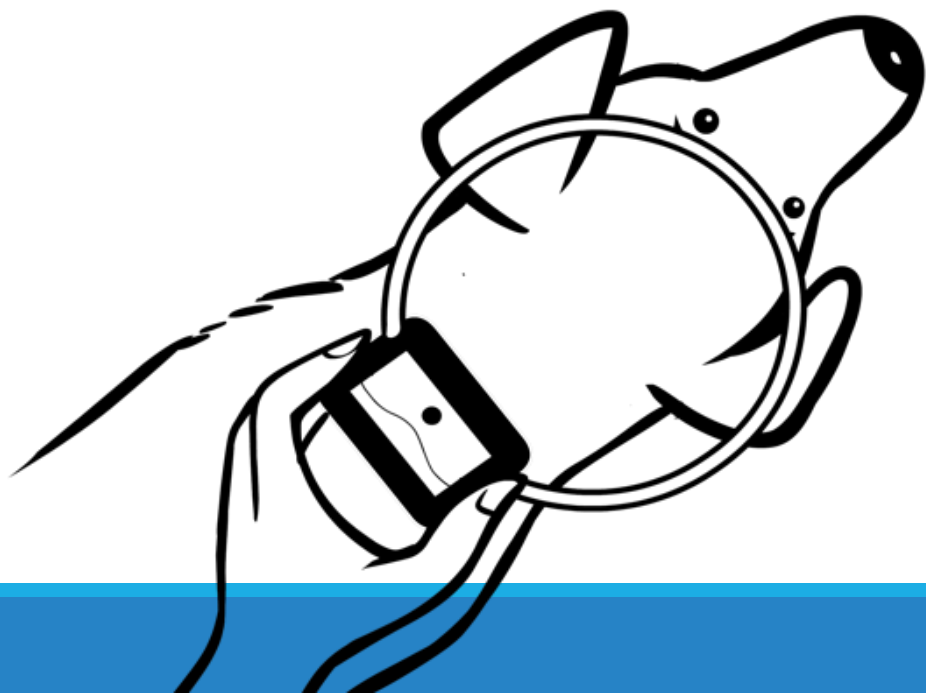
Pankratz, et al. PLOS one 2021



## Device application

---

- Coil positioned at base of the skull
- duration of 15 minutes / treatment
- Repeat twice daily



## Adverse Events

- Non-specific
- Vomit, diarrhea, ocular d/c, cough

# PEMF Results for SA (Tx vs placebo)

---

- Difference in mean negative behaviors
  - not significant at week 4
  - significant at week 6
- Success defined as improvement in positive behaviors (IE + PA) by 100% or more
  - Week 4: (Z=2.83, p=0.005)
  - Week 6: (Z=1.65, p=0.098)
  - Overall: (Z=1.99, p=0.047)

# Treatment effect example:

---





If progress or response not achieved  
within an acceptable timeframe → refer

---

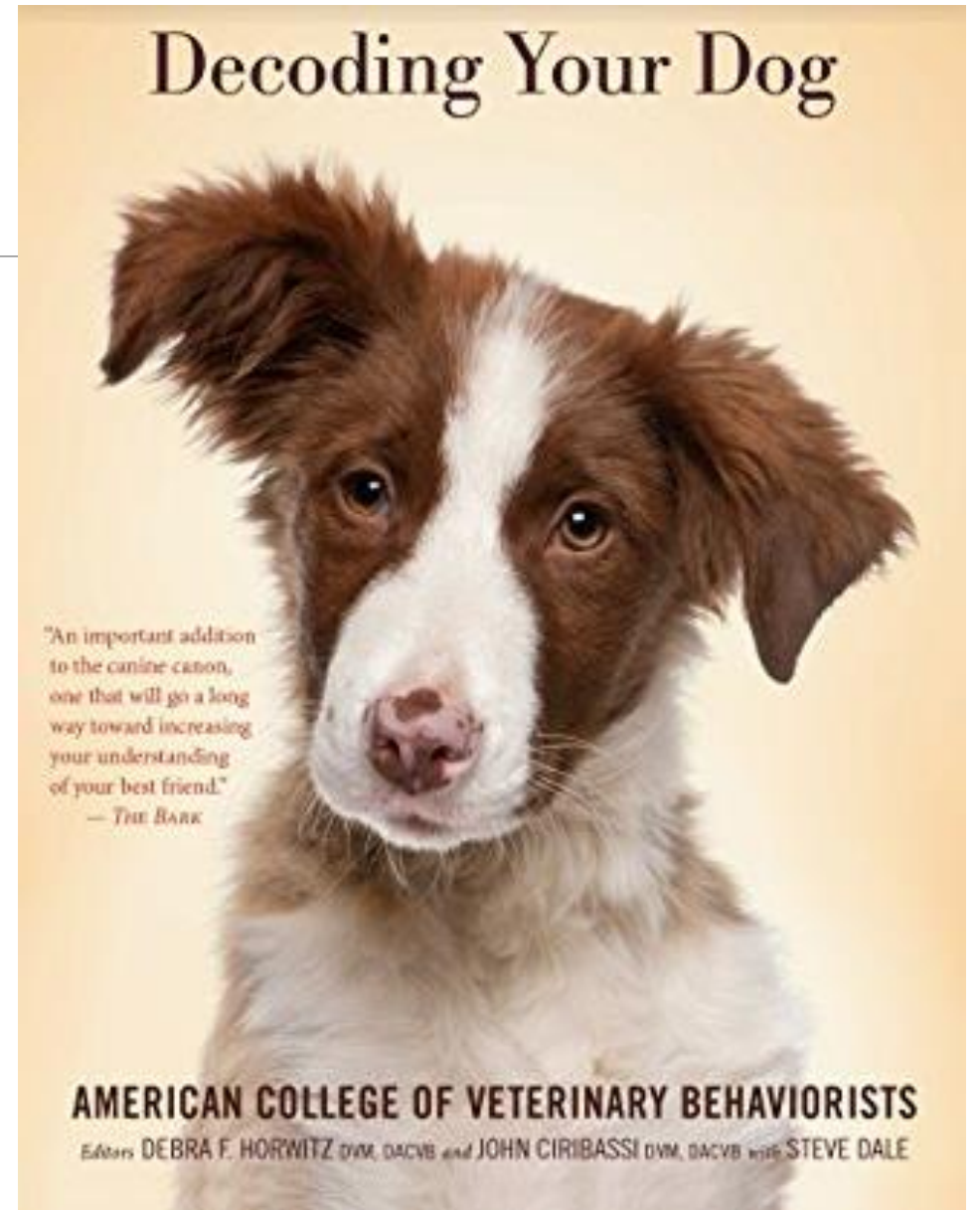
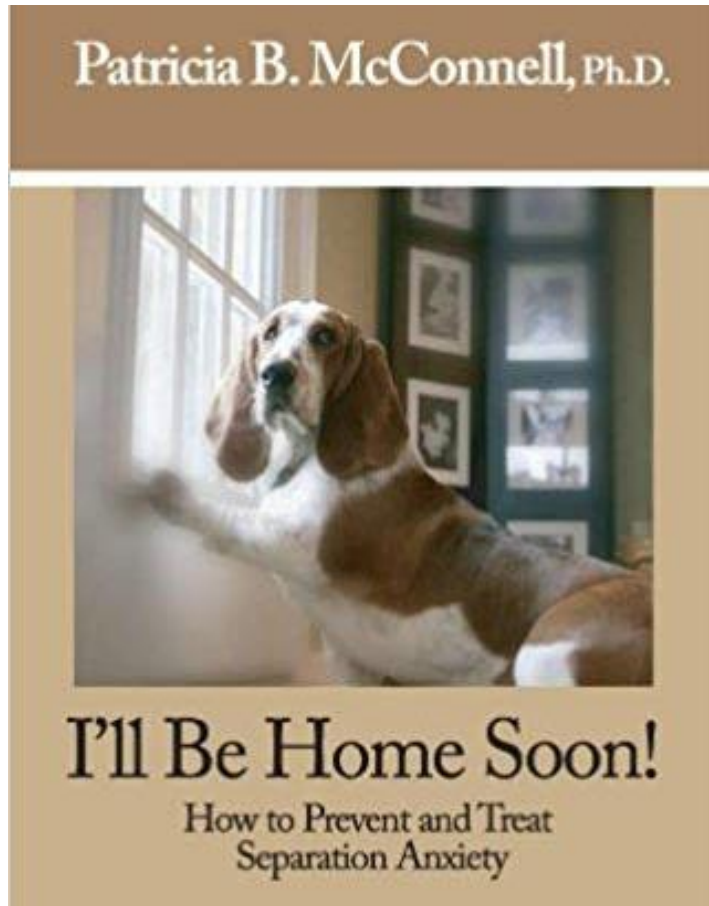


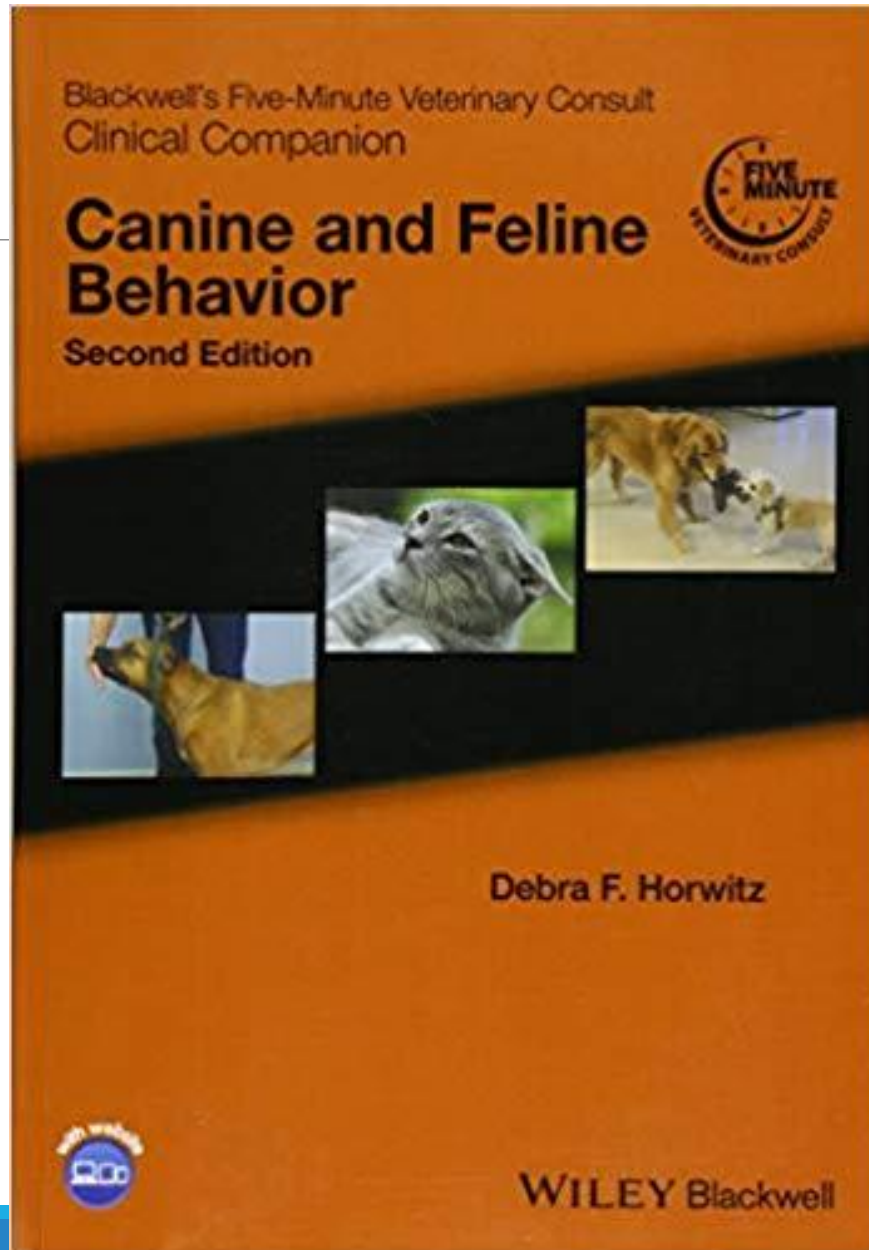
[www.dacvb.org](http://www.dacvb.org)

# Resources

# Client-gearred resources

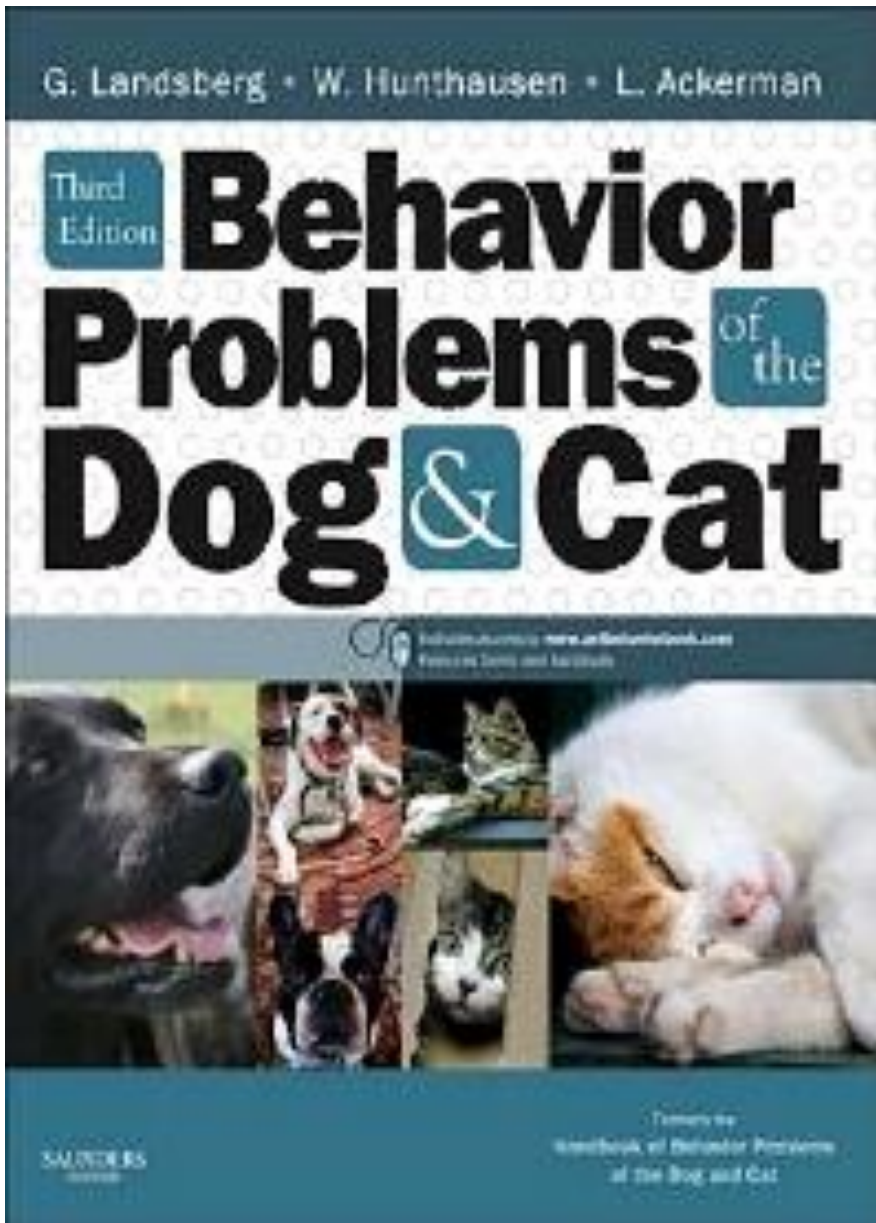
---





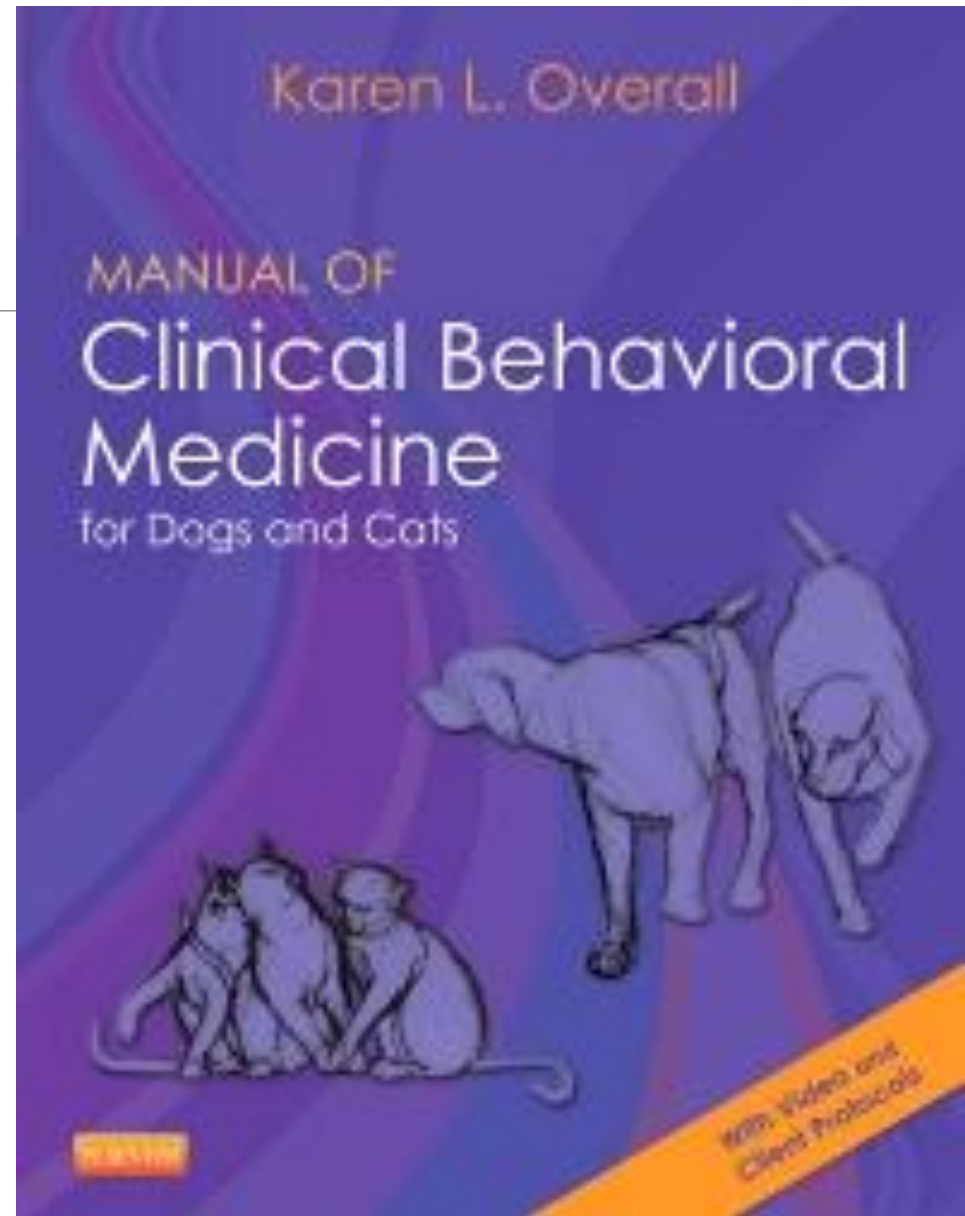
---

Blackwell's 5 minute  
Canine & Feline Behavior  
By Debra Horwitz



Landsberg  
Behavior  
Problems of the  
Dog & Cat 2013

Overall  
Manual of  
Clinical  
Behavioral  
Medicine 2013





Thank you!



[drpankratz@animalbehaviorclinic.net](mailto:drpankratz@animalbehaviorclinic.net)  
[www.AnimalBehaviorClinic.net](http://www.AnimalBehaviorClinic.net)