



COVID Crisis! Isolation's impact on dog behavior

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Session sponsor: VetStrategy



Lecture objectives

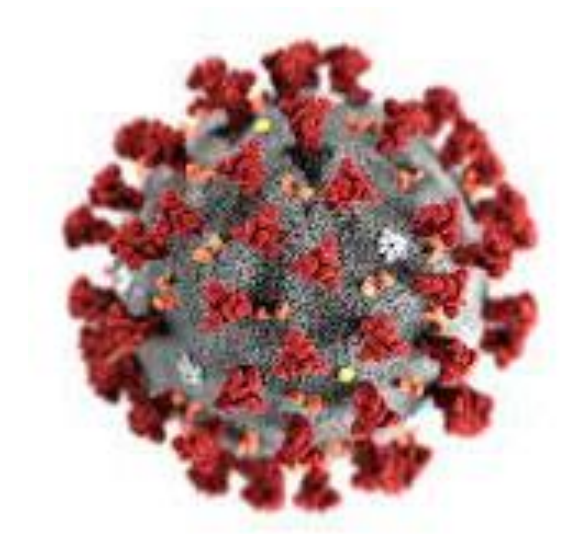
Impact of the COVID19 pandemic

How to approach a presenting complaint

- Determine diagnosis
- Create treatment plan

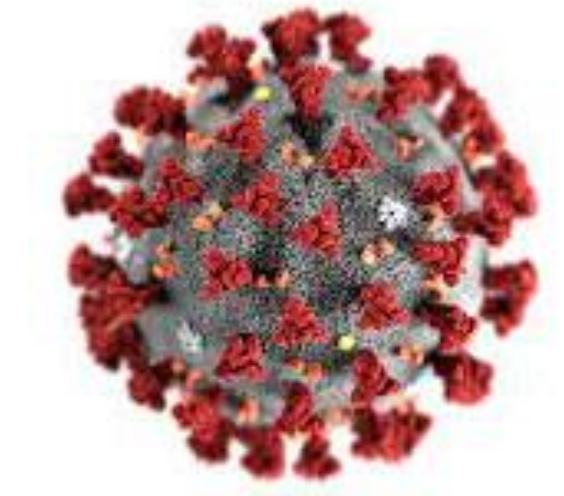
Lockdown impact on owned dogs

- Majority of dogs had a change in routine
 - Christley et al. Animals 2020
- Decreased frequency and duration of walks
 - Christley et al. Animals 2020
 - Owczarczak-Garstecka et al. IJERPH 2021
 - Vucinic et al. JVB 2022



Lockdown impact on owned dogs

- Escalation of pre-existing behavior problem
 - Bowen et al. JVB 2020
 - Ribiero et al. JVB 2023
- Dog Trust UK Survey
 - 26% developed new behavior problem
 - 82% increased barking/whining at owners
 - 54% increased hiding & retreating from people



Where did these pandemic puppies come from?

- Majority owners did not consider getting a puppy prior to the pandemic lockdowns
- Most decisions influenced by pandemic and likelihood of having more time for a dog



Where did these pandemic puppies come from?

Owners were **less** likely to

- Use a breeder that did health testing
- View the puppy prior to purchase

Owners were **more** likely to be

- First time dog owners
- Have kids



Where did these pandemic puppies come from?

- Puppies were likely to be
 - Younger
 - Collected away from breeder property
 - Seen without littermates



Behavioral impact on pandemic puppies

- When restrictions lifted, increase in fear and aggression observed in dogs
 - Boardman & Farnworth Animals 2022
- Fear & aggression increased in those undergoing socialization during lockdown
 - Sacchettino et al. Veterinary Sciences 2023



Behavioral impact on pandemic puppies

- During lockdown, dogs were left alone significantly less often & less duration
 - Christley et al. Animals 2020
- Harvey et al. Animals 2022
 - At lockdown, separation anxiety signs decreased
 - Over lockdown, more dogs developed separation anxiety
 - The dogs with less departures had greater risk of developing separation anxiety



Application of these concerns go beyond a pandemic

- Change in routine
 - Retirement
 - Job change
 - Relocation
- Novel experiences
- At-home working



What is the consequence of lack of socialization?



FEAR

Lack socialization



Future decreased coping ability

 Strangers



 Other dogs



 Other animals



 Environments



 Handling



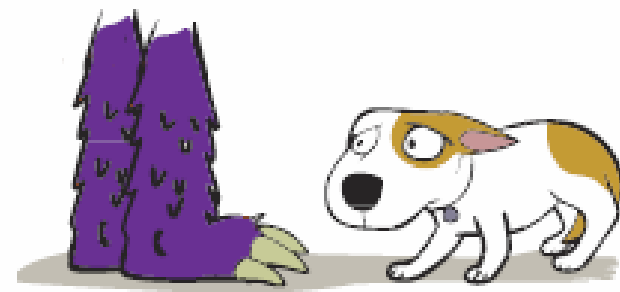
Recognize fear in history and exam

Dr. Sophia Yin, DVM, MS

Body Language of Fear

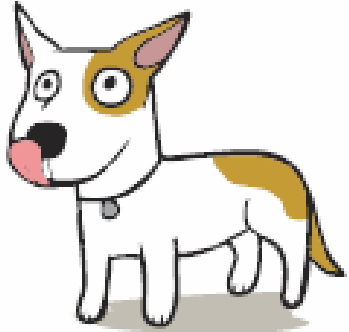


Slight Cowering

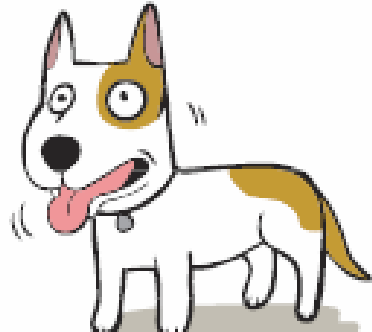


Major Cowering

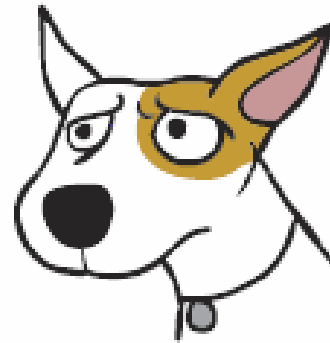
Some fear responses are more subtle



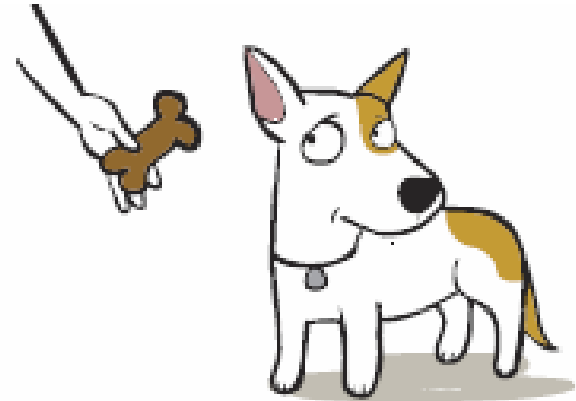
Licking Lips
when no food nearby



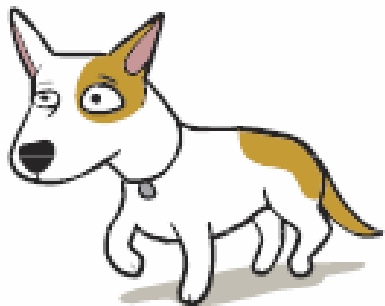
Panting
when not hot or thirsty



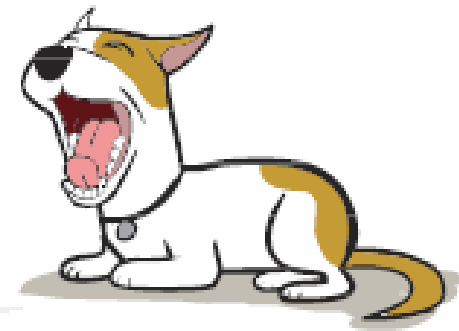
Brow Furrowed, Ears to Side



Suddenly Won't Eat
but was hungry earlier



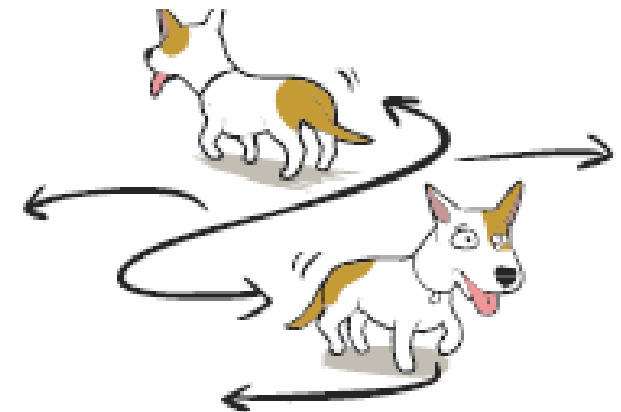
Moving in Slow Motion
walking slow on floor



Acting Sleepy or Yawning
when they shouldn't be tired



Hypervigilant
looking in many directions



Pacing

Approaching behavior with the 5 Ms

M Medical: rule out other differentials

M Motivation: what's the emotional state?

M Management: safety & avoid rehearsal

M Modification: change emotion / behavior

M Medication: dial down motivation

Approaching behavior with the 5 Ms

M Medical: rule out other differentials

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Behavioral vs Medical



KEEP

CALM

AND

DAMNITY

With information,
formulate differentials
and diagnostics
necessary to rule out

Gather info
to rule out
differentials



Approaching behavior with the 5 Ms

M Medical: rule out other differentials

M Motivation: what's the emotional state?

M Management: safety & avoid rehearsal

M Modification: change emotion / behavior

M Medication: dial down motivation

Please tell us about your cat's behavior

Today's date: ___/___/___ Client's name: _____

Cat's name: _____ Cat's date of birth: ___/___/___ Is this birth date estimated? known?

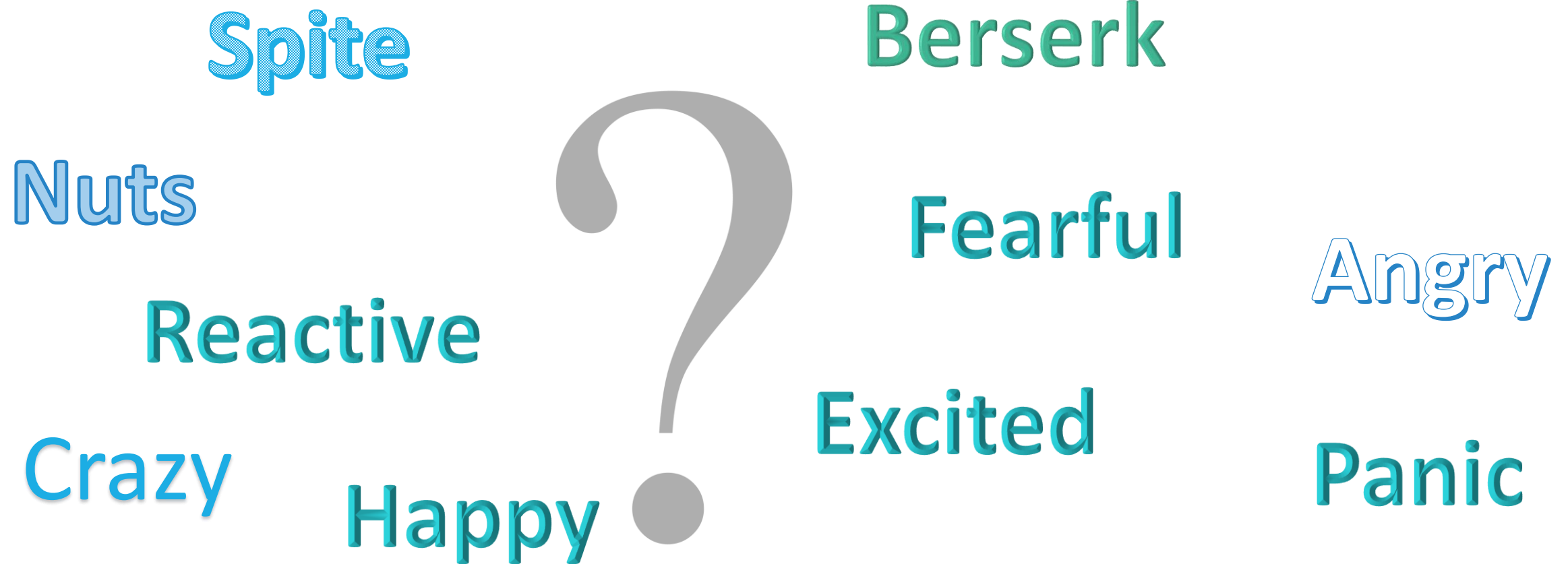
Cat's breed: _____ Cat's sex: M MC F FS Age at adoption: ___ weeks months

Is your cat: indoor only outdoor only indoor/outdoor

	Yes	No
Do you have any worries, complaints, or problems with urination in the house now?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have any worries, complaints, or problems with defecation in the house now?	<input type="checkbox"/>	<input type="checkbox"/>
Does your cat destroy any objects or anything else by chewing, sucking, or eliminating on them (for example, furniture, rugs, clothes, or other objects) now?	<input type="checkbox"/>	<input type="checkbox"/>
Does your cat mouth, bite, suck, or nip anything or anyone?	<input type="checkbox"/>	<input type="checkbox"/>
Does your cat make any sounds that worry you?	<input type="checkbox"/>	<input type="checkbox"/>
Does your cat hiss, growl, or bite?	<input type="checkbox"/>	<input type="checkbox"/>
Have you ever worried that your cat is aggressive to people?	<input type="checkbox"/>	<input type="checkbox"/>
Have you ever worried that your cat is aggressive to other cats?	<input type="checkbox"/>	<input type="checkbox"/>
Have you ever worried that your cat is aggressive to animals other than cats?	<input type="checkbox"/>	<input type="checkbox"/>

Proactive
behavior
history
leads to early
detection

Avoid labels and interpretations

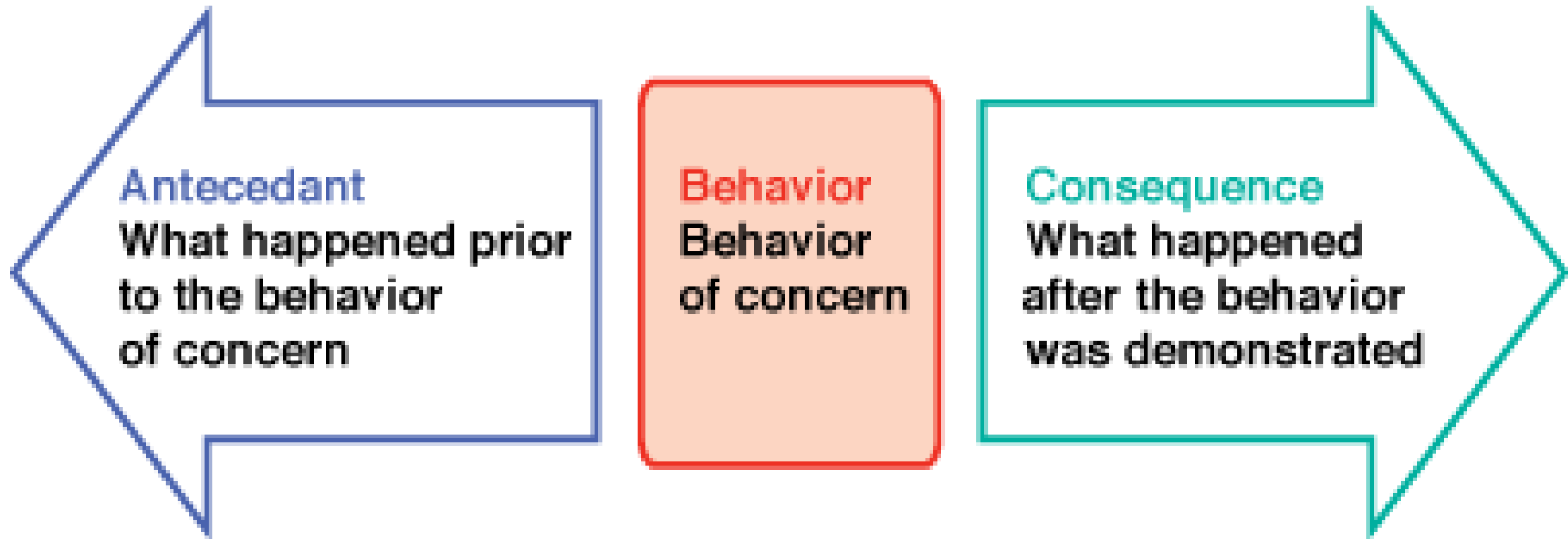




“What does
that behavior
LOOK like?”

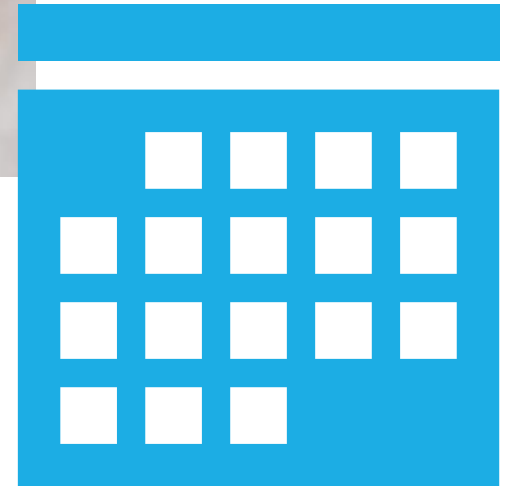
Date	Home happenings	Behavior	Meds
			AM - trazodone 50mg
23		Slept all night	PM - trazodone 50mg, alpraz 0.25mg, fluoxetine 8mg
		Slept all night - even though housemate woke up at one point to a wind storm	AM - trazodone 50mg
24		Left alone for 1hr after dinner (and meds). No anxiety noticed on camera.	PM - trazodone 50mg, alpraz 0.25mg, fluoxetine 8mg
		Slept all night	AM - trazodone 50mg
25		Hung out with me all day at school grilling for dean's social. Totally happy to hang out in the car and with us grilling.	PM - trazodone 50mg, alpraz 0.25mg, fluoxetine 8mg
			AM - trazodone 50mg
26		Slept all night	PM - trazodone 50mg, alpraz 0.25mg, fluoxetine 8mg
			AM - trazodone 50mg
		Slept all night	PM - trazodone 50mg, alpraz 0.25mg, fluoxetine 8mg
27	One owner out of town	Slightly anxious during day. Very grumpy - growling at gym dogs (normally get along great).	4am - Alpraz 0.25mg
		Woke up at 4am - pawing, shaking, seeking attention. Gave alprazolam. Fell back asleep around 530/6.	AM - trazodone 50mg
28		Seemed okay during day	PM - trazodone 50mg, alpraz 0.25mg, fluoxetine 8mg

A behavior diary can reveal patterns & progressions



Get a mental picture of behavior sequence

Address needs efficiently?





Treatment Plan

Approaching behavior with the 5 Ms

M Medical: rule out other differentials

M Motivation: what's the emotional state?

M Management: safety & avoid rehearsal

M Modification: change emotion / behavior

M Medication: dial down motivation

Meeting patient's needs may prevent or resolve motivation

Journal of Feline Medicine and Surgery (2013) 15, 219–230

SPECIAL ARTICLE

AAFP and ISFM Feline Environmental Needs Guidelines



Nature-Driven Nurture Foundations

<https://onlineschool.instinctdogtraining.com/>

Join the course and community that will revolutionize how you think about and parent your dog.



FOOD PUZZLES FOR CATS



WET FOOD PUZZLES

HOMEMADE PUZZLES

VIDEOS

ABOUT US


Information about feeding

paper about food

Tony Buffington and
ment to the manuscript.



<https://onlineschool.instinctdogtraining.com/>



INSTINCT

JOIN TODAY

the Dog Enrichment course

Your dog's behavioral health is dependent on providing them with outlets to engage in important natural canine behaviors. Learn how to use enrichment games & activities to fulfill your dog's behavioral needs & reduce problem behaviors.

Register for free!



Lickimat

Proactive superior to Reactive response





Reactive: avoid additional drama

Punishment is contraindicated



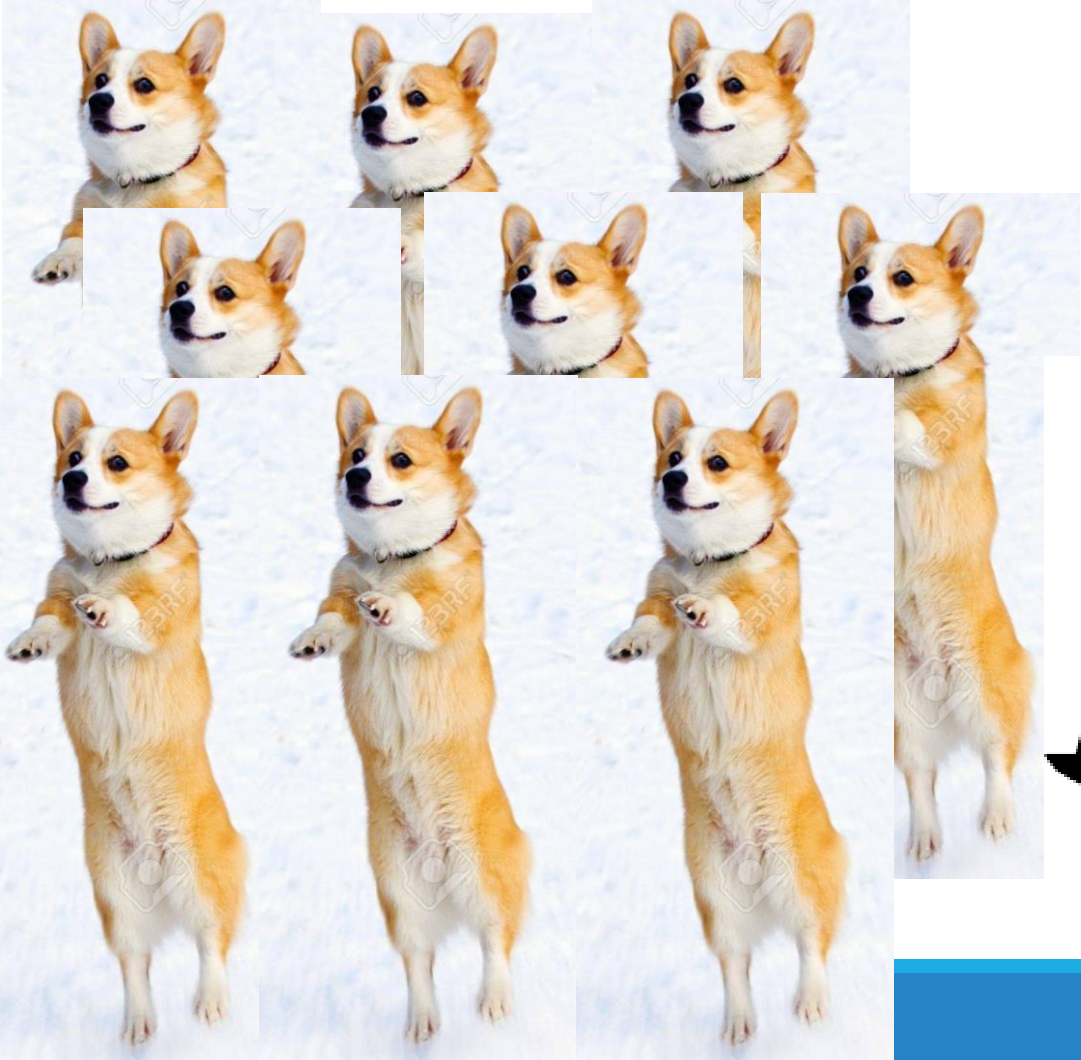
AVSAB Position Statement

The Use of Punishment for Behavior Modification in Animals

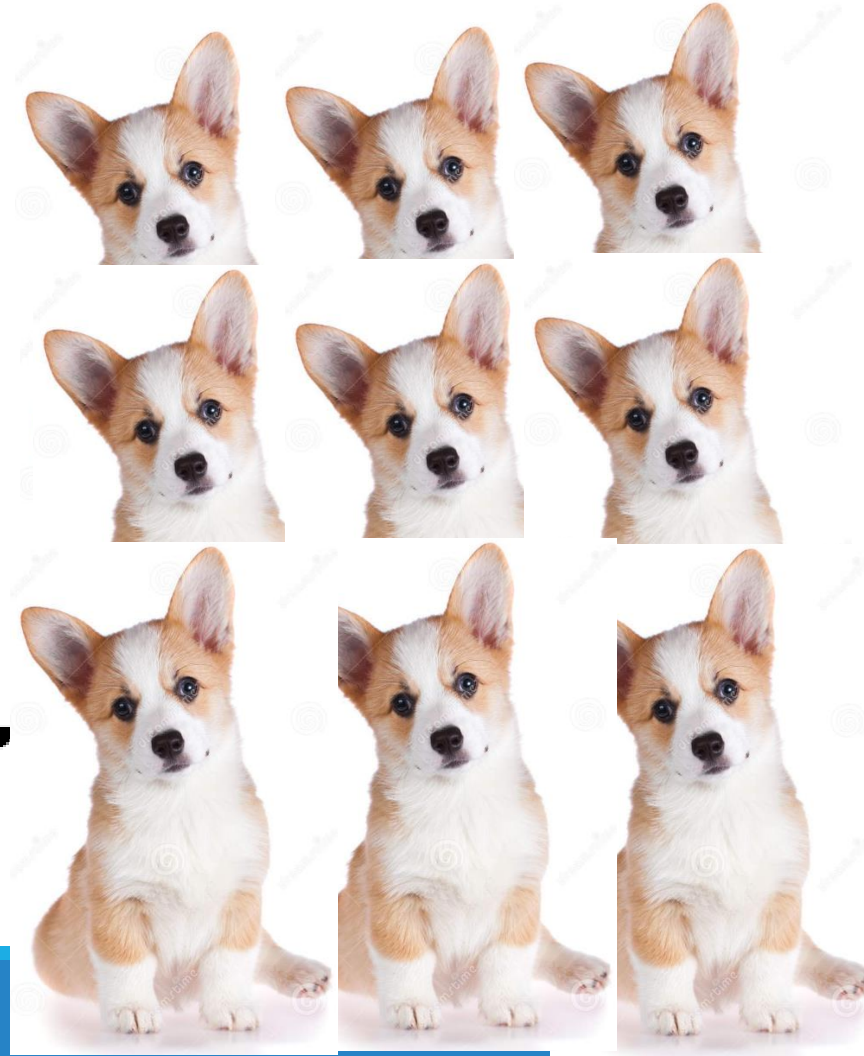
Proactive:
avoid triggers
/ antecedents



Practice makes perfect



Prevention of rehearsal is also important





Avoidance increases safety



Buys time until
additional help
is reached



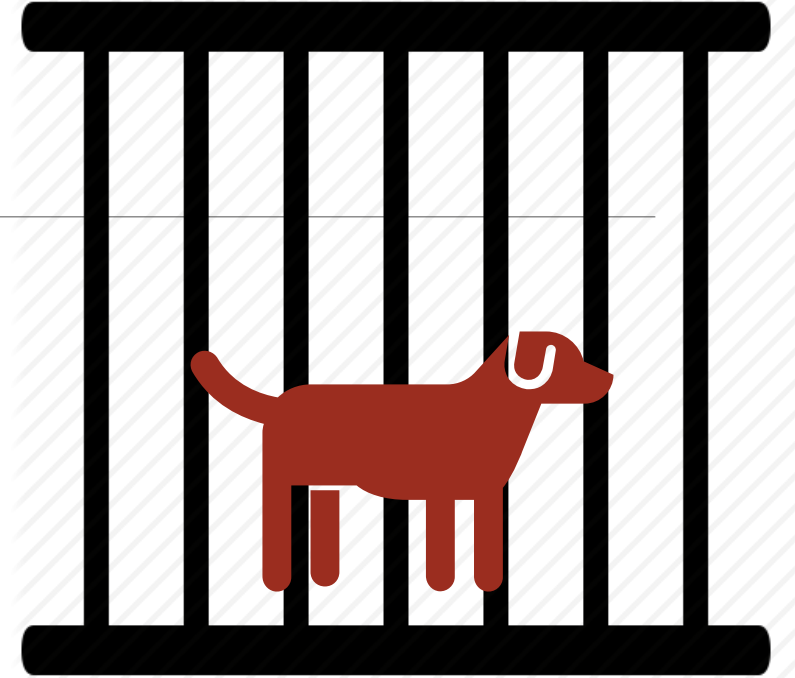
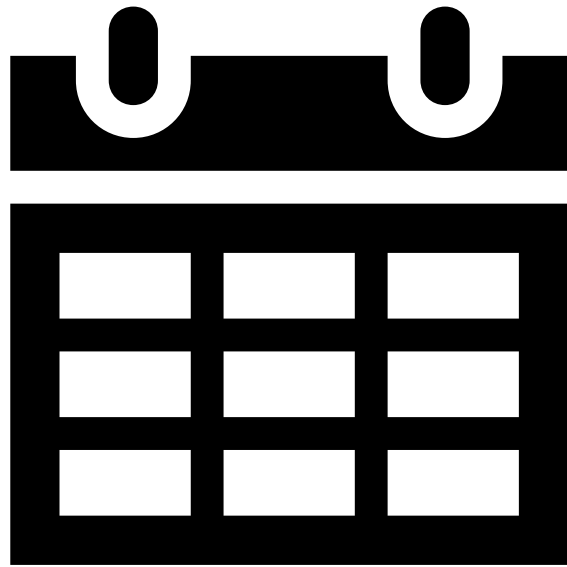
Risk Factors



A broken human-animal bond is a risk factor

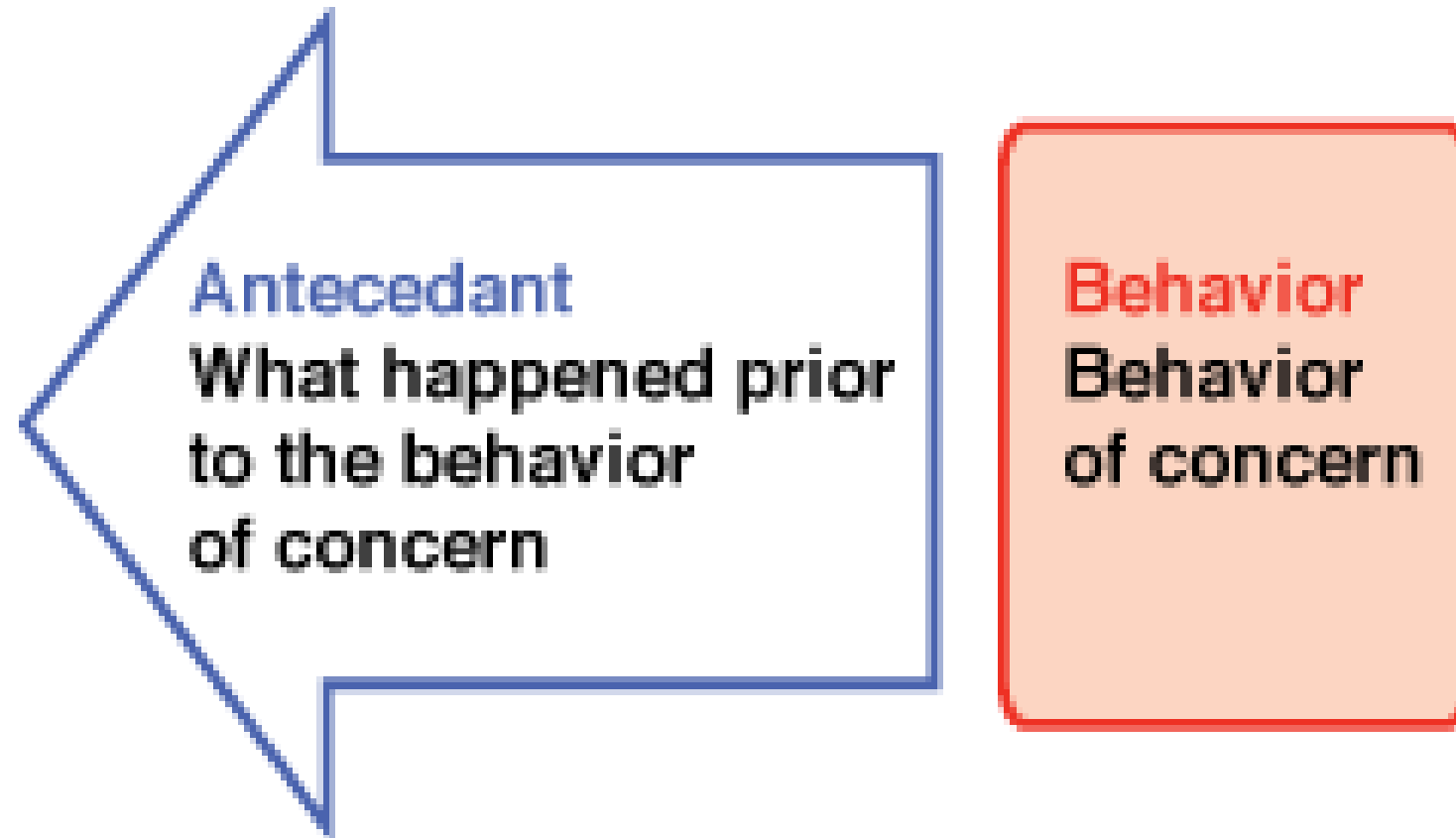


Patient welfare
(mentally/physically)
compromised

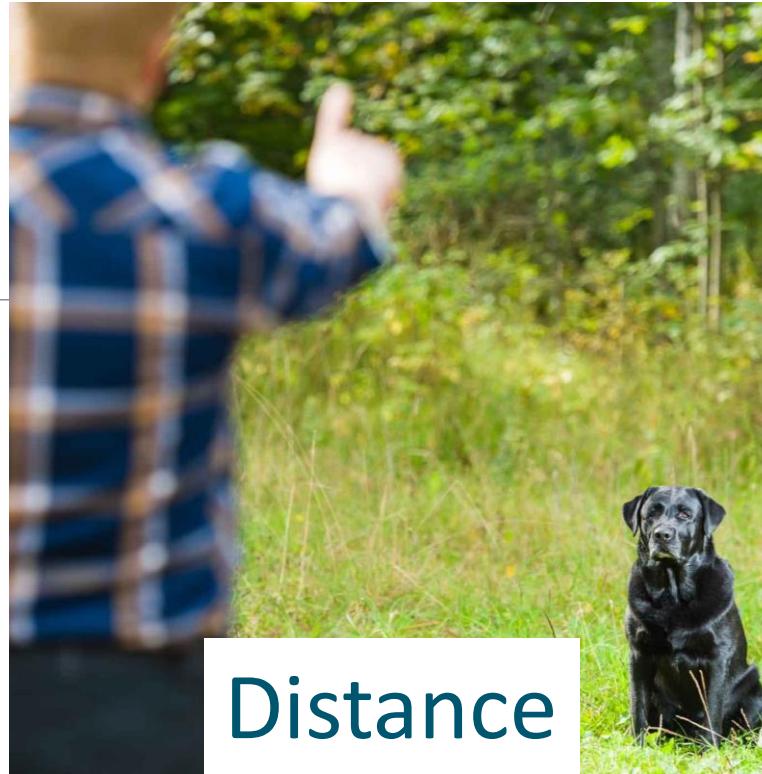


Additional risk factors

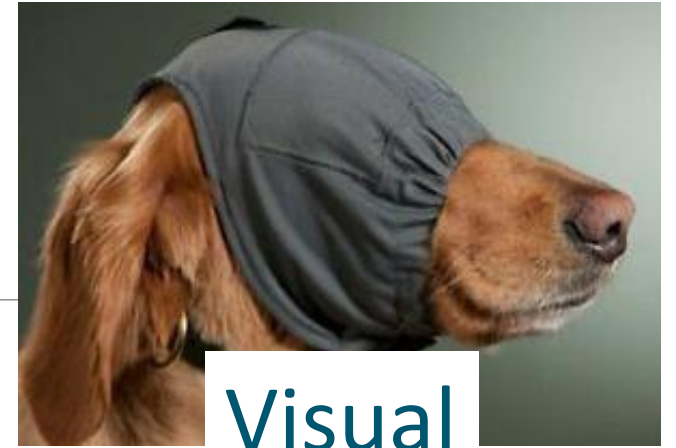
If you can predict it, you should prevent it



How to manage safely:



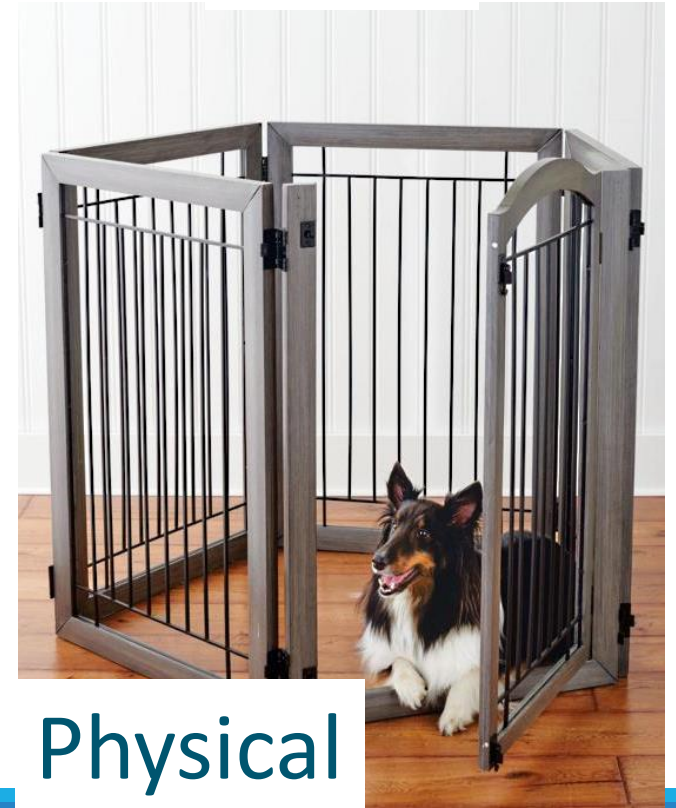
Distance



Visual



Audio



Physical

Avoid times
and locations





Visual barriers



MuttMuffs

Auditory barriers



y
m

Pawnix



Physical barriers



Humanely gain control of physical actions



Leash Not Included

Neck Collar
Not Included



Approaching behavior with the 5 Ms

M Medical: rule out other differentials

M Motivation: what's the emotional state?

M Management: safety & avoid rehearsal

M Modification: change emotion / behavior

M Medication: dial down motivation

Behavior Modification: Focus on “DO” instead of “Do Not”



**Reactive:
Attention/Yell**



**Proactive:
Reward calm**



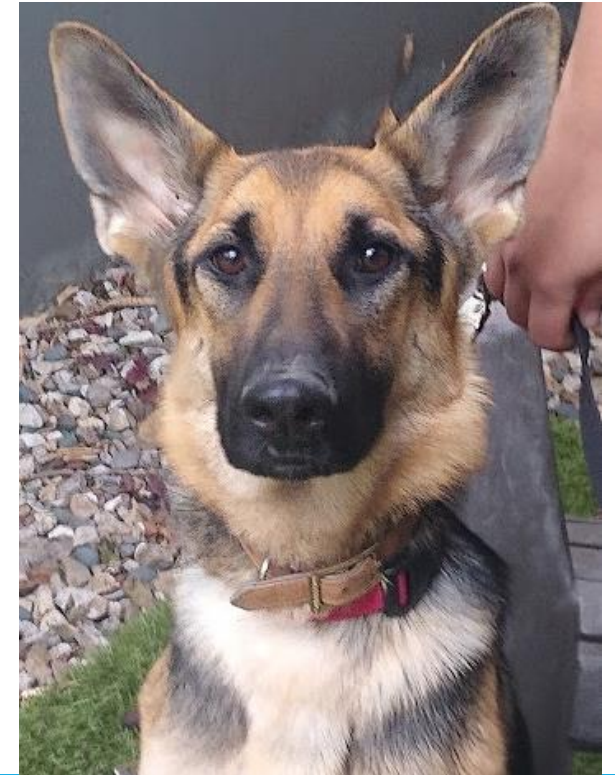
Sensitization

Increased response to repeated stimulus



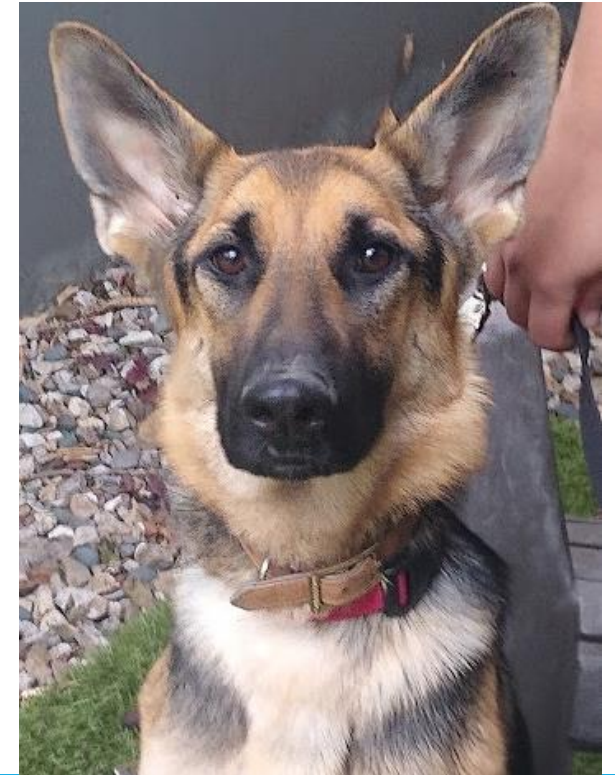
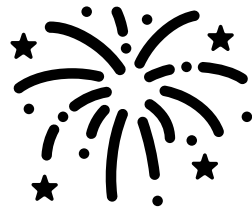
Desensitization

Decreased response to repeated stimuli = gradual & controlled



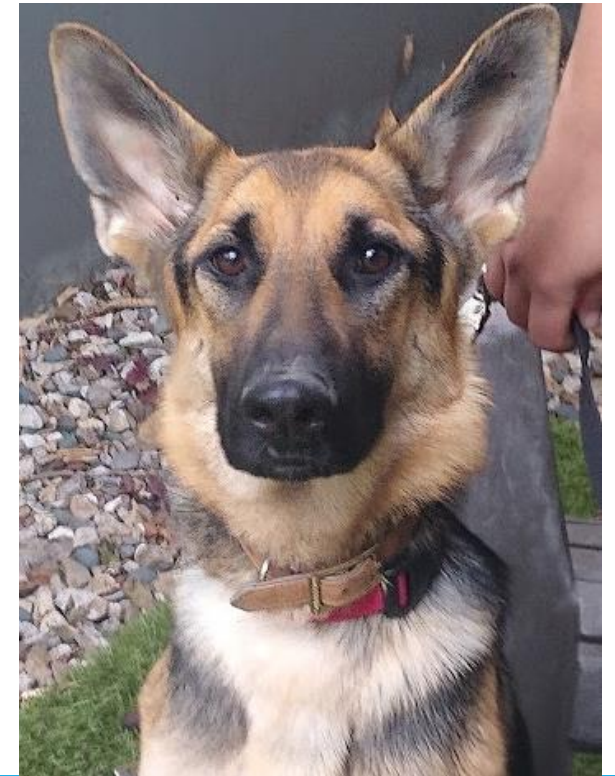
Counter Conditioning

Change emotional response



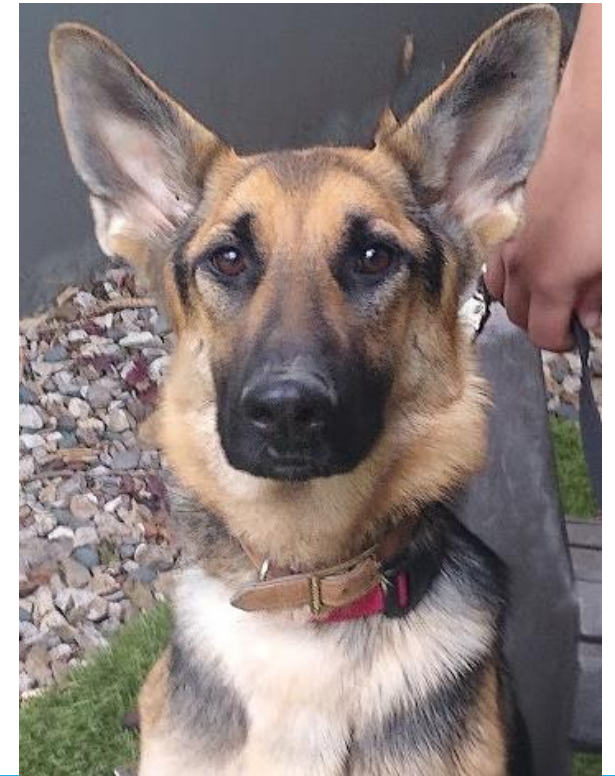
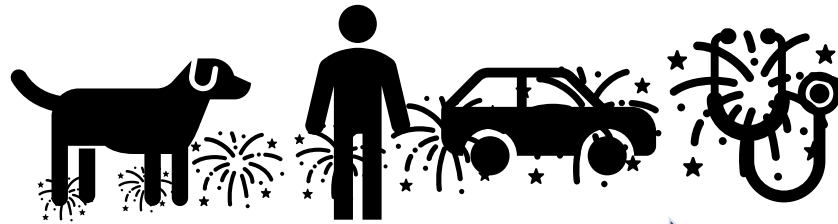
Desensitization & Counter conditioning

Gradually increasing intensity while pairing with positive (food)



Desensitization & Counter conditioning

Gradually increasing intensity while pairing with positive (food)



Desensitization & Counter conditioning

You're likely already doing this!



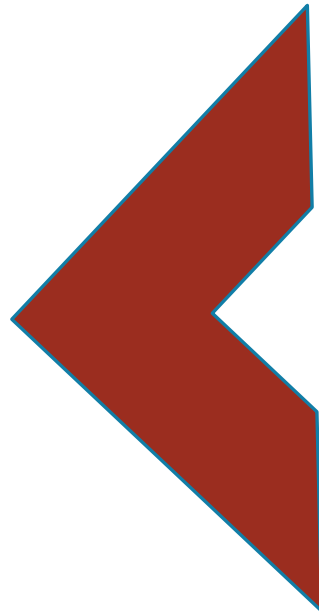
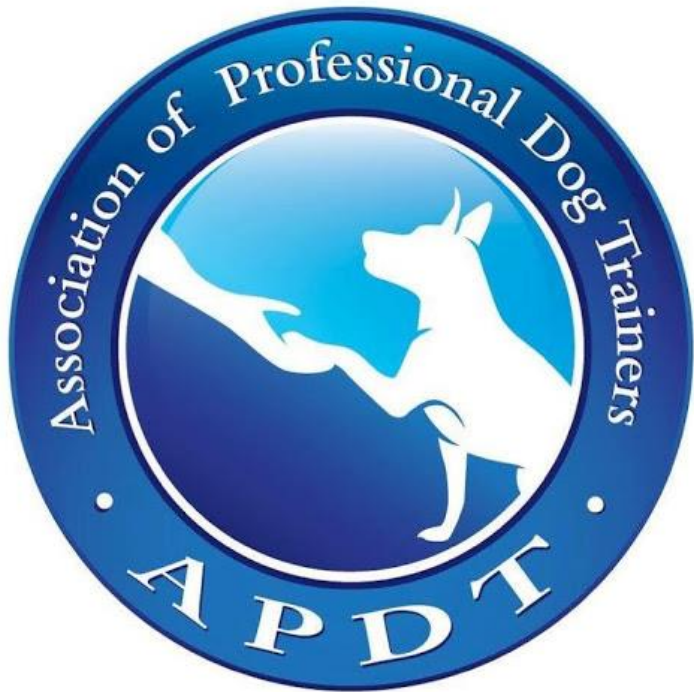


Sidebar:
training support
is not all equal

Trainers educated in science of learning
are valuable



Not all “trainers” are equal



Certified Professional
Dog Trainer,
Knowledge
Assessed



AMERICAN VETERINARY SOCIETY
OF ANIMAL BEHAVIOR

How to Choose a Trainer:

Choosing a dog trainer can be one of the most important decisions that you make in your dog's life. The techniques that a trainer uses can strongly affect how you interact with your dog for years to come. Therefore, it is very important to choose your trainer wisely. Here are some guidelines for choosing a dog trainer.

Approaching behavior with the 5 Ms

M Medical: rule out other differentials

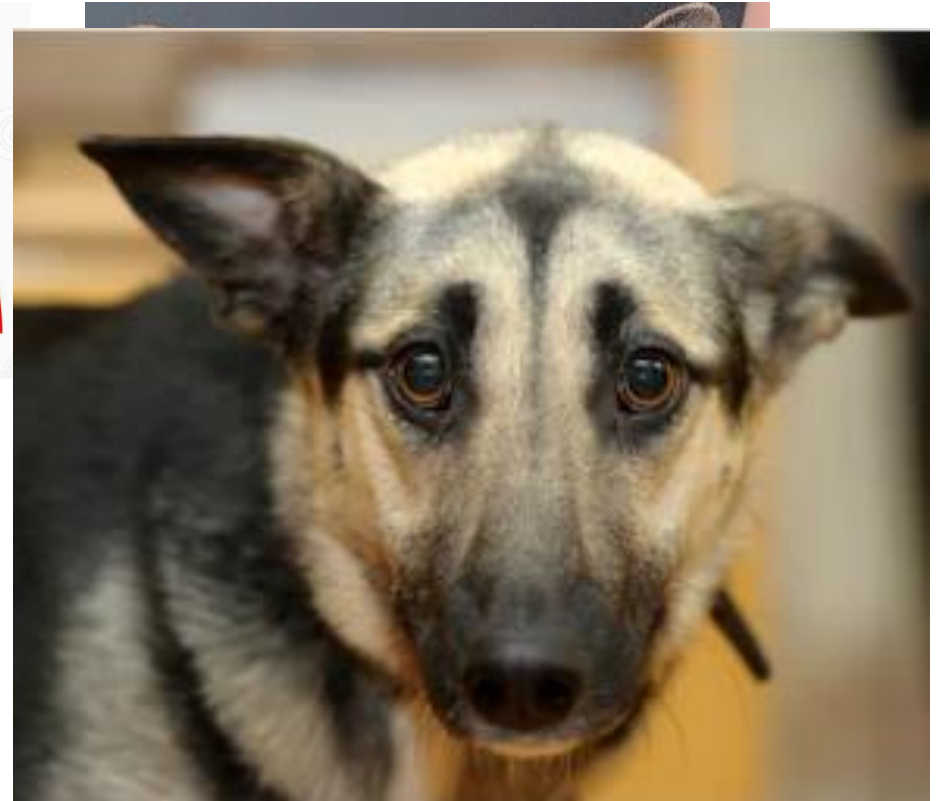
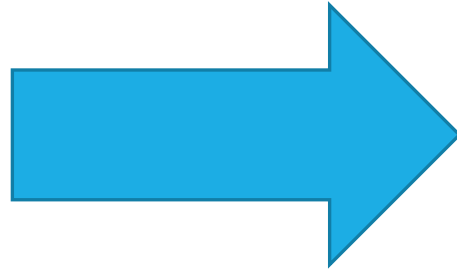
M Motivation: what's the emotional state?

M Management: safety & avoid rehearsal

M Modification: change emotion / behavior

M Medication: dial down motivation

Medication goal to decrease poor emotion



“Medication” go beyond pharmacology



Pharmaceuticals



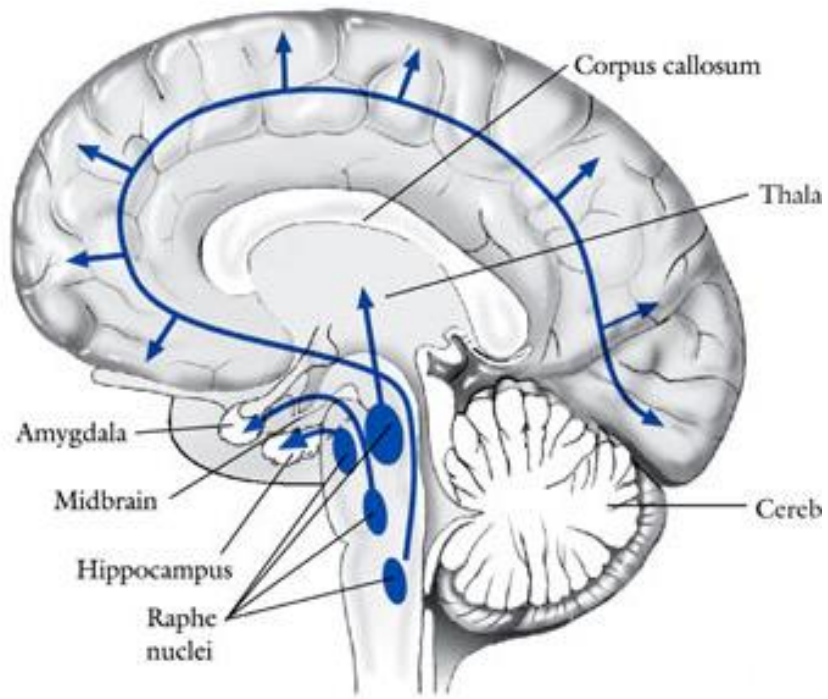
Nutraceuticals



**Dog-Appeasing
Pheromone**

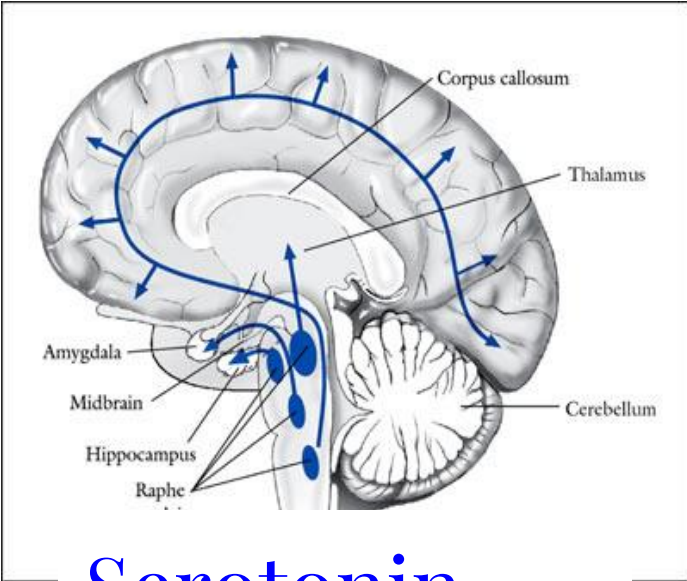


The Anxiety Wrap

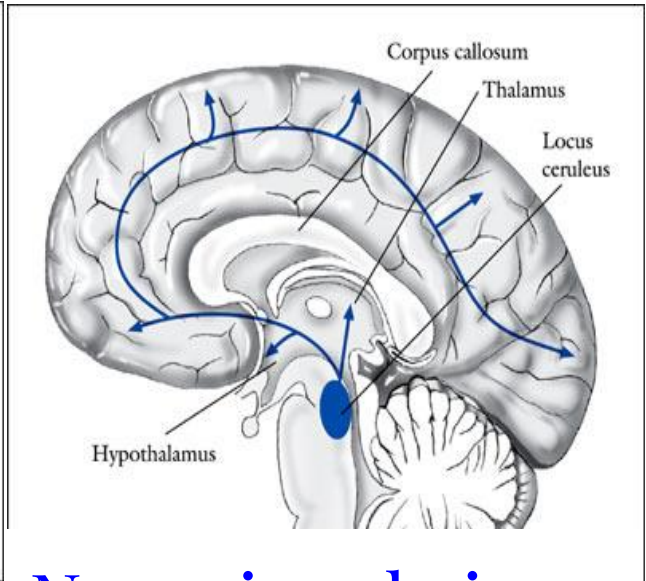


Neurotransmitters have their own neuronal pathways to influence behavior

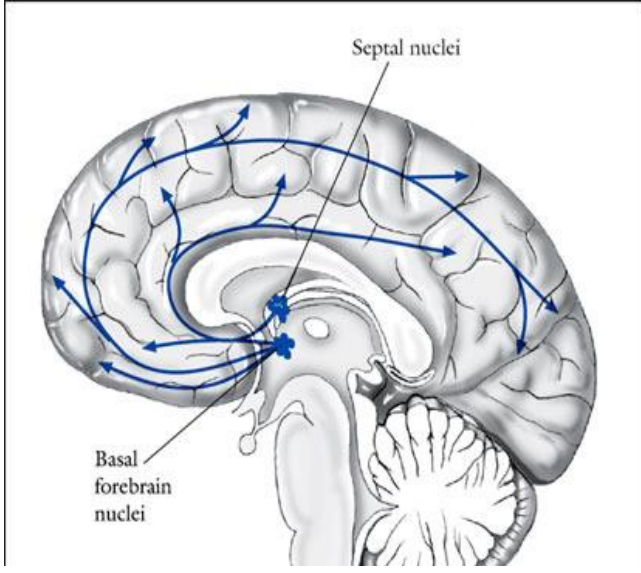
There are many different neurotransmitters



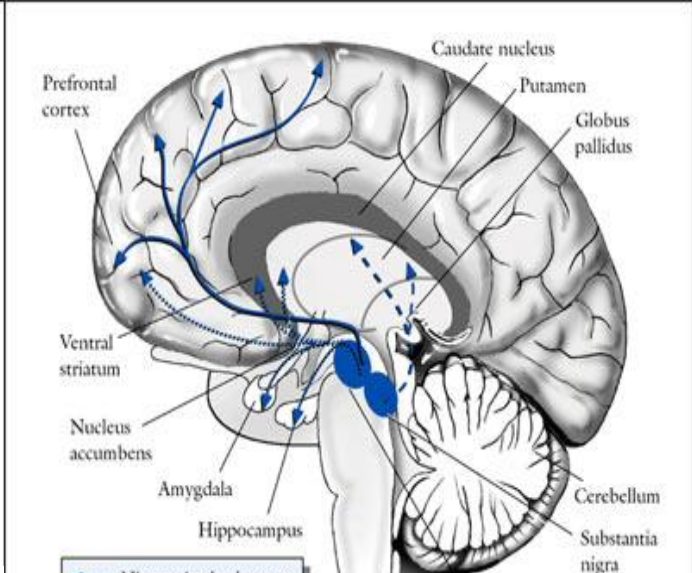
Serotonin



Norepinephrine



Acetylcholine

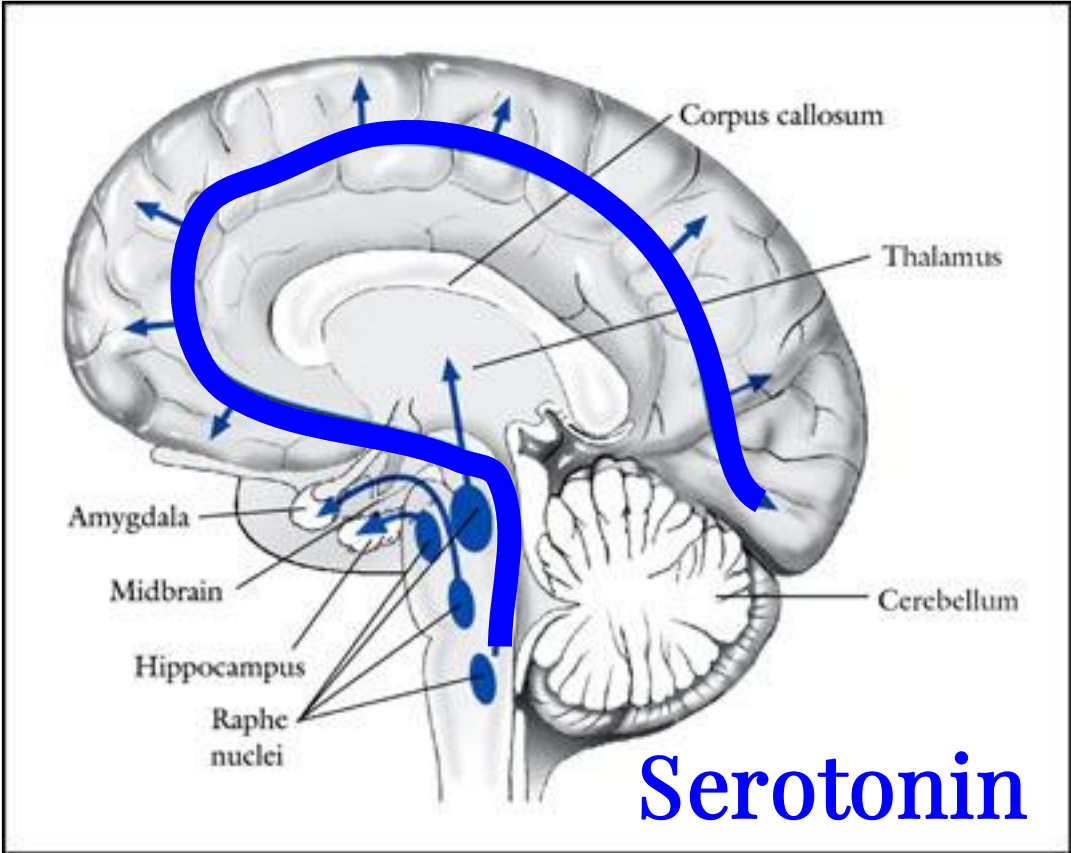
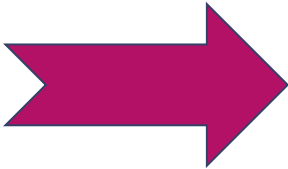


Dopamine

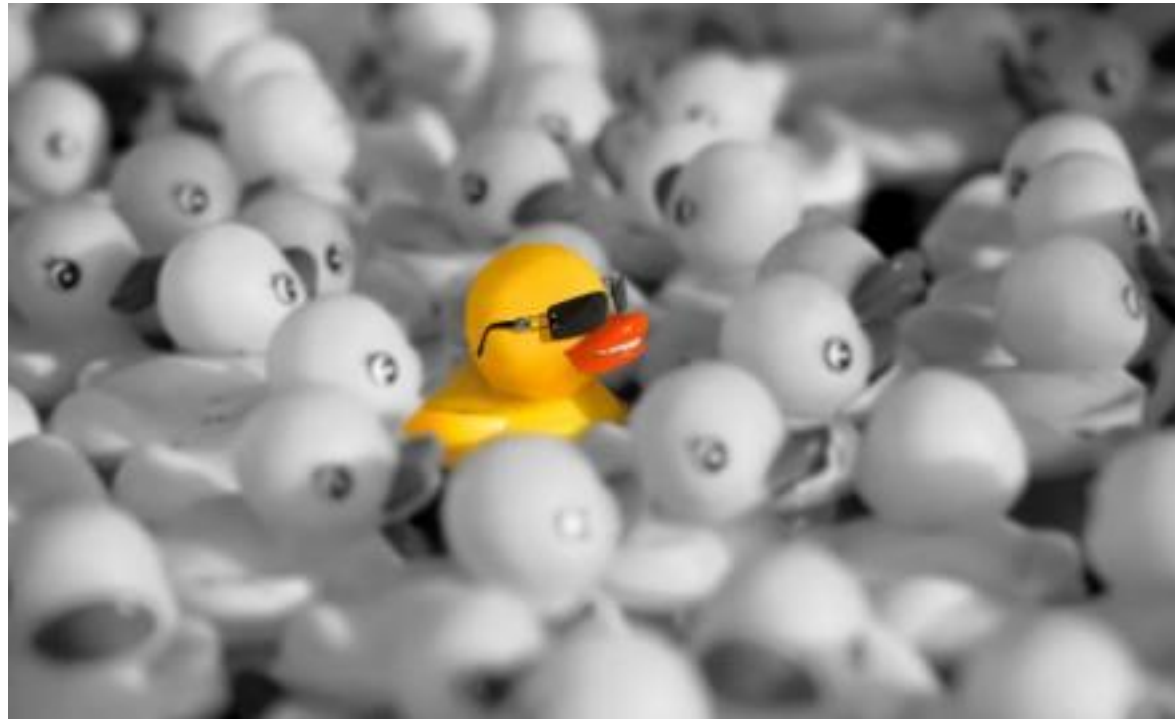
Psychopharmacologics modify levels of neurotransmitters



Behavior medication



Each case is unique with special considerations



Needs, risk, health status & meds, owner perspective influence psychopharmacological choice



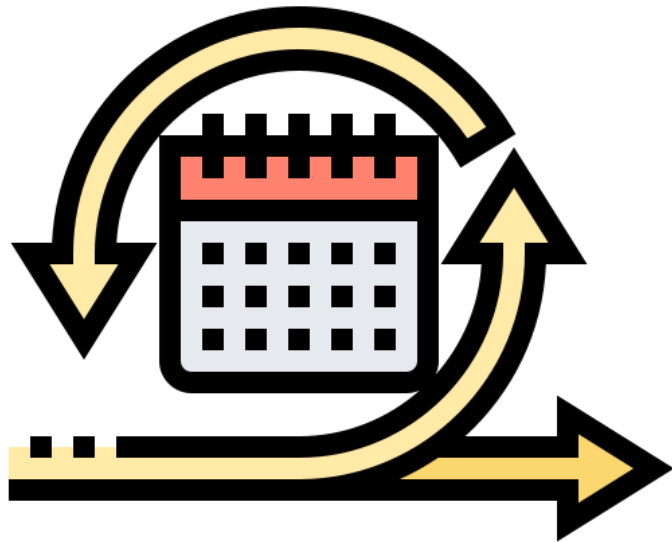


Health monitoring

- Physical exam,
 - Complete Blood Count,
 - Chemistry profile,
 - Total T4 and
 - Urinalysis
- **Prior to starting and repeated yearly

“Daily”

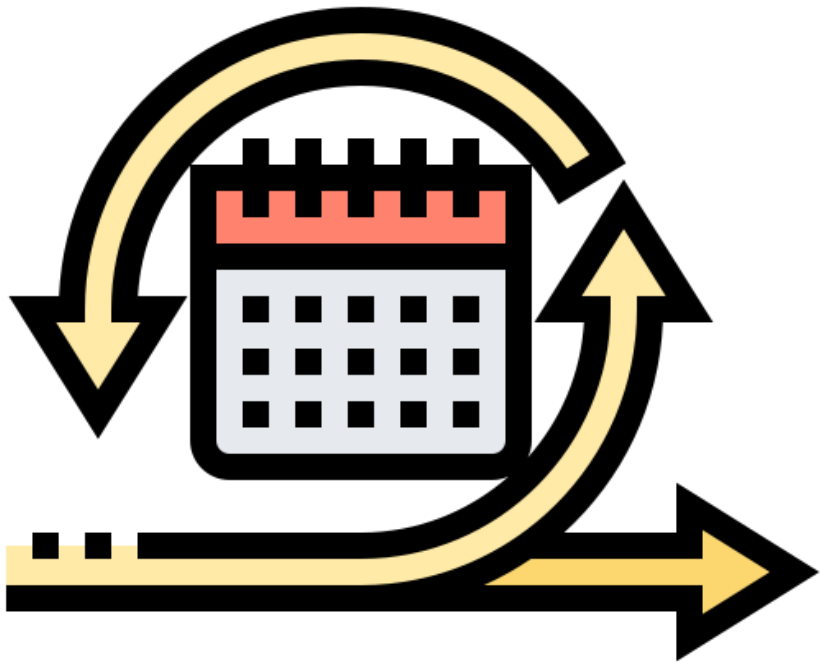
BASELINE, MAINTENANCE, STANDING



“Event”

AS NEEDED, ADJUNCT, SECONDARY





Daily drugs are given on
a daily basis

- take time to see full
beneficial effects
 - smoother effects
-

Indications for a **daily** drug are **chronic** or **unpredictable** conditions

Examples:

Generalized anxiety

Urine Marking

Separation anxiety

Compulsive disorders

Fearful behavior or aggression

Inter-pet aggression

Cognitive Dysfunction Syndrome

Daily drug classes

Selective Serotonin Reuptake Inhibitors (SSRI)

- fluoxetine, fluvoxamine, sertraline, paroxetine

Tricyclic Antidepressants (TCA)

- clomipramine, amitriptyline

Monoamine Oxidase Inhibitors (MAOI)

- Selegiline

Azapirones

- buspirone



Next Lecture



“Event” Drugs are given (a few hours) prior to stressful events

- fast onset of benefit
 - shorter duration of effect
-

Indications for **event** meds are **short** and **predictable** conditions or as an **adjunct**

Examples:

Veterinary visits

Car travel

Separation anxiety

Noise phobias

Changes in home (new baby, pet, visitors)

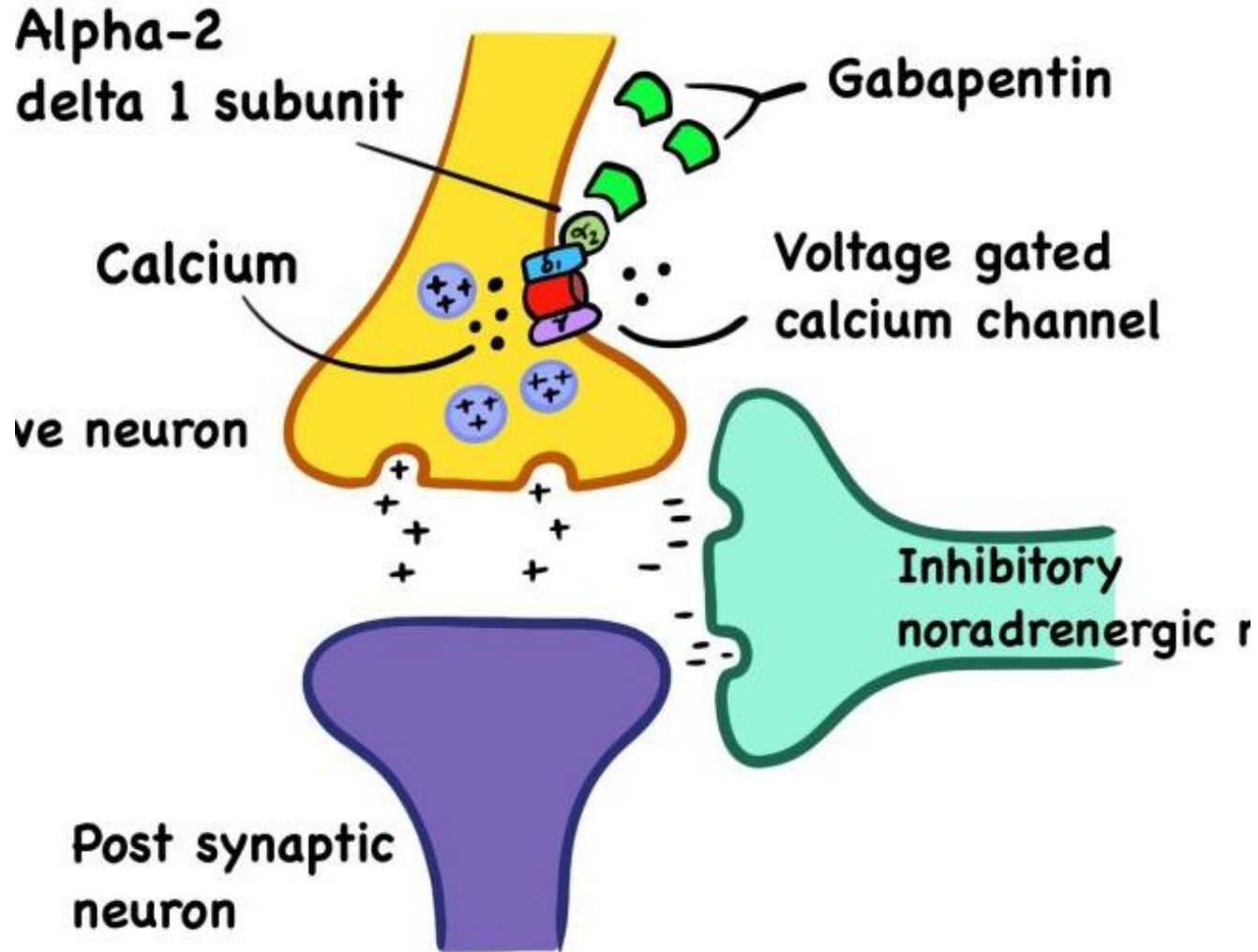


Trial dose
recommended to
assess efficacy
before use

“Event” Drugs

- Gabapentin
- Serotonin Antagonist Reuptake Inhibitor
 - Trazodone
- Benzodiazepines
 - Alprazolam (Xanax), Lorazepam (Ativan), Clonazepam (Klonopin)
- Alpha-2 Agonists
 - Dexmedetomidine oromucosal gel (Sileo)
 - Clonidine

Gabapentin



Gabapentin binds Ca^{2+} channels to modulate excitatory neurotransmission

Gabapentin (generic)

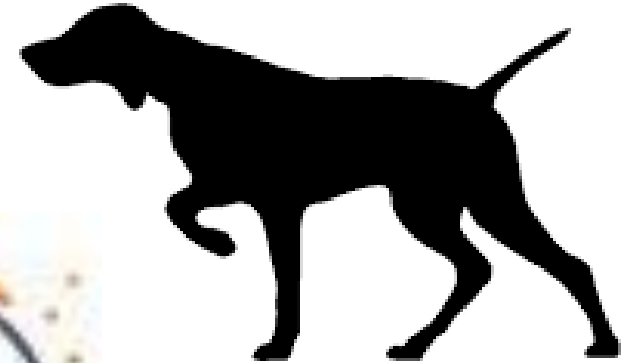
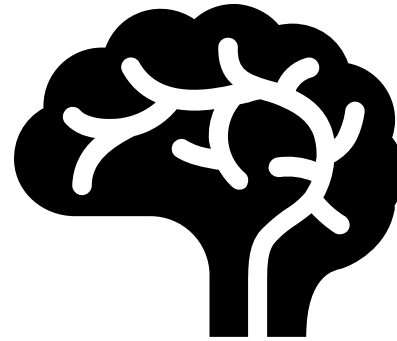
Neurontin (human)

Uses:

Anticonvulsant

Neuropathic pain modulation

Antianxiety properties



Gabapentin

- Dosing:
 - Dogs: 7-10mg/kg PO PRN (to start, could titrate up to 50mg/kg)
 - Cats: 50mg to 100mg per cat PO PRN (20mg/kg PRN)
- Time to effect: 2-3 hours
- Duration of action: 6-12 hours



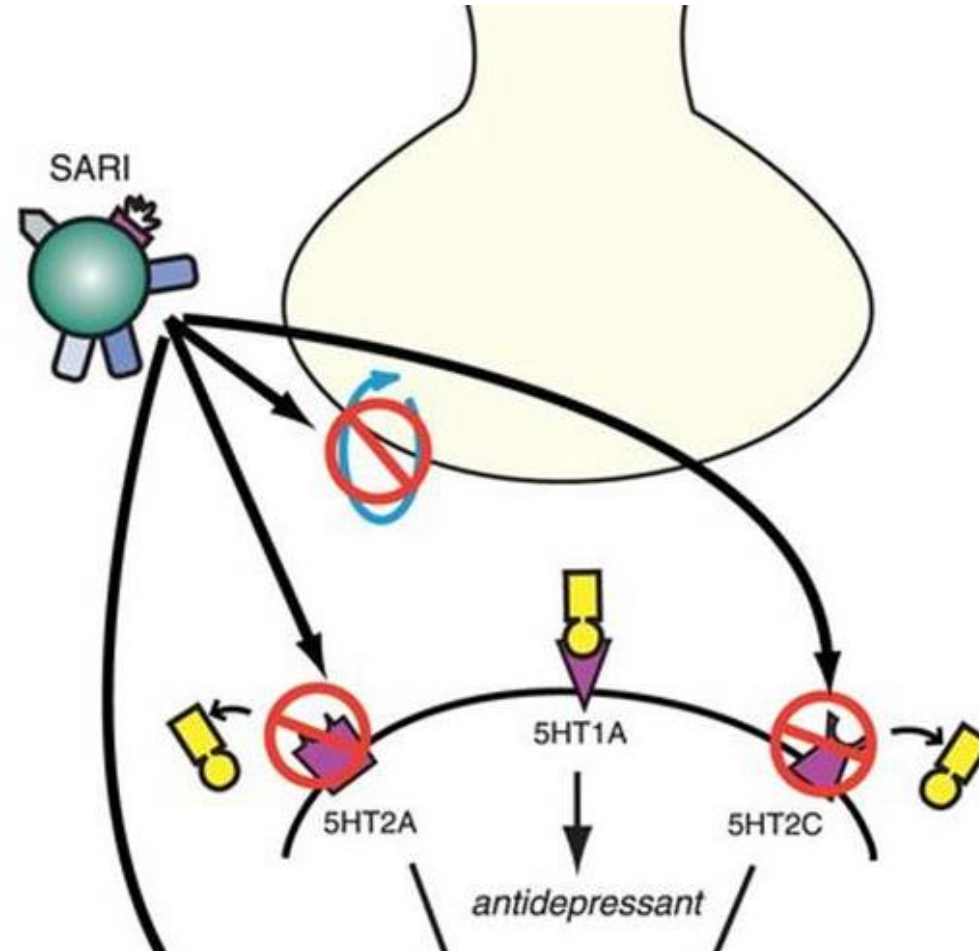
Gabapentin

- Side effects: sleepiness/sedation, vomiting, ataxia,
- Eliminated unchanged in the urine (reduce dose 50% in renal insufficiency)
- Caution commercially available liquid compounding has xylitol



Serotonin Antagonist Reuptake Inhibitor (SARI)

SARIs inhibit 5HT reuptake, antagonize some 5HT₂ receptors and affect 5HT_{1A}



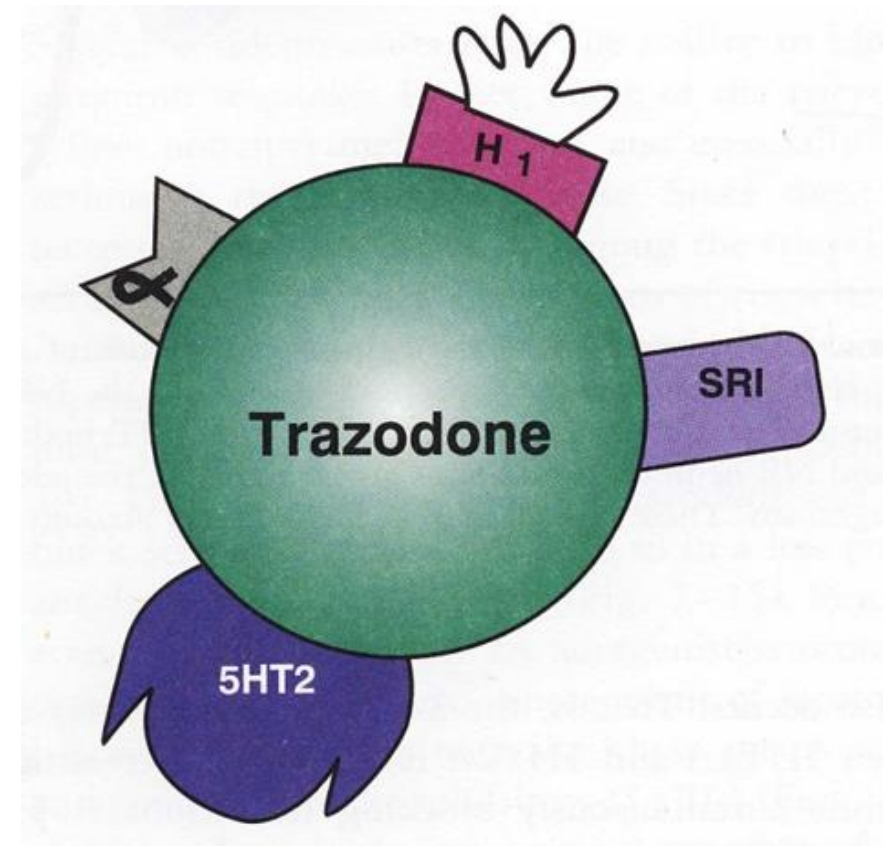
Trazodone (generic)

Desyrel (human), Oleptro (human)

Behavior Uses:

Travel

Veterinary visits



Trazodone

- Dosing:
 - Dogs: 3-10mg/kg PO PRN
 - Cats: 50mg to 100mg per cat PO PRN
- Time to effect: 90 minutes
- Duration of action: 6-12 hours



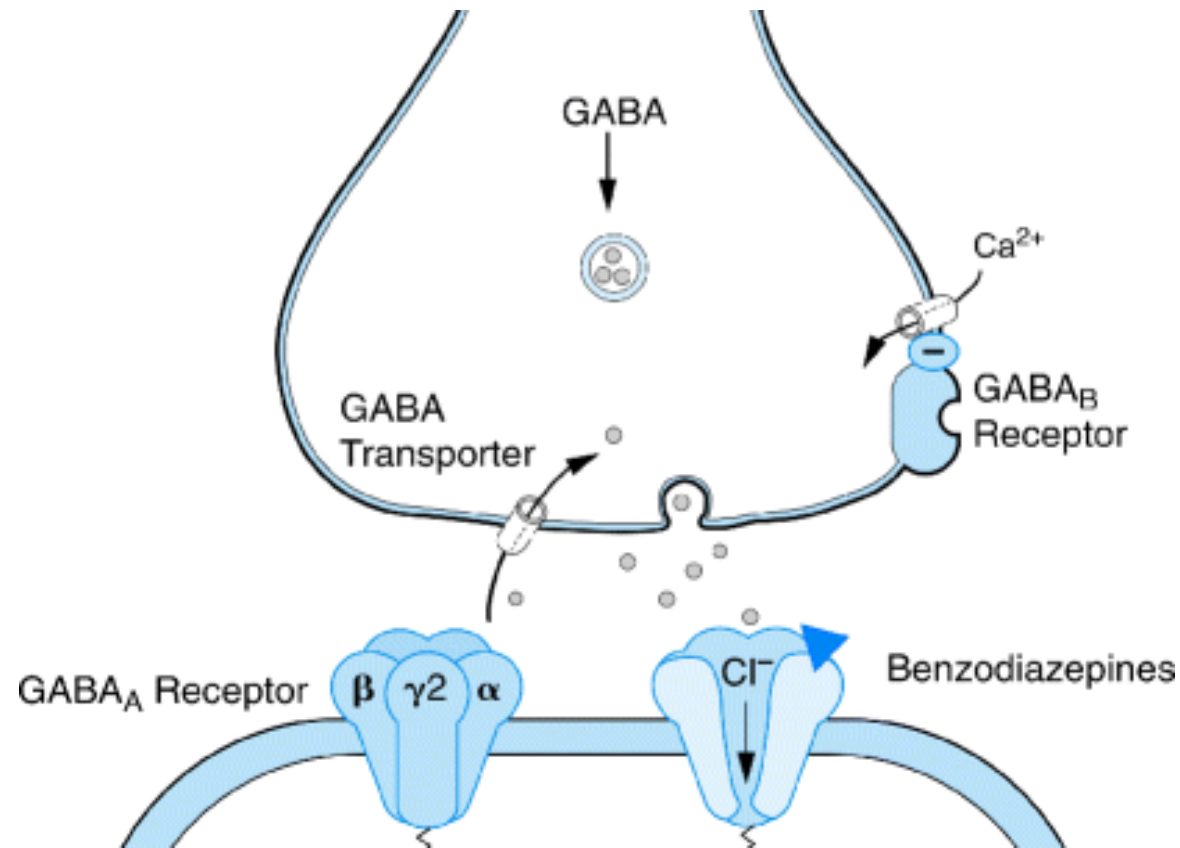
Trazodone

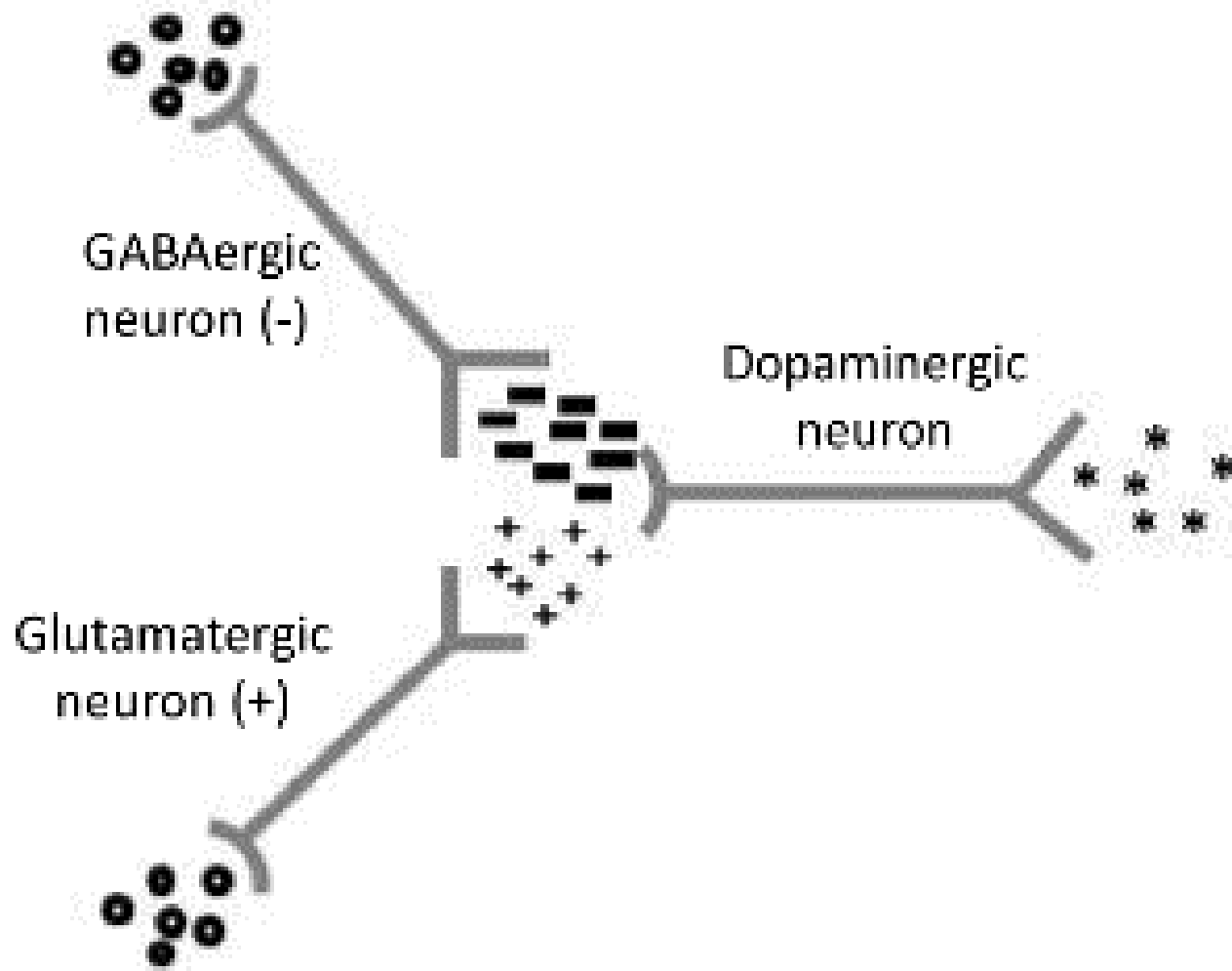
- Side effects: sleepiness/sedation, gastrointestinal upset, agitation



Benzodiazepines

Benzodiazepines increase the sensitivity of GABA receptors and potentiates them





GABAergic systems regulate functions such as vigilance, anxiety, muscle tension, epileptogenic activity & memory

There are many different benzodiazepines

SHORT DURATION

Diazepam

Midazolam

LONGER DURATION

Alprazolam

Lorazepam

Clonazepam

Oxazepam

And there are many more...

Benzodiazepines

ALPRAZOLAM (XANAX)

Doses:

Canine: 0.02-0.1 mg/kg PO PRN

Feline: 0.125-0.25mg/CAT PO PRN

“Rescue type” drug

- Aroused = less effective



LORAZEPAM (ATIVAN)

Doses:

Canine: 0.02-0.1 mg/kg PO PRN

Feline: 0.125-0.25mg/CAT PO PRN

No liver metabolites

More liver sparing

injectible



Benzodiazepines have a fast onset of 30 to 60 minutes and duration of 6 to 8 hours



Benzodiazepines

- Most common side effects include sedation, increased appetite and gastrointestinal upset
- May have amnesic properties and rebound anxieties with abrupt stop
- Less common (but concerning) side effects include behavioral disinhibition & paradoxical excitation

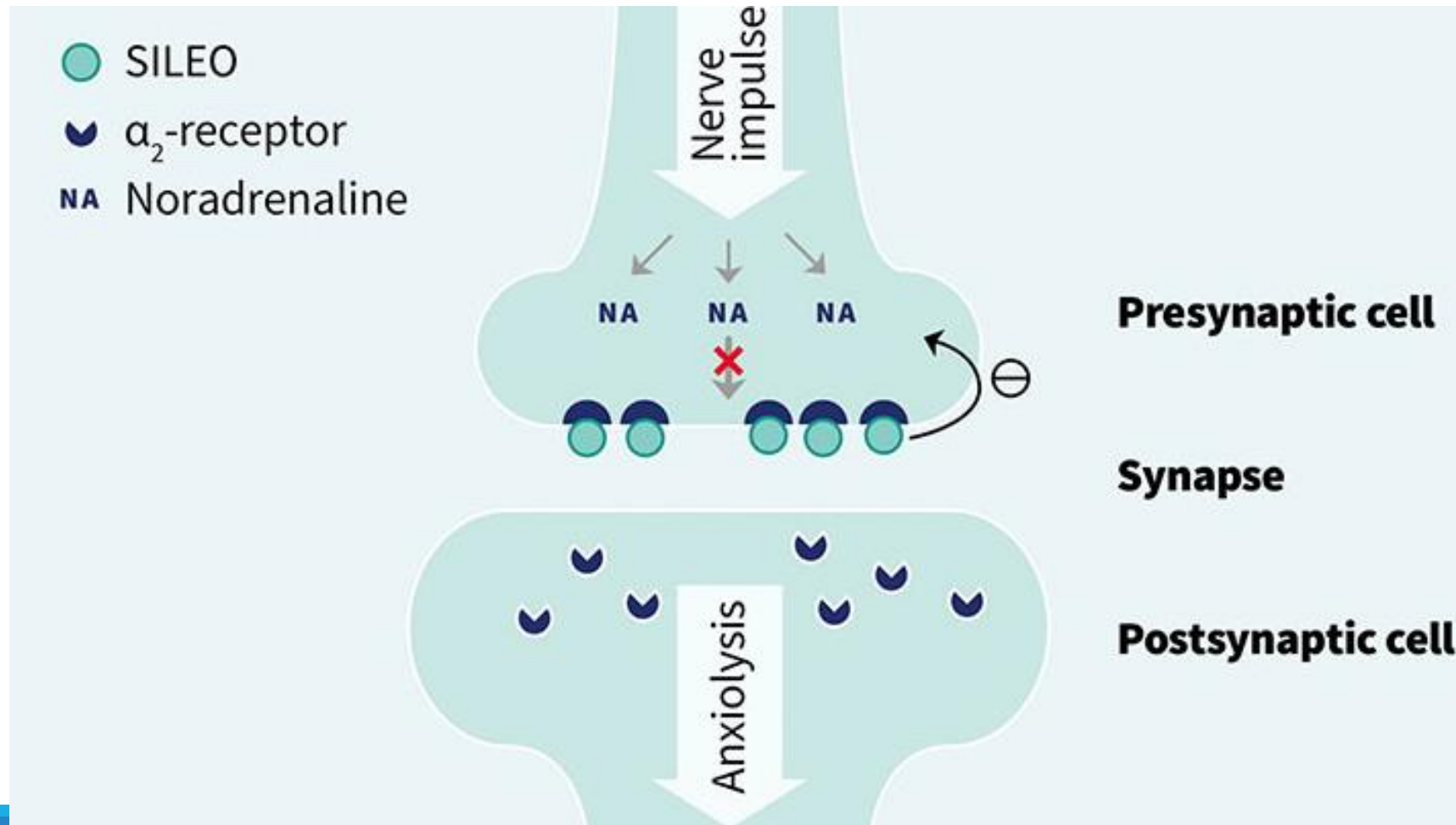


Benzodiazepines are a controlled substance (schedule IV in USA)



Alpha2 Agonists

Alpha2 agonists binds alpha-2 receptors preventing release of norepinephrine



Alpha2 agonists

Clonidine

Dexmedetomidine oromucosal gel (Sileo)

Uses:

FDA approved for firework phobia (Sileo)

Travel

Vet Visits

Kopivaara et al. Vet Record 2017

Amat et al. IVBM 2017

Kopivaara et al. IVBM 2017

Ogata & Dodman JVB 2011

Clonidine

- Dosing:
 - Dogs: 0.01 – 0.05mg/kg PO PRN
- Time to effect: ~60 minutes
- Duration of action: 6-12 hours



Dexmedetomidine oromucosal gel

- Administration is OTM & reversible
- Dosing:
 - Dogs: 125 mcg/m² (follow packet insert)
 - Cats: unpublished & anecdotal use
- Time to effect: 20-40 minutes
- Duration of action: 1-2 hours, can be redosed x5



Alpha2 agonists

- Side effects: sleepiness/sedation, gastrointestinal upset, ataxia
- Can impact heart rate & blood pressure, usually within normal limits



Follow up



Re-evaluate often & adjust when needed





Still unsure about
what to do?

Consider Referral

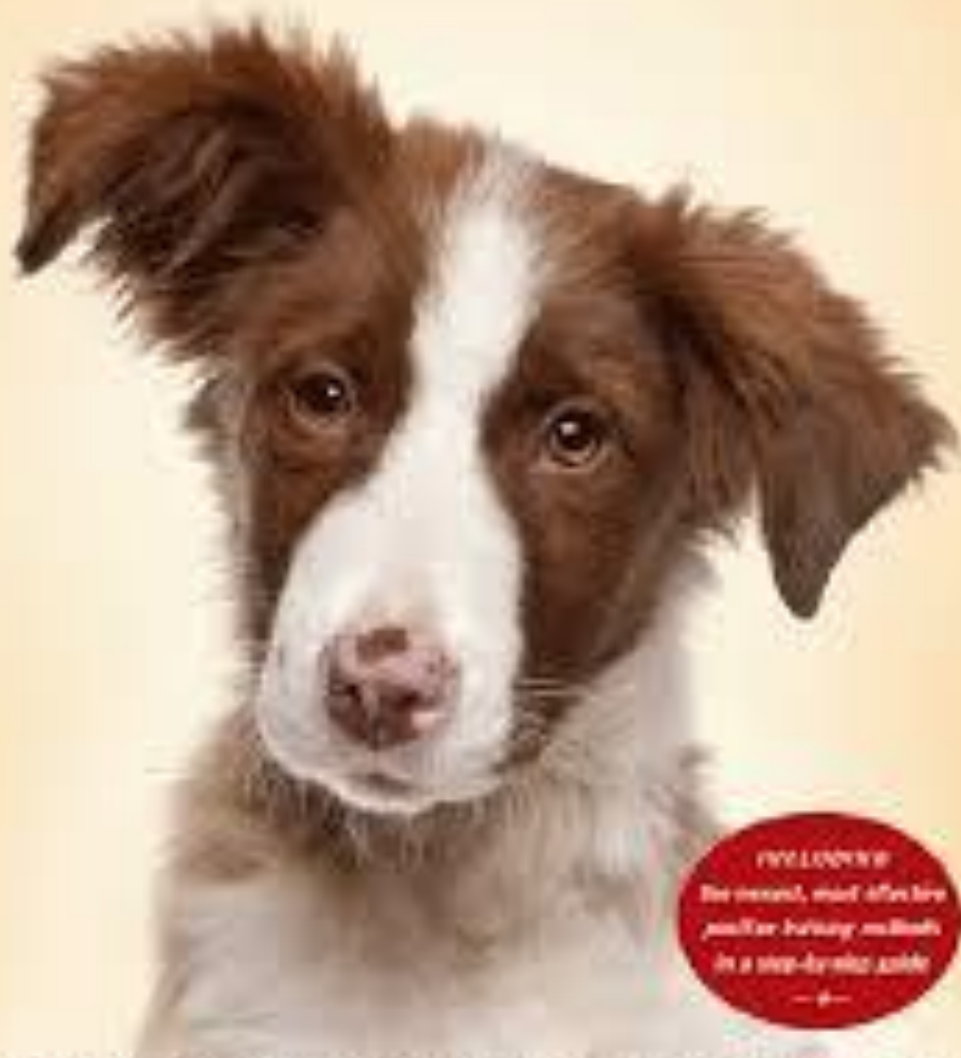


Diplomats
of ACVB

Resources



Decoding Your Dog



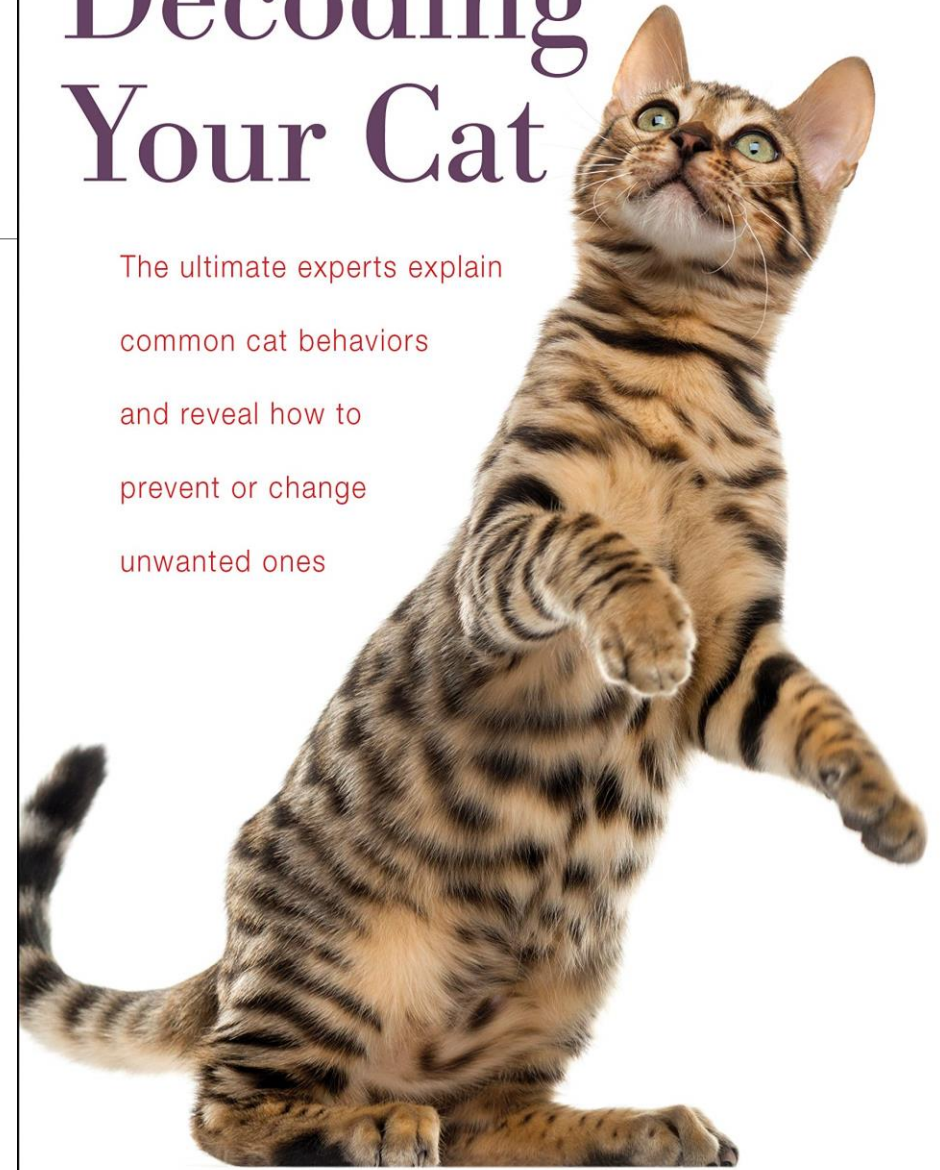
INCLUDES:
The newest, most effective
and fun training methods
in a step-by-step guide

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EDITED BY DEBRA HORWITZ DVM, DACVB AND ANN C. BASSI DVM, DACVB WITH STEVE DALE

Decoding your dog / cat by ACVB

Decoding Your Cat



The ultimate experts explain
common cat behaviors
and reveal how to
prevent or change
unwanted ones

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By Debra Horwitz



AVSAB Position Statements

Veterinary Psychopharmacology

Sharon L. Crowell-Davis
Thomas F. Murray
Leticia Mattos de Souza Dantas



Resource:

Veterinary
Psychopharmacology
by Sharon Crowell-Davis



Thank You!



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