

Undetected pain & subsequent behavior problems: Treatment (Part 2)

Kat Pankratz, DVM DACVB

November 5, 2022

2022 SBCV Fall Conference & Trade Show



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No association with any product shared

Recommendations should not be taken as an exclusive protocol as variations in practice may be warranted

Speaker's perspective is from the United States

Lecture Goals



Pain pathway



Treatment tiers



Additional treatment
considerations

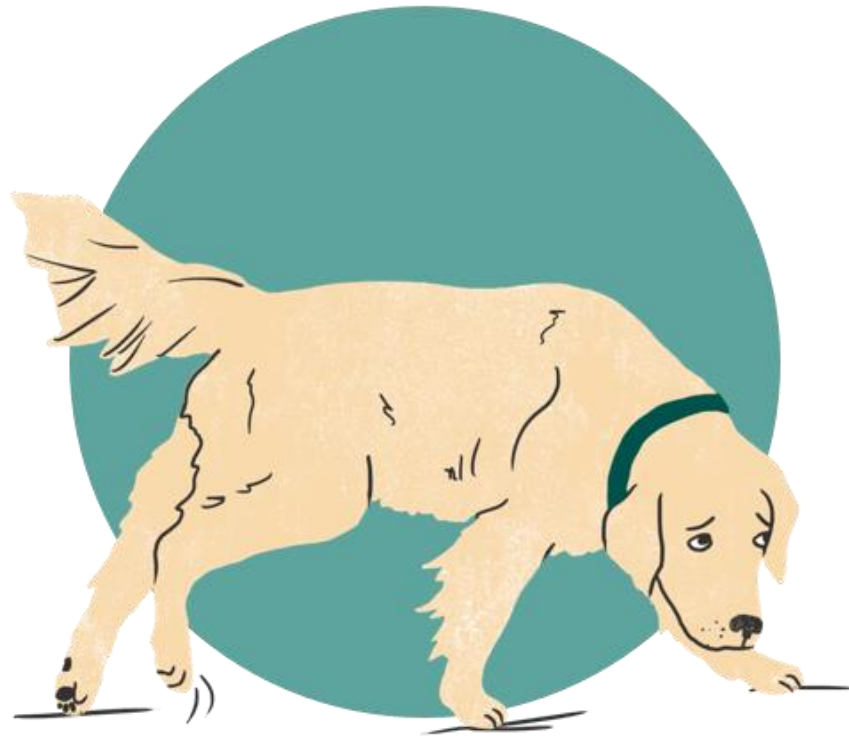


Follow up

Treatment required an understanding of types of pain



SLOW TO RISE



LIMPING



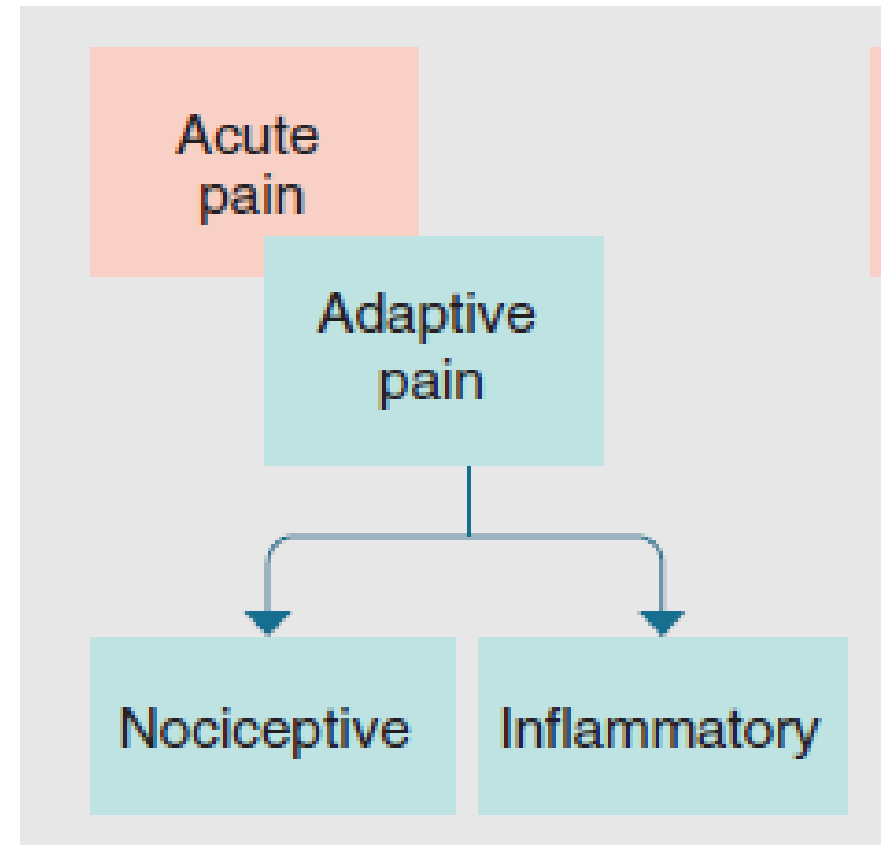
LOW ENERGY

Categories of Pain: Acute vs Chronic



Acute “adaptive” Pain

- Tissue damage or threat of it
- Purpose:
 - change behavior to avoid / minimize damage
 - optimize potential for healing

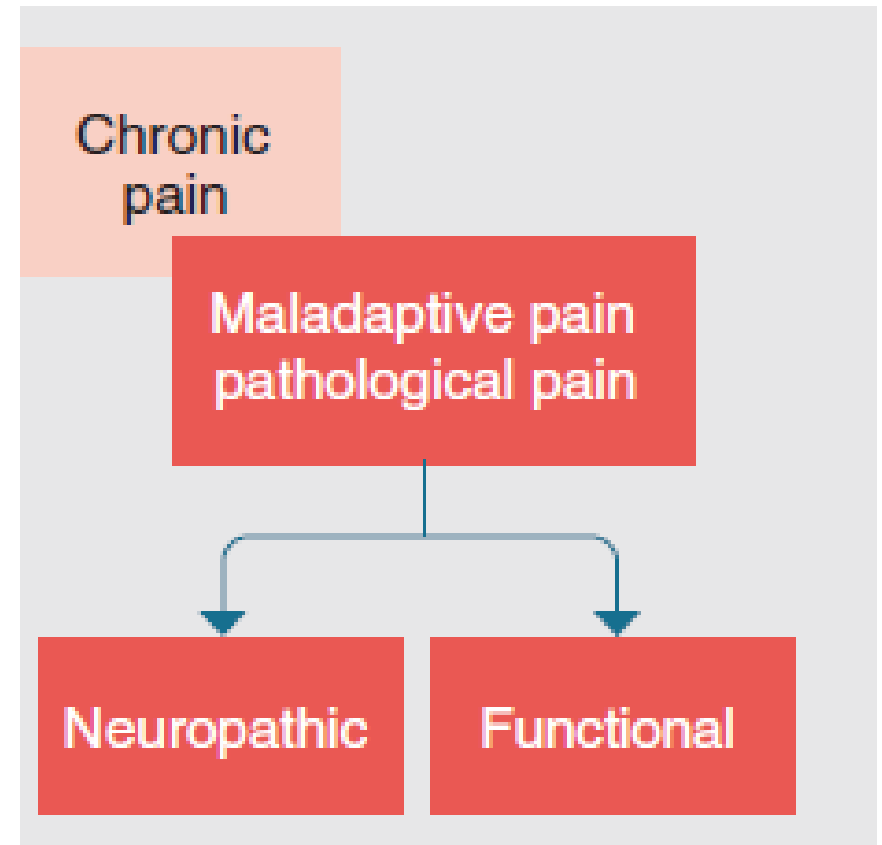


Acute pain most straightforward as easily palpated or observed



Chronic “maladaptive” Pain

- > 3 month duration of pain
- Acute pain → pathological state
 - Changes in pain transmission system → amplify pain
 - Progressive disconnect between peripheral lesion & perceived pain
- Subtypes
 - Neuropathic pain
 - Functional pain





Clinically can be a mix of acute and chronic pain

- Longer the pain
 - → more likely chronic pain present
 - → more difficult to treat

Chronic pain is underrecognized
as signs not always obvious



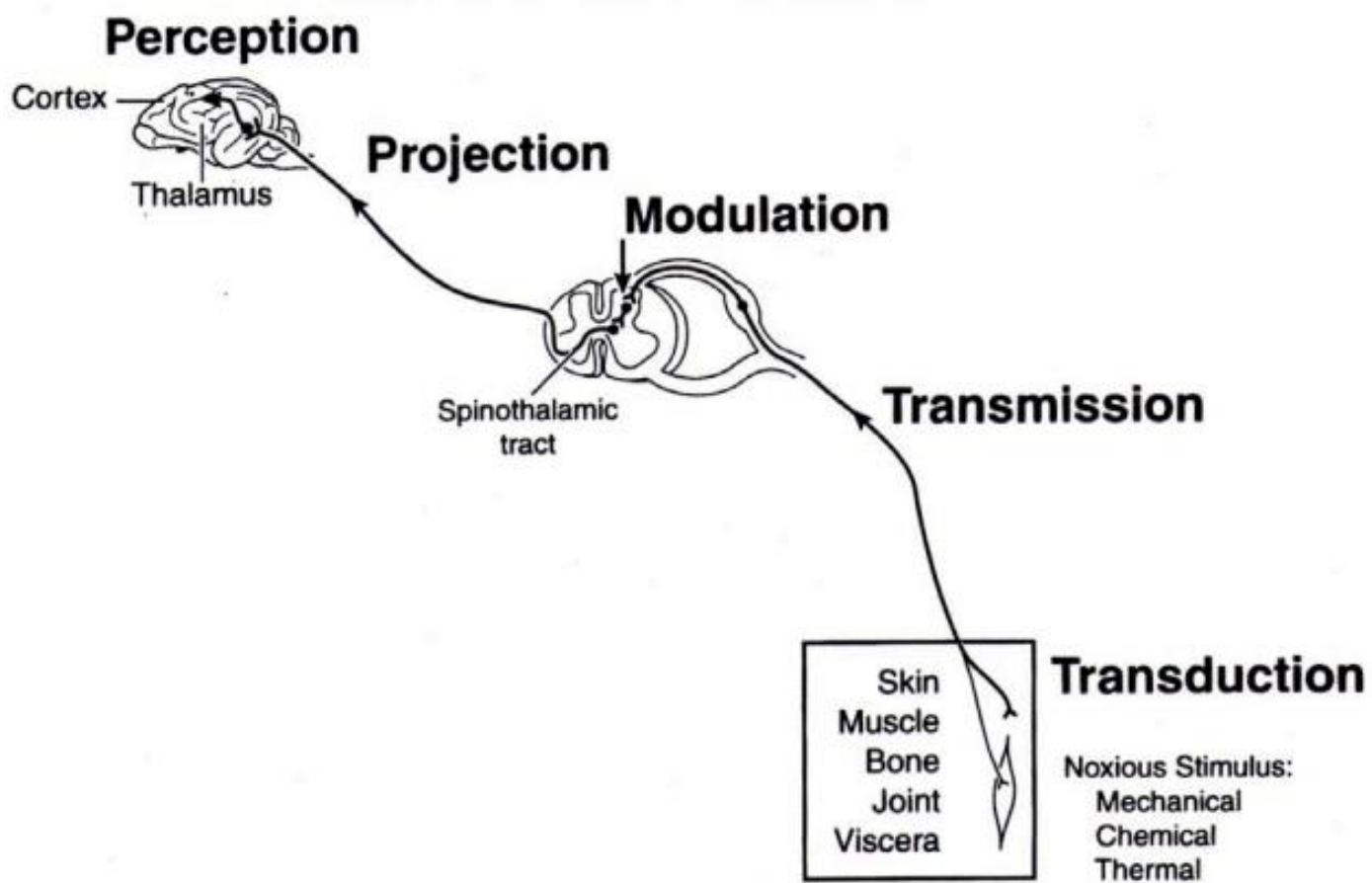
Great Pet Care

Pain pathway



Pain Physiology

- Transduction
- Transmission
- Modulation
- Projection
- Perception



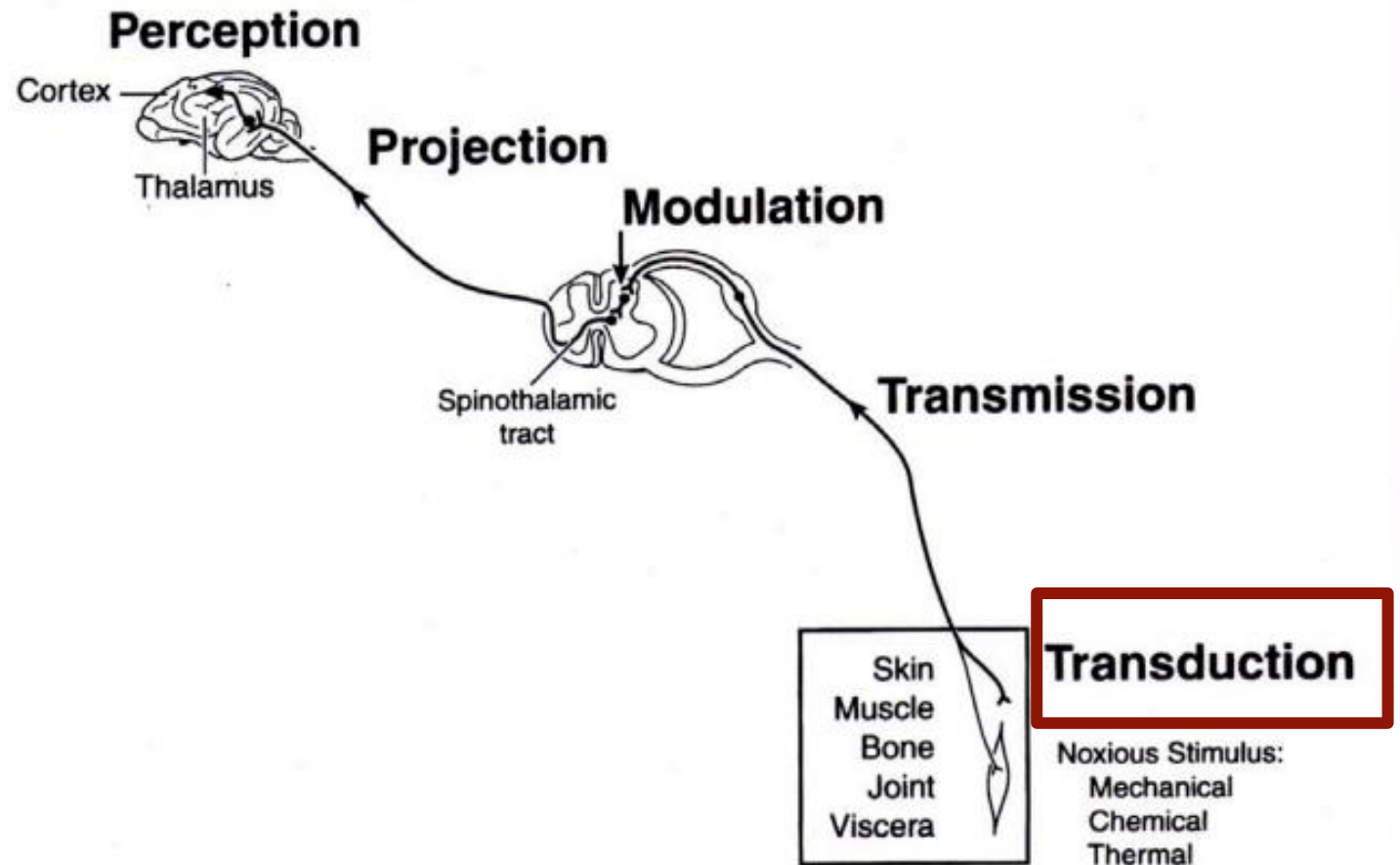
<http://vanat.cvm.umn.edu/>

Pain Physiology

- **Transduction**

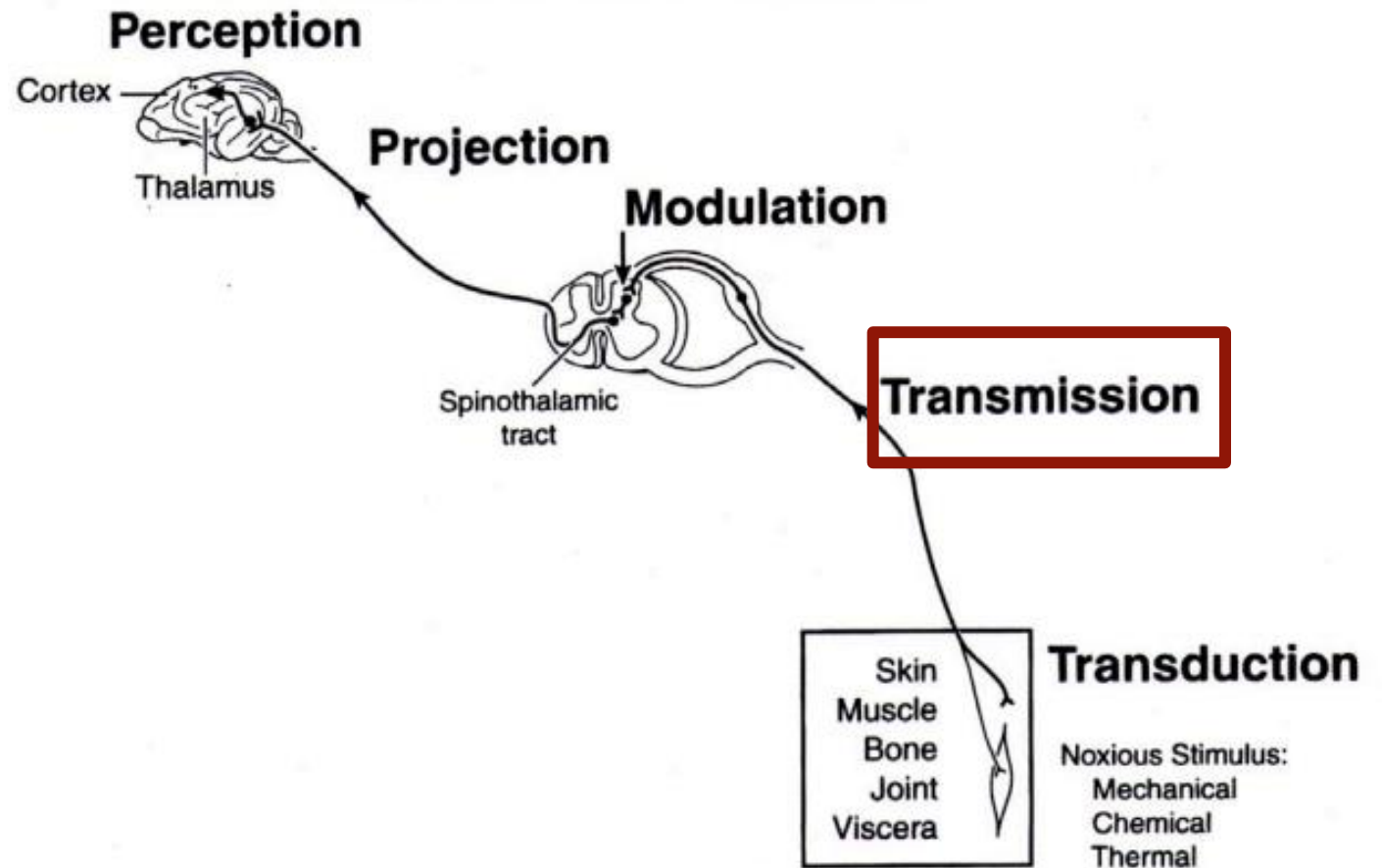
- Peripheral nociceptors
- peripheral sensitization
 - Hyperalgesia
 - allodynia

- Transmission
- Modulation
- Projection
- Perception



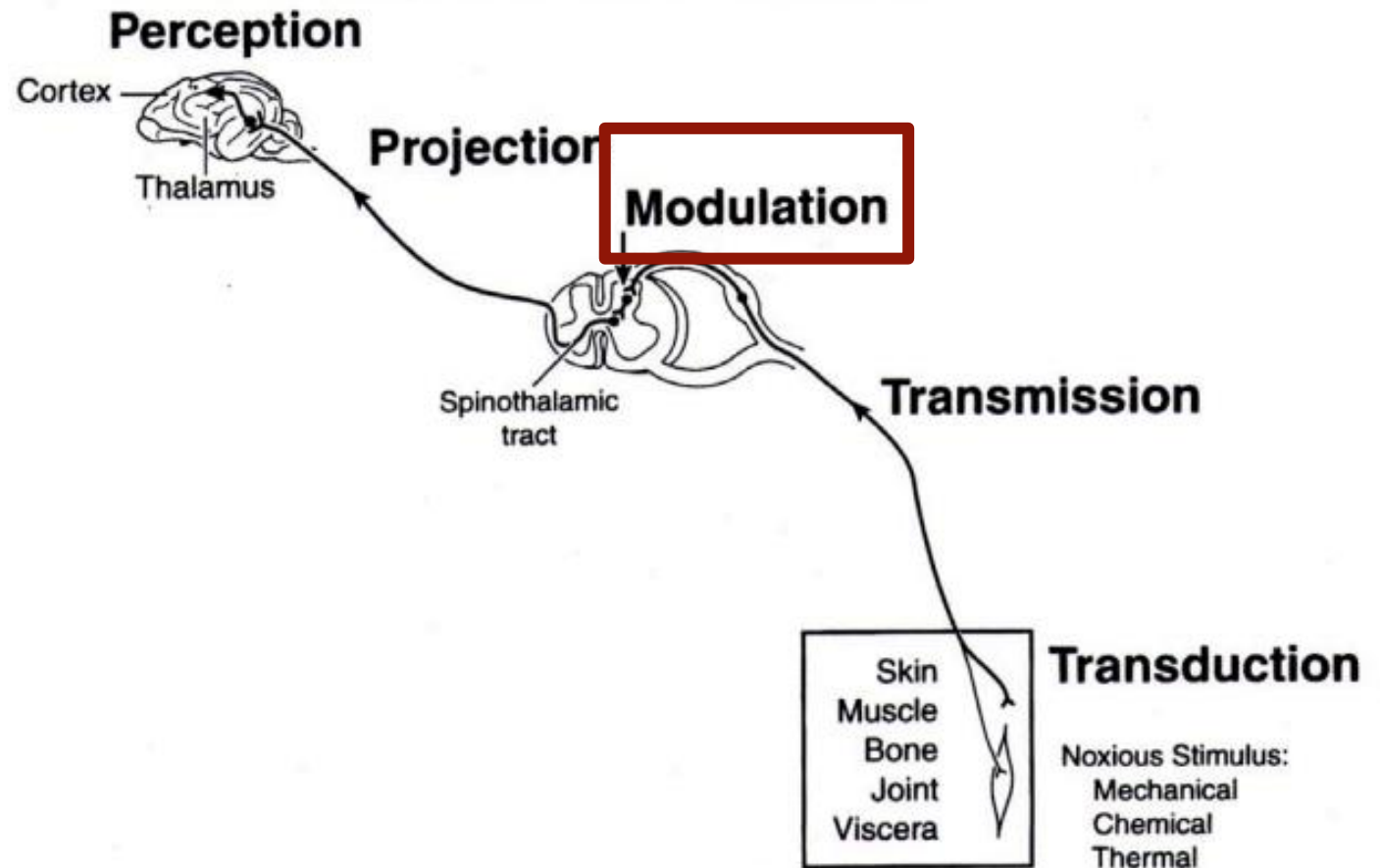
Pain Physiology

- Transduction
- **Transmission**
 - $A\delta$, C, and $A\beta$ fibers send signal
- Modulation
- Projection
- Perception



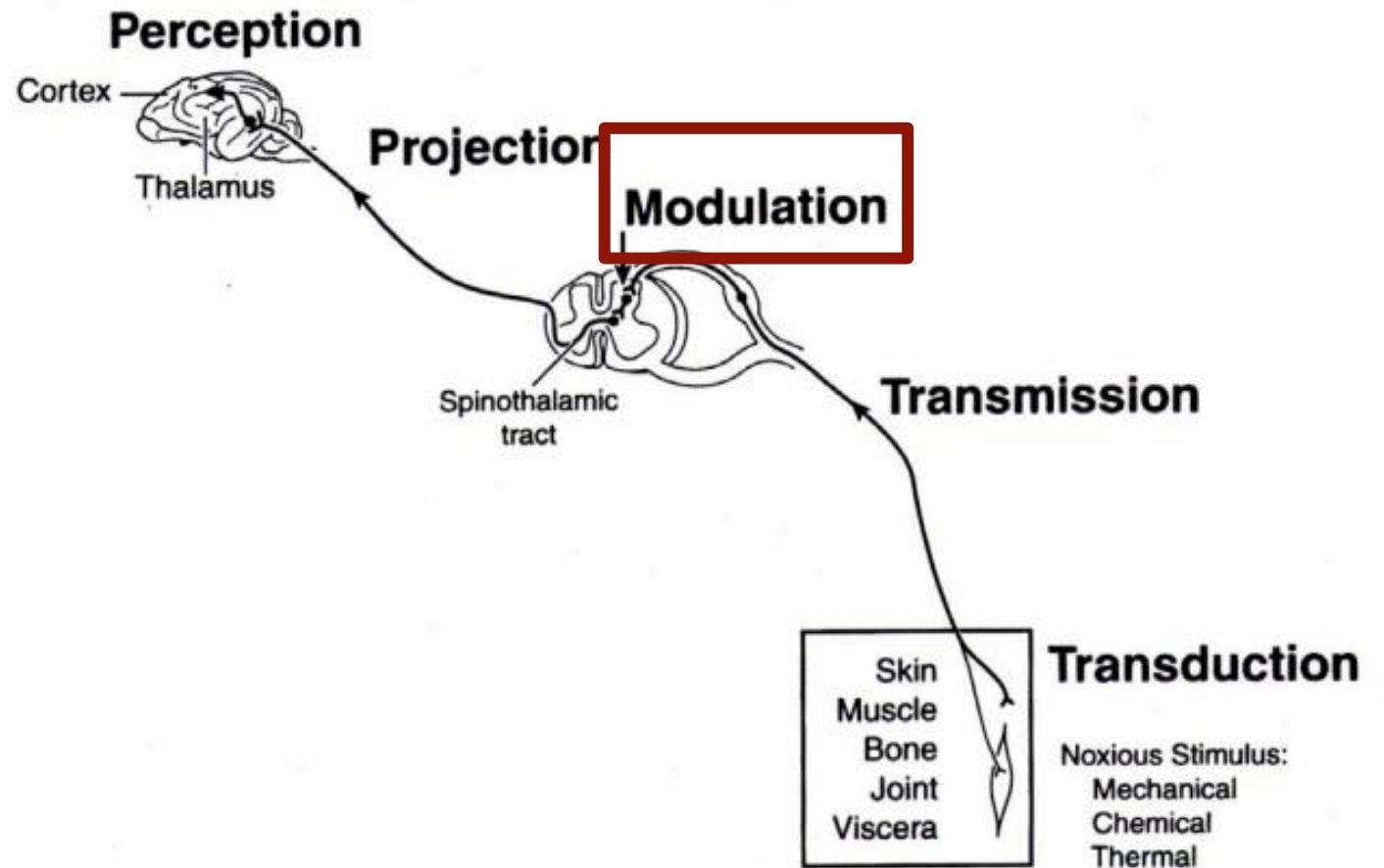
Pain Physiology

- Transduction
- Transmission
- **Modulation**
 - Descending Inhibitory pathway NT:
 - Endogenous opioids
 - Serotonin 5HT
 - Norepinephrine
 - Gamma-aminobutyric acid (GABA)
 - Glycine
- Projection
- Perception



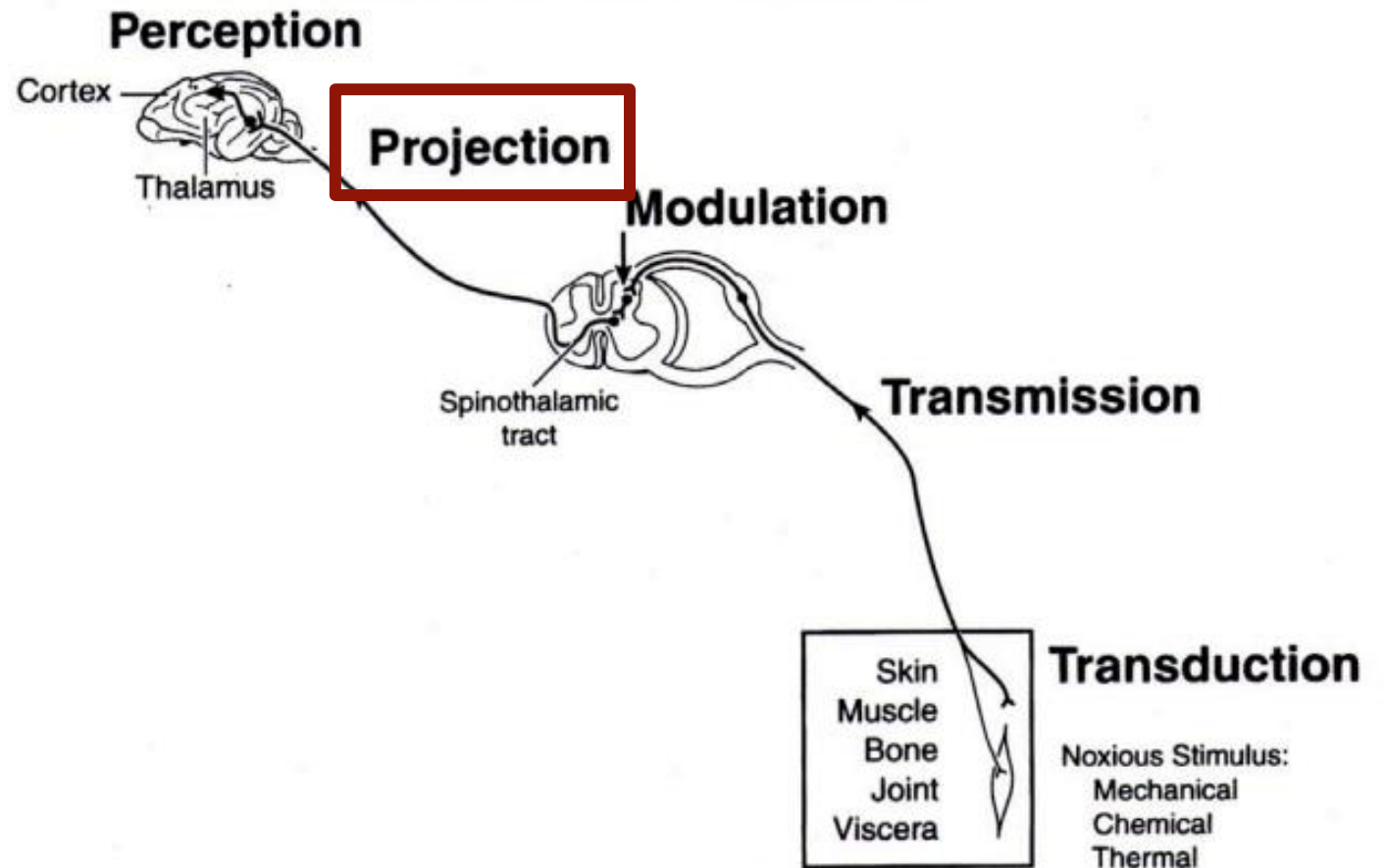
Pain Physiology

- Transduction
- Transmission
- **Modulation**
 - ↑ Glutamate, Substance P, Prostaglandins, NMDA
 - ↓ Opioids, Serotonin, Norepinephrine
- Projection
- Perception



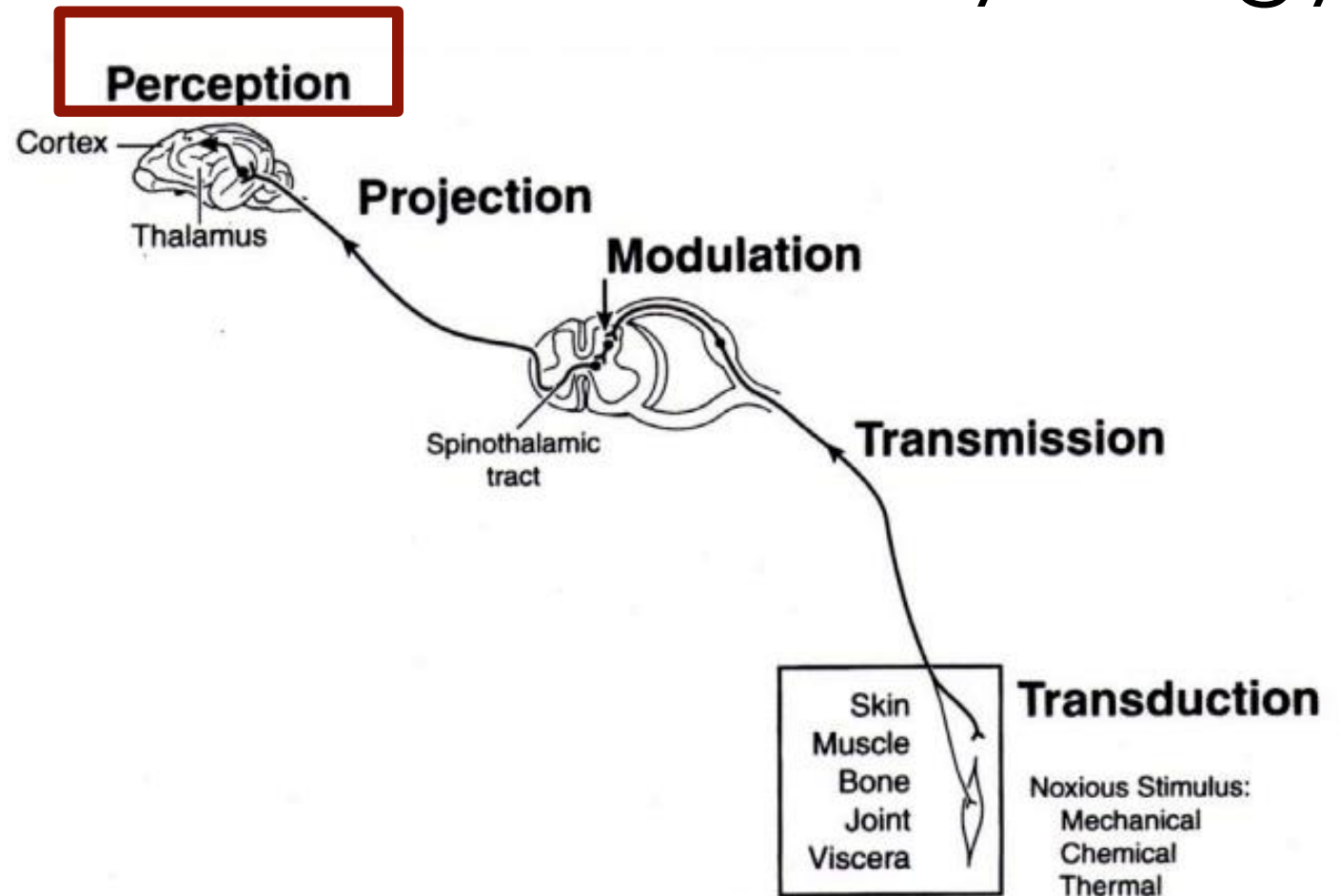
Pain Physiology

- Transduction
- Transmission
- Modulation
- **Projection**
 - Transport thru spinal cord
- Perception



Pain Physiology

- Transduction
- Transmission
- Modulation
- Projection
- **Perception**
 - Convert signal into pain



Treatment options for pain



Treatments largely focused on musculoskeletal management



Tiered treatment considerations

First Tier

- Opioid
- NSAIDs
- Anti-NGF mAb
- Omega 3
- Environment modification
- Weight optimization
- Encourage activity/exercise
- Surgery
- Supportive care
 - Cold therapy
 - Nursing care

Second Tier

- Alpha 2 agonists
- Amantadine
- Gabapentin
- Disease specific drug therapies
- Dogs only:
 - Acetaminophen

Third Tier

- Tramadol
- Other supplements
- Cats only:
 - TCAs
- Ambulation assistance

First Tier treatment options

- Opioid
- NSAIDs
- Anti-NGF mAb
- Omega 3
- Environment modification
- Weight optimization
- Encourage activity/exercise
- Surgery
- Supportive care
 - Cold therapy
 - Nursing care

Opioids

- Effective perio-operative pain management

- Preemptive benefit



Veterinary Clinics of North America: Small
Animal Practice

Volume 45, Issue 5, September 2015, Pages 1013-1027



Pain 73 (1997) 461–471

PAIN

Analgesia in the Perioperative Period

Post-operative central hypersensitivity and pain: the pre-emptive
value of pethidine for ovariohysterectomy

B.D.X. Lascelles^{a,b,*}, P.J. Cripps^a, A. Jones^a, A.E. Waterman^a

Several opioids available



 **Simbadol™** 
(buprenorphine injection)



Opioids in cats

- Opioids don't cause hyperactivity or dysphoria in cats (at clinical doses)

BRAIN RESEARCH 1134 (2007) 53–61



ELSEVIER

Available online at www.sciencedirect.com

SciVerse ScienceDirect

www.elsevier.com/locate/brainres

BRAIN
RESEARCH

Research Report

Ontogenesis of morphine-induced behavior in the cat

*J. Wesley Burgess*¹, *Jaime R. Villablanca**

Opioids in cats

- Hyperthermia managed with monitoring and modification

Veterinary
Anaesthesia and Analgesia

Formerly the Journal of Veterinary Anaesthesia

Veterinary Anaesthesia and Analgesia, 2010, **37**, 35–43

doi:10.1111/j.1467-2995.2009.00508.x

RESEARCH PAPER

Effects of opioids and anesthetic drugs on body temperature in cats

Lysa P Posner*, Alana A Pavuk*, Jennifer L Rokshar*, Jennifer E Carter* & Jay F Levine†



Animal Emergency Center Memphis

Opioids may not be best choice for long term use

- Potential for human abuse
- Dogs poor uptake when taken orally repeatedly due to enterohepatic recirculation and elimination



NSAIDS are helpful for wide range
of pain conditions

Review

J Vet Intern Med 2013;27:1011–1019

**Systematic Review of Nonsteroidal Anti-Inflammatory
Drug-Induced Adverse Effects in Dogs**

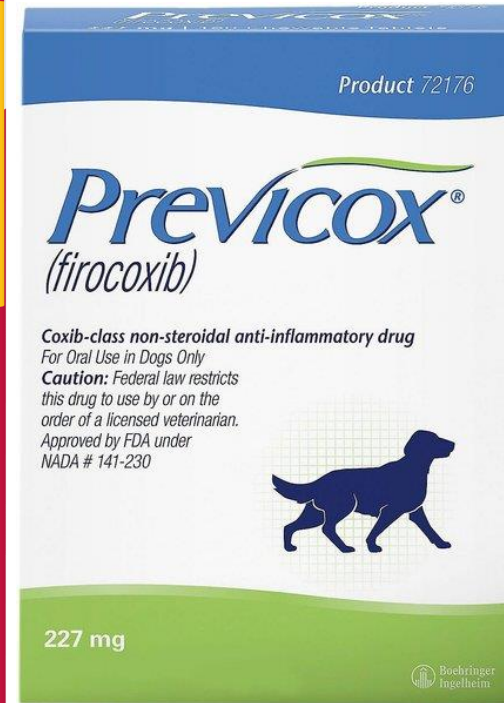
B.P. Monteiro-Steagall, P.V.M. Steagall, and B.D.X. Lascelles

Papers

**Review of the safety and efficacy of long-term
NSAID use in the treatment of canine
osteoarthritis**

J. F. Innes, J. Clayton, B. D. X. Lascelles

Many NSAIDs available



NSAIDs may or may not be appropriate

Review > Vet Ther. 2005 Fall;6(3):237-51.

Guidelines for safe and effective use of NSAIDs in dogs

B Duncan X Lascelles¹, J Michael McFarland, Heather Swann

Affiliations + expand

PMID: 16299670

Veterinary
Anaesthesia and Analgesia

Formerly the Journal of Veterinary Anaesthesia

Veterinary Anaesthesia and Analgesia, 2012, **39**, 69–90

doi:10.1111/j.1467-2995.2011.00675.x

REVIEW

Clinical pharmacology of nonsteroidal anti-inflammatory drugs in dogs

Butch KuKanich*, Tara Bidgood† & Oliver Knesl†

*Kansas State University College of Veterinary Medicine, Manhattan, KS, USA

†Pfizer Animal Health, 5 Giralda Farms, Madison, NJ, USA

Anti-NGF monoclonal antibodies

Journal of Veterinary Internal Medicine

ACVIM
American College of Veterinary Internal Medicine

Open Access

J Vet Intern Med 2016;30:1138–1148

A Feline-Specific Anti-Nerve Growth Factor Antibody Improves Mobility in Cats with Degenerative Joint Disease–Associated Pain: A Pilot Proof of Concept Study

M.E. Gruen, A.E. Thomson, E.H. Griffith, H. Paradise, D.P. Gearing, and B.D.X. Lascelles

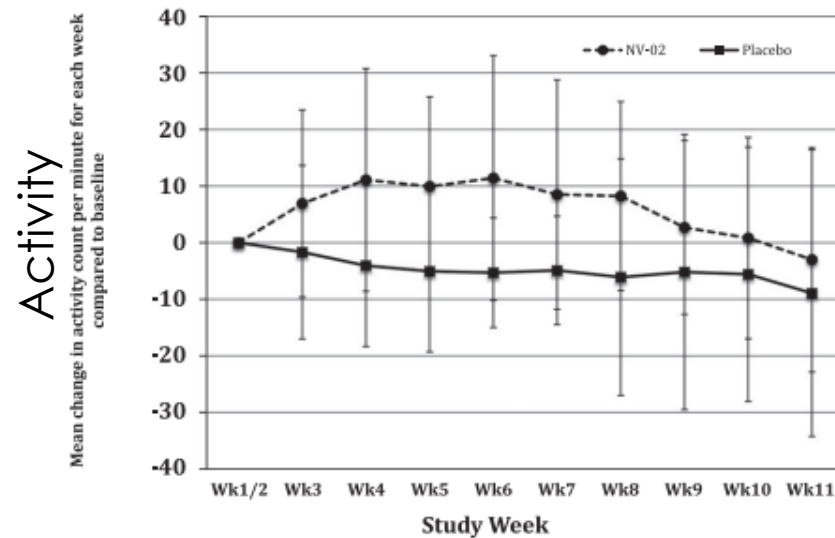


Fig 2. Plot of percentage change from baseline (average of weeks 1 and 2 activity, before the antibody or placebo being administered) in mean weekly activity counts (originally expressed as average activity count per minute over the week) by group (treatment/placebo), for each week of study.

Efficacy and Safety of an Anti-nerve Growth Factor Antibody (Frunevetmab) for the Treatment of Degenerative Joint Disease-Associated Chronic Pain in Cats: A Multisite Pilot Field Study



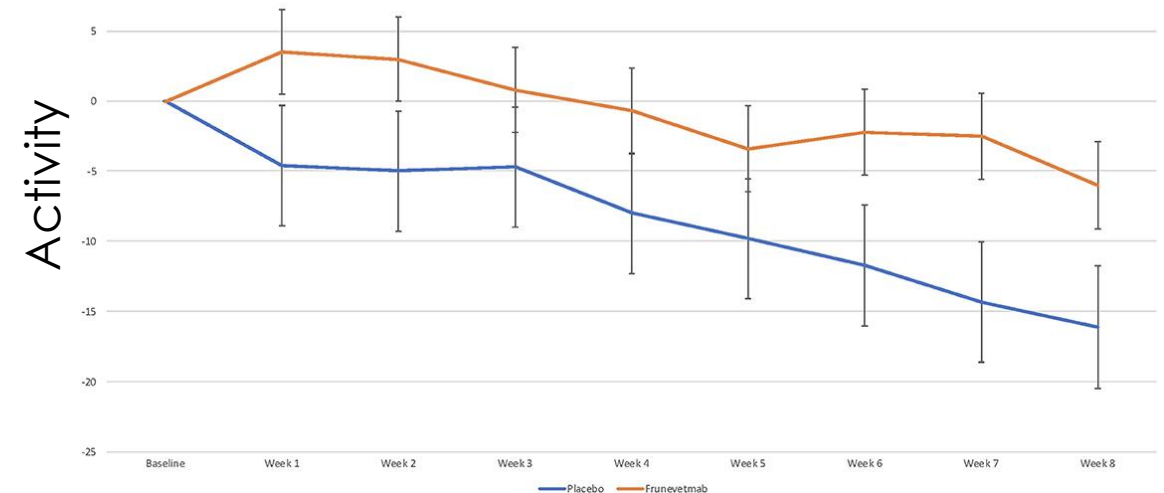
Margaret E. Gruen^{1,2,3*}



Jamie A. E. Myers^{4*} and



B. Duncan X. Lascelles^{1,3,5,6*}



Omega 3

J Vet Intern Med 2010;24:487-495

Evaluation of a Therapeutic Diet for Feline Degenerative Joint Disease

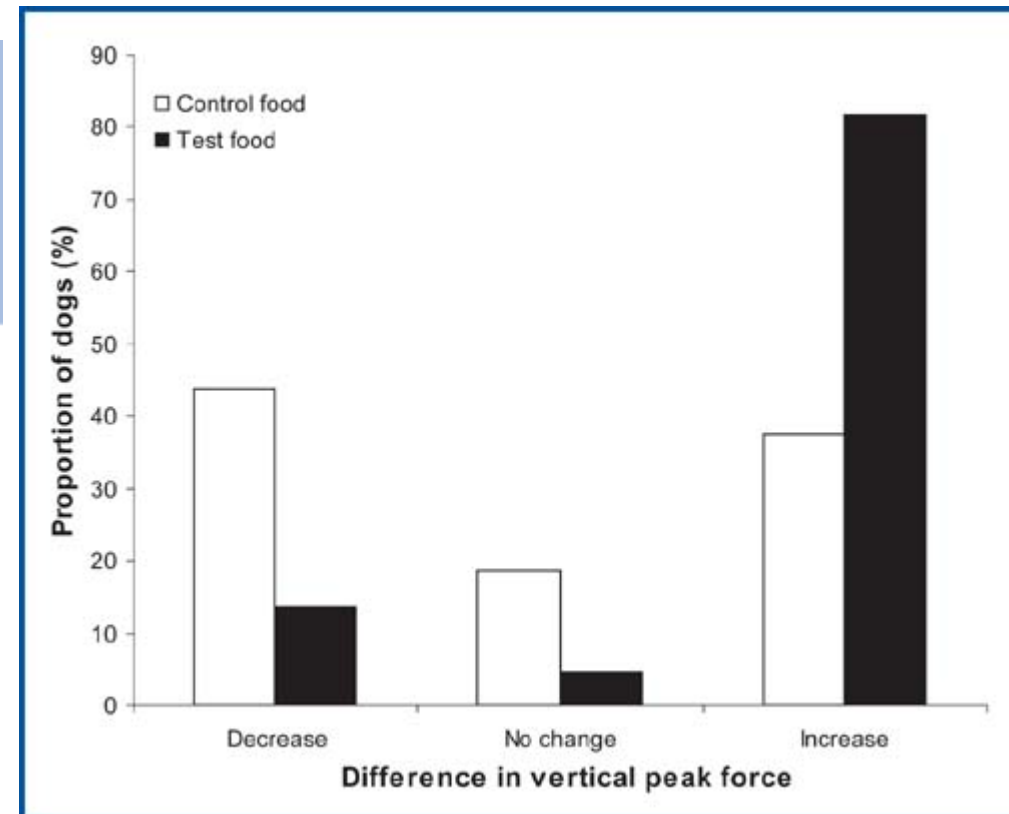
B.D.X. Lascelles, V. DePuy, A. Thomson, B. Hansen, D.J. Marcellin-Little, V. Biourge, and J.E. Bauer

Evaluation of the effects of dietary supplementation with fish oil omega-3 fatty acids on weight bearing in dogs with osteoarthritis

James K. Roush, DVM, MS, DACVS; Alan R. Cross, DVM, MS, DACVS; Walter C. Renberg, DVM, MS, DACVS; Chadwick E. Dodd, DVM; Kristin A. Sixby, DVM; Dale A. Fritsch, MS; Timothy A. Allen, DVM, DACVIM; Dennis E. Jewell, PhD; Daniel C. Richardson, DVM, DACVS; Phillip S. Leventhal, PhD; Kevin A. Hahn, DVM, PhD, DACVIM



SM ALL ANIMALS



Certain surgeries may treat chronic pain



VCA Animal Hospitals

Environment modifications relieve
the impact of pain



Environment that increases pet's access



Environment that ensures access
to elimination needs

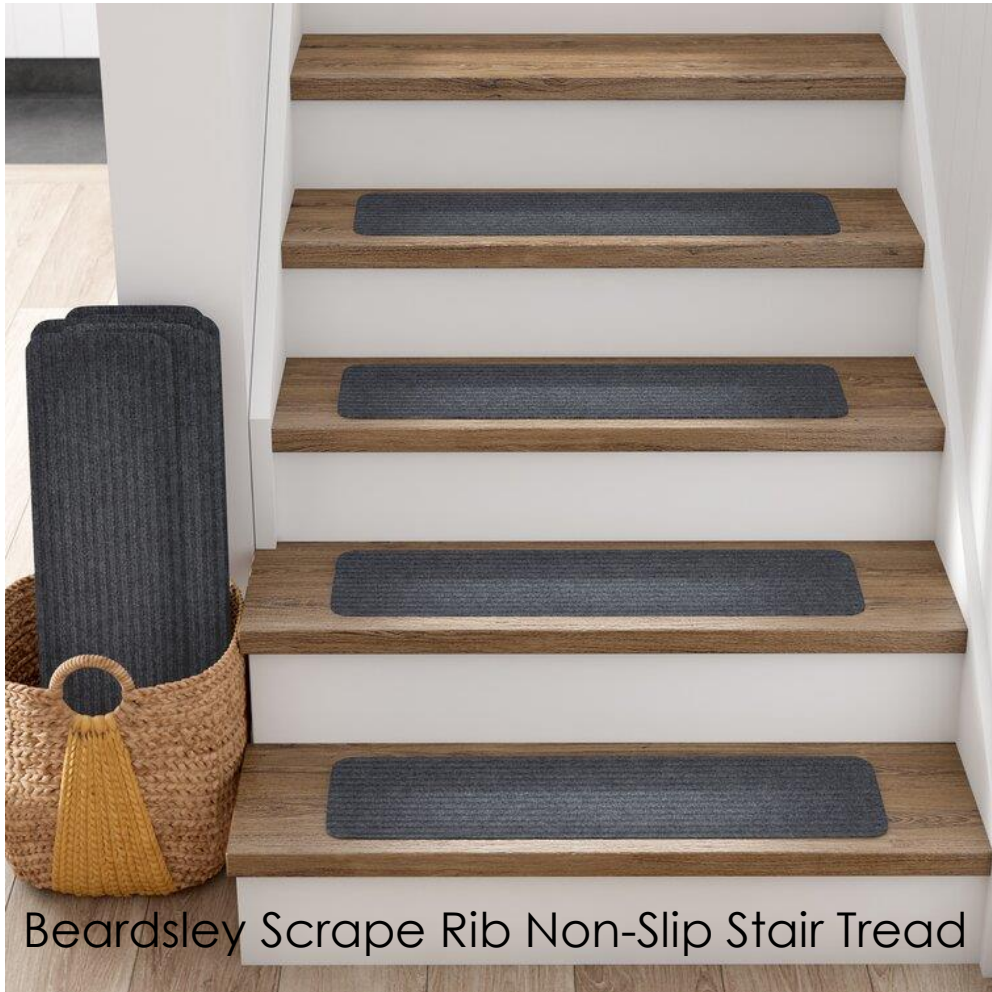


KittyGoHere

Environment that ensures access to elimination needs



Environment ensure security & safety



Beardsley Scrape Rib Non-Slip Stair Tread



Help 'Em Up Harness

Environment ensure security & safety



ToeGrips



PawFriction



DailyPaws.com

Environment ensure security & safety



Omlet

AAFP and ISFM Feline Environmental Needs Guidelines

5 pillars of a healthy feline environment

1. Provide safe places
2. Provide multiple and separated key environmental resources
3. Provide opportunity for play and predatory behavior
4. Provide positive, consistent and predictable human-cat social interaction
5. Provide an environment that respects the importance of the cat's sense of smell

Environment ensure security & safety



Pooch Parenting

Build patient's comfort with necessary environmental changes

NO WALKS? NO WORRIES!

Maintaining wellbeing in dogs on restricted exercise



Siân Ryan & Helen Zulch



Hubble & Hattie



dog tricks crate rest



Crate Rest Activities for Dogs after Back, Hip, Leg Injuries, ACL or TPLO, Heartworm treatmentetc



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Weight optimization



K9 strong

Diet and exercise impact weight

Influence of lifetime food restriction on causes, time, and predictors of death in dogs

Dennis F. Lawler, DVM; Richard H. Evans, DVM, MS; Brian T. Larson, PhD; Edward L. Spitznagel, PhD; Mark R. Ellersieck, PhD; Richard D. Kealy, PhD

Lifelong diet restriction and radiographic evidence of osteoarthritis of the hip joint in dogs

Gail K. Smith, VMD, PhD; Erin R. Paster, DVM; Michelle Y. Powers, DVM; Dennis F. Lawler, DVM; Darryl N. Biery, DVM, DACVR; Frances S. Shofer, PhD; Pamela J. McKelvie, VMD; Richard D. Kealy, PhD

Interrelationship of Neurogenic Obesity and Chronic Neuropathic Pain in Persons With Spinal Cord Injury

Elizabeth R. Felix, PhD,^{1,2} and David R. Gater, Jr, MD, PhD, MS^{1,3}



FOOD PUZZLES FOR CATS



H



PUZZLES HOMEMADE PUZZLES VIDEOS ABOUT US

about feeding


at food

ington and
manuscript.

Widely read
'Clinical Practice' article
(13,536 downloads in 2016)

Food puzzles for cats: Tending for physical and mental well-being by Leila W. Dantas, MSc and M. Delgado, DVM, MS, CA-Tony Buffington

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



INSTINCT

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Register for free!



Lickimat

Encourage Activity / Exercise

Associations among exercise duration, lameness severity, and hip joint range of motion in Labrador Retrievers with hip dysplasia

Laura M. Greene, DVM; Denis J. Marcellin-Little, DEDV, DACVS, DACVSMR; B. Duncan X. Lascelles, BVSc, PhD, DACVS






PetMD

Exercise is an important piece of mental enrichment too



Hall; Appl An Beh Sci 1998

Ice therapy: cool, current and complicated

B. WRIGHT^{1,*}, P. W. KRONEN^{1,†}, D. LASCELLES[§], B. MONTEIRO [§], J. C. MURRELL [‡], S. ROBERTSON^{**},
P. V. M. STEAGALL ^{††} AND K. YAMASHITA^{††}

Effect of cold compression therapy on postoperative pain, swelling, range of motion, and lameness after tibial plateau leveling osteotomy in dogs

Kevin A. Drygas, DVM, DACVS; Scott R. McClure, DVM, PhD, DACVS; Robert L. Goring, DVM, DACVS;
Antonio Pozzi, DMV, MS, DACVS; Sheilah A. Robertson, BVMS, PhD, DACVA; Chong Wang, PhD

Cold therapy



Icing Hind Leg youtube.com

TOPICAL REVIEW

Analgesia for Anesthetized Patients

Kip A. Lemke, DVM, MSc, Dipl. ACVA, and Catherine M. Creighton, DVM

Nursing Care

Perioperative Pain Management in Veterinary Patients

Doris H. Dyson, DVM, DVSc

Second Tier pain treatment

- Alpha 2 agonists
- Amantadine
- Gabapentin
- Disease specific drug therapies
- Dogs only:
 - Acetaminophen

Alpha-2 Agonists

Respiratory and hemodynamic effects of 2 protocols of low-dose infusion of dexmedetomidine in dogs under isoflurane anesthesia

Caterina Di Bella, Despoina Skouropoulou, Marzia Stabile, Cosmin Muresan, Salvatore Grasso, Luca Lacitignola, Luisa Valentini, Antonio Crovace, Francesco Staffieri

Behavior Tangent

Clonidine



Journal of Veterinary Behavior
Volume 6, Issue 2, March–April 2011, Pages 130-137



Research

The use of clonidine in the treatment of fear-based behavior problems in dogs: An open trial

Behavior Tangent

Sileo

Dexmedetomidine oromucosal gel for noise-associated acute anxiety and fear in dogs—a randomised, double-blind, placebo-controlled clinical study Vet Record 2017

M. Korpivaara, K. Laapas, M. Huhtinen, B. Schöning, K. Overall

Preventing Travel Anxiety Using Dexmedetomidine Hydrochloride Oromucosal Gel Intern Vet Beh Med 2017

MARTA AMAT^{1*}, SUSANA LE BRECH¹, CAMINO GARCÍA-MORATO¹, DÉBORAH TEMPLE¹, MARTA SALICHS², BIBIANA PRADES², TOMÀS CAMPS¹ AND XAVIER MANTECA¹

Oromucosal Dexmedetomidine Gel for Alleviation of Fear and Anxiety in Dogs During Minor Veterinary or Husbandry Procedures

Intern Vet Beh Med 2017
MIRA KORPIVAARA^{1*}, MIRJA HUHTINEN¹, JOHN ASPEGREN¹
AND KAREN OVERALL²

Behavior Tangent

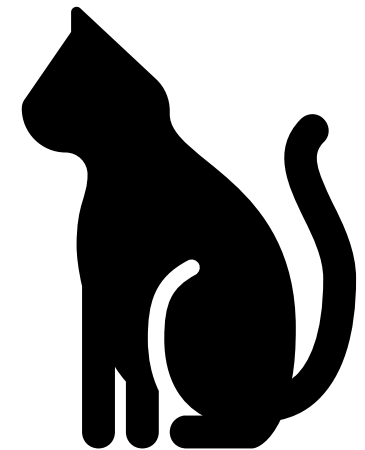
Sileo

Anxiolytic effect of
dexmedetomidine oromucosal gel
(Sileo®) and gabapentin in a
cat travel anxiety model

G. LANDSBERG*, D. DUNN, M. KORPIVAARA

*CanCog Inc. Fergus, ON, Canada

*Corresponding author: garyl@cancog.com



Efficacy of dexmedetomidine oromucosal gel to attenuate anxiety in client owned cats presented for routine veterinary care

Megan A Carson, Katherine E Pankratz, Kristen M Messenger, Margaret E Gruen

Amantadine

- Useful in combo with NSAID for OA but no efficacy studies

J Vet Intern Med 2008;22:53-59

Amantadine in a Multimodal Analgesic Regimen for Alleviation of Refractory Osteoarthritis Pain in Dogs

B.D.X. Lascelles, J.S. Gaynor, E.S. Smith, S.C. Roe, D.J. Marcellin-Little, G. Davidson,
E. Boland, and J. Carr

veterinary Pharmacology and Therapeutics

J. vet. Pharmacol. Therap. 38, 305–308. doi: 10.1111/jvp.12190.

SHORT COMMUNICATION

Pharmacokinetics of oral amantadine in greyhound dogs

Gabapentin used widely without supporting data

Gabapentin as an adjuvant for postoperative pain management in dogs undergoing mastectomy

Giulianne Carla CROCIOLLI¹⁾, Renata Navarro CASSU^{1)*}, Rafael Cabral BARBERO¹⁾, Thalita Leone A ROCHA¹⁾, Denis Robson GOMES¹⁾ and Gabriel Montoro NICÁCIO¹⁾

Clinical evaluation of perioperative administration of gabapentin as an adjunct for postoperative analgesia in dogs undergoing amputation of a forelimb

Ann E. Wagner, DVM, MS, DACVP, DACVA; Patrice M. Mich, DVM, MS, DABVP;
Samantha R. Uhrig, DVM, MS; Peter W. Hellyer, DVM, MS, DACVA

Assessment of the effects of gabapentin on activity levels and owner-perceived mobility impairment and quality of life in osteoarthritic geriatric cats

Alonso G. P. Guedes MV, PhD

Julie M. Meadows DVM

OBJECTIVE

To evaluate effects of gabapentin on activity levels and owner-perceived mo-

Behavior Tangent

- Used for short acting anti-anxiety with studies in cats
- SE: sleepiness
- Rare: vomiting, ataxia, affectionate

Gabapentin



Original Article

Use of single-dose oral gabapentin to attenuate fear responses in cage-trap confined community cats: a double-blind, placebo-controlled field trial

Journal of Feline Medicine and Surgery
1-9

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DOI: 10.1177/1098612X17719399

journals.sagepub.com/home/jfms

This paper was handled and processed by the American Editorial Office (AAFP) for publication in JFMS



Katherine E Pankratz¹, Kelli K Ferris¹, Emily H Griffith²
and Barbara L Sherman¹

Effects of a single preappointment dose of gabapentin on signs of stress in cats during transportation and veterinary examination

van Haften et al, JAVMA, 2017

Clinical evaluation of the effects of a single oral dose of gabapentin on fear-based aggressive behaviors in cats during veterinary examinations

Gabapentin ↓ fear at 2h for duration of 6-8h



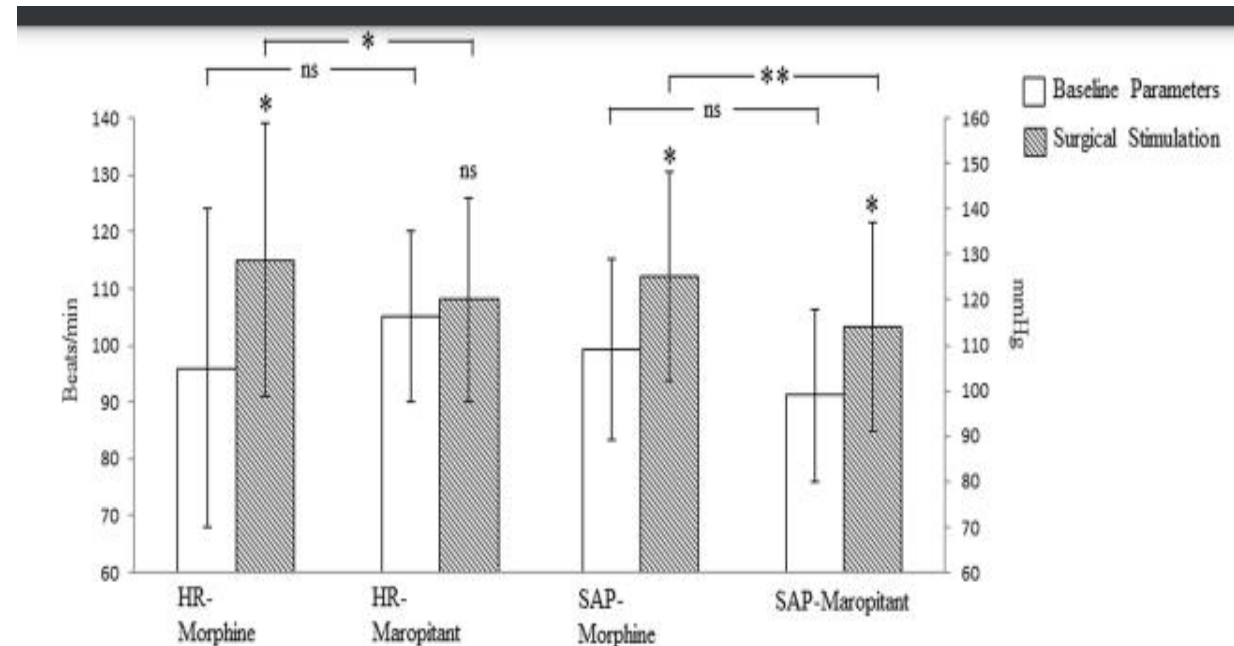
Maropitant may provide visceral analgesia

RESEARCH ARTICLE

Comparison of NK-1 Receptor Antagonist (Maropitant) to Morphine as a Pre-Anaesthetic Agent for Canine Ovariohysterectomy

Megan Marquez, Pedro Boscan*, Heather Weir, Pamela Vogel, David C. Twedt

Department of Clinical Sciences, Veterinary Teaching Hospital, Colorado State University, Fort Collins, Colorado, United States of America



Acetaminophen (**dogs only!**) inferior to NSAIDS

Comparison of the effects on lameness of orally administered acetaminophen-codeine and carprofen in dogs with experimentally induced synovitis

Steven C. Budsberg DVM, MS

Stephanie A. Kleine DVM, PhD

OBJECTIVE

To compare the ability of acetaminophen-codeine (AC; 15.5 to 18.5

Third Tier pain treatment

- Tramadol
- Other supplements
- Tricyclic Antidepressants (TCAs) - cats
- Ambulation assistance (braces, wheelchair, slings)

Tramadol does not have supportive efficacy in dogs



The Veterinary Journal

journal homepage: www.elsevier.com/locate/tvj




Pharmacokinetics and efficacy of intravenous and extradural tramadol in dogs

Enzo Vettorato^{a,1}, Annalisa Zonca^b, Maurizio Isola^a, Roberto Villa^b, Martina Gallo^b, Giuliano Ravasio^c, Michela Beccaglia^c, Clara Montesissa^d, Petra Cagnardi^{b,*}

Research article | [Open Access](#) | [Published: 15 October 2014](#)

Comparison of preoperative tramadol and pethidine on postoperative pain in cats undergoing ovariohysterectomy

[Marina C Evangelista](#) , [Rodrigo A Silva](#), [Larissa B Cardozo](#), [Marcia A P Kahvegian](#), [Thais C Rossetto](#), [Julia M Matera](#) & [Denise T Fantoni](#)

BMC Veterinary Research **10**, Article number: 252 (2014) | [Cite this article](#)

Lack of effectiveness of tramadol hydrochloride for the treatment of pain and joint dysfunction in dogs with chronic osteoarthritis

Steven C. Budsberg DVM, MS
Bryan T. Torres DVM, PhD

OBJECTIVE

To investigate the effectiveness of tramadol for treatment in dogs.

Tramadol does not have supportive efficacy in dogs

Comparison of the analgesic efficacy of perioperative firocoxib and tramadol administration in dogs undergoing tibial plateau leveling osteotomy

Diana Davila DVM, Thomas P. Keeshen, Richard B. Evans PhD, and Mike G. Conzemius DVM, PhD, DACVS

DOI: <https://doi-org.prox.lib.ncsu.edu/10.2460/javma.243.2.225>

Randomised trial of perioperative tramadol for canine sterilisation pain management

Natascha V Meunier,¹ Ambra Panti,² Stella Mazeri,¹ Karlette A Fernandes,³ Ian G Handel,² Barend M de C Bronsvort,¹ Luke Gamble,³ Richard J Mellanby²

Veterinary
Anaesthesia and Analgesia

Formerly the Journal of Veterinary Anaesthesia

Veterinary Anaesthesia and Analgesia, 2013, 40, 641–649

doi:10.1111/vaa.12080

RESEARCH PAPER

Effects of tramadol alone, in combination with meloxicam or dipyrone, on postoperative pain and the analgesic requirement in dogs undergoing unilateral mastectomy with or without ovariohysterectomy

Renata CR Teixeira*, Eduardo R Monteiro*, Daniela Campagnol*, Karina Coelho*, Thais F Bressan* & Betânia S Monteiro*

*School of Veterinary Medicine, UVV - University of Vila Velha, Vila Velha, Brazil

PAPER

Tramadol may have efficacy in cats but aversive taste

Veterinary
Anaesthesia and Analgesia

Veterinary Anaesthesia and Analgesia, 2016, **43**, 643–651

RESEARCH ARTICLE

Analgesic efficacy of tramadol in cats with naturally occurring osteoarthritis

Beatriz P. Monteiro¹*, Mary P. Klinck^{1,2}*, Maxim Moreau^{1,2}*, Martin Guillot^{1,2}, Paulo V. M. Steagall³, Jean-Pierre Pelletier², Johanne Martel-Pelletier², Dominique Gauvin¹, Jérôme R. E. del Castillo¹, Eric Troncy^{1,2}*

RESEARCH PAPER

Analgesic efficacy of an oral transmucosal spray formulation of meloxicam alone or in combination with tramadol in cats with naturally occurring osteoarthritis

Beatriz P Monteiro*, Mary P Klinck*,†, Maxim Moreau*,†, Martin Guillot*,†, Paulo VM Steagall‡, Daniel K Edge§, Jean-Pierre Pelletier†, Johanne Martel-Pelletier†, Dominique Gauvin*, Jérôme RE del Castillo* & Eric Troncy*,†

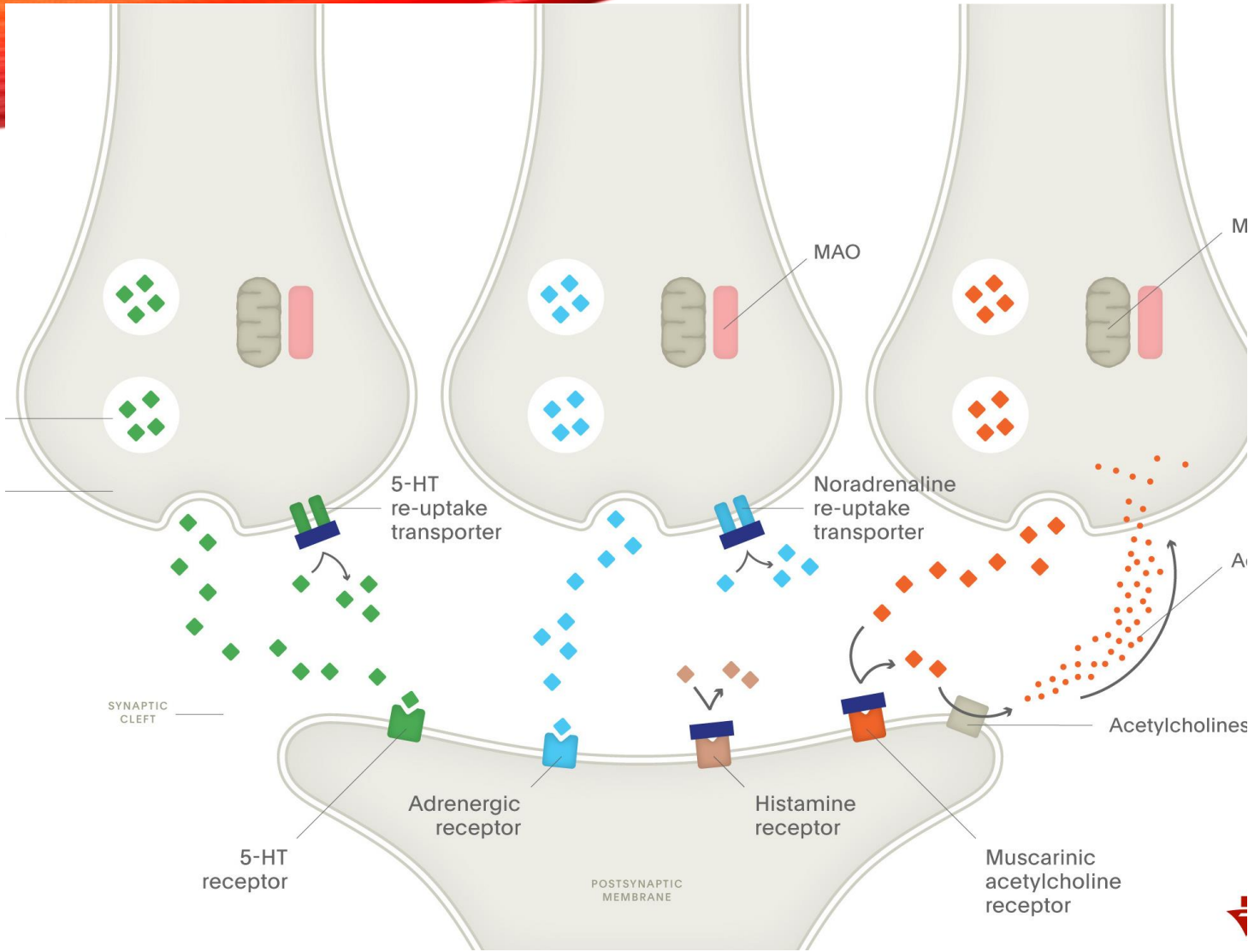
No evidence of efficacy in supplements other than omega-3

Review

J Vet Intern Med 2012;26:448-456

Systematic Review of Efficacy of Nutraceuticals to Alleviate Clinical Signs of Osteoarthritis

J.-M. Vandeweerdt, C. Coisson, P. Clegg, C. Cambier, A. Pierson, F. Hontoir, C. Saegerman, P. Gustin, and S. Buczinski



Tricyclic antidepressants (TCA) affect of **5HT** & **NE** & **Ach** (& Hist)



Tricyclic Antidepressant (TCAs)

**Amitriptyline treatment for severe recurrent idiopathic cystitis in cats.
Chew DJ, Buffington CA, Kendall MS, DiBartola SP, Woodward BE
JAVMA 1998**

Sawyer, L S (1999). "Psychogenic alopecia in cats: 11 cases (1993-1996)". *Journal of the American Veterinary Medical Association* (0003-1488), 214 (1), p. 71.

Behavior Tangent

Amitriptyline

- Behavior Uses:
- Feline interstitial cystitis (FIC)
- Psychogenic alopecia

SE: sleepiness & anticholinergic effects, *Bitter taste

Serious SE:

- proarrhythmogenic effects
- lowering seizure threshold
- severe urinary retention



Behavior Tangent

Serotonin Norepinephrine Reuptake Inhibitor (Venlafaxine)

- Up and comer
- High palatability in cats
 - toxicity risk
- Behavioral Uses:
 - Idiopathic Cystitis
 - Fear
 - Aggression
 - House soiling
 - Misdirected play / Impulse control
 - Case report

Original Article



jfms
Journal of Feline
Medicine and Surgery

Double-blind, placebo-controlled trial of venlafaxine to treat behavioural disorders in cats: a pilot study

Delphine Metz¹, Tiphaine Medam² and Sylvia Masson³ 



EAVBE

Journal of Veterinary Behavior

journal homepage: www.journalvetbehavior.com

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1–11

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DOI: 10.1177/1098612X211036792

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Investigation of the use of venlafaxine for treatment of refractory misdirected play and impulse-control aggression in a cat: A case report

Kevin Pflaum^{a,*}, Sara Bennett^b

Ambulation assistance devices



Many other reported pain therapies
in use with limited studies



Dr Angel Veterinary House Call



Sunvet Animal Wellness

External factors impacting pain treatment



Repeat visits impact patient comfort: make it Fear Free / Low Stress

Journal of Feline Medicine and Surgery
Volume 13, Issue 5, May 2011, Pages 364-375
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<https://doi-org.prox.lib.ncsu.edu/10.1016/j.jfms.2011.03.012>



Special Article

AAFP and ISFM Feline-Friendly Handling Guidelines

Ilona Rodan, DVM DABVP (Feline), Eliza Sundahl, DVM DABVP (Feline), Hazel Carney, DVM MS DAVBP (Canine Feline), Anne-Claire Gagnon, DVM, Sarah Heath, BVSc DipECVBM-CA CCAB MRCVS, Gary Landsberg, DVM MRCVS DACVB DECVBM-CA, Kersti Seksel, BVSc (Hons) MRCVS FACVSc DACVB DECVBM-CA, and Sophia Yin, DVM MS





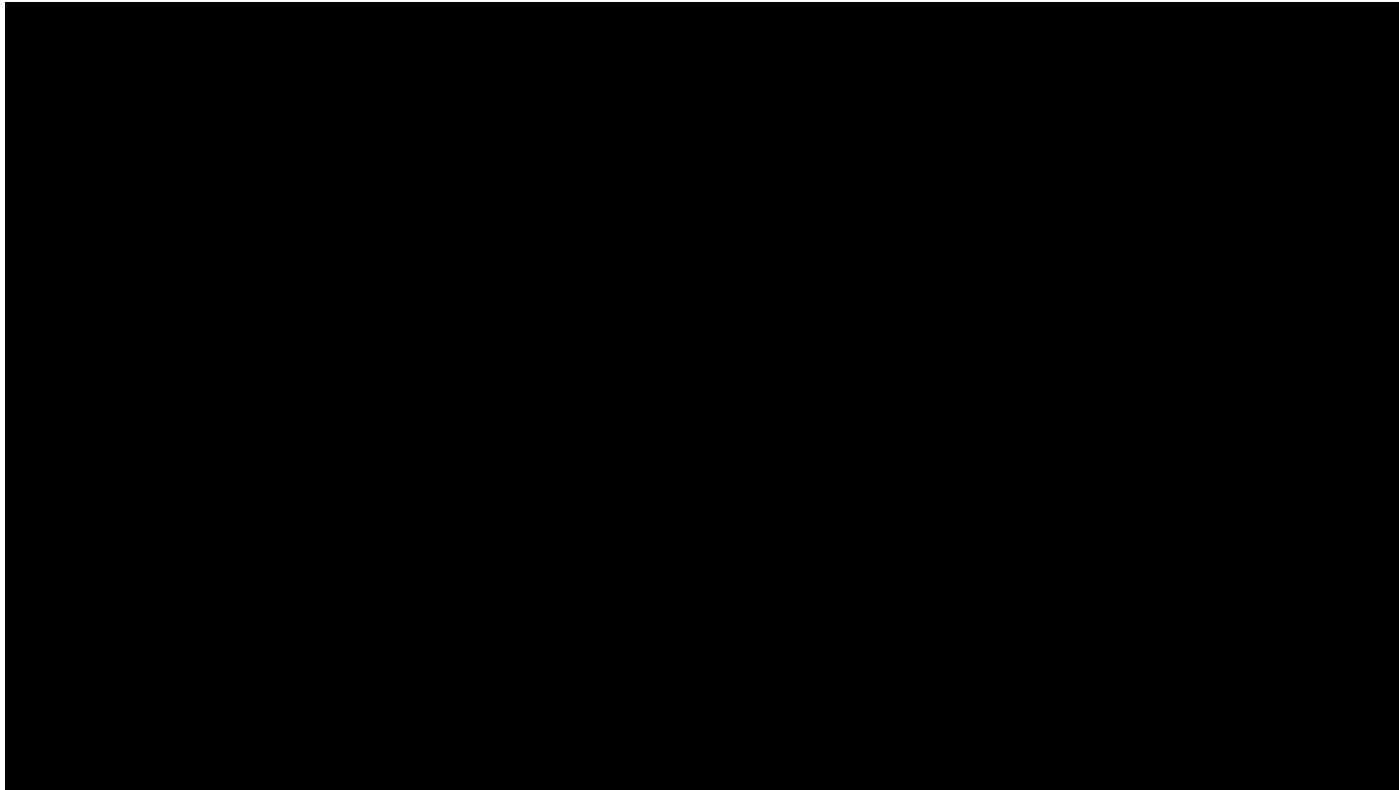
Empowering
patients to be
part of the
treatment

Cooperative care &
desensitization/
counter conditioning
empower the
patient





Classical Counterconditioning



Operant Desensitization / Counter Conditioning



Cooperative Veterinary Care

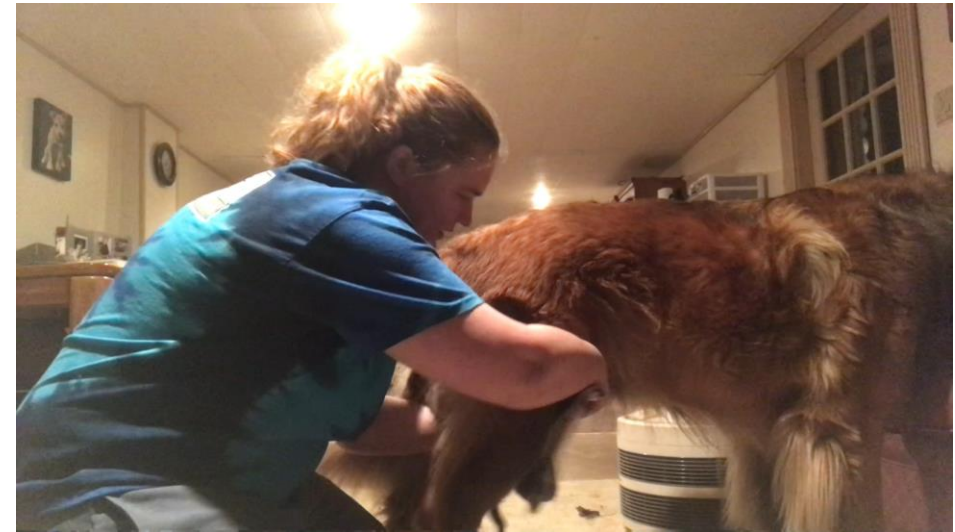
Alicea Howell
Monique Feyreclide



WILEY Blackwell

Providing choice
can give pets a
sense of control in
their healthcare

Cooperative Care for brace placement





Ensure safety
during treatment



Administering medication





Medications may be disguised to encourage administration



Some
medications
can be
compounded
into more
tolerated
formulations

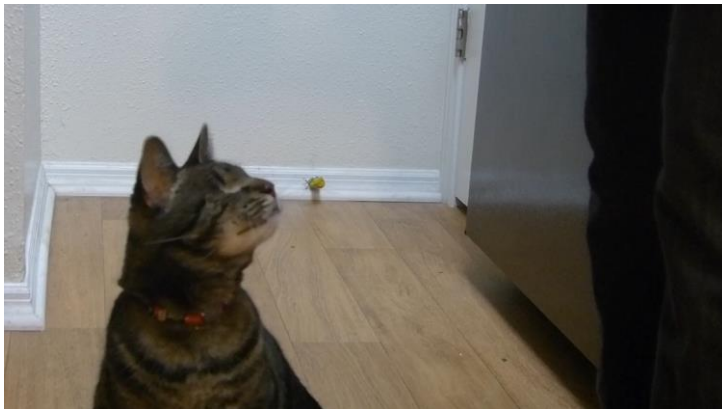
Systemic absorption of amitriptyline and buspirone after oral and ...

Foy, Elizabeth;MacCara, Mary E;MacLean, Lindsay

International Journal of Pharmaceutical Compounding; Nov/Dec 2004; 8, 6; ProQuest Central
pg. 416

Bioavailability of some meds via
transdermal is poor compared to oral

Pets can be trained to take medication



Follow up



Empower owner compliance in treatment



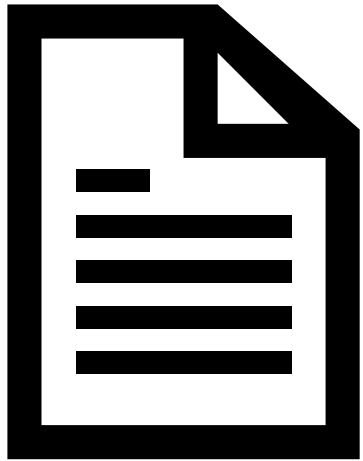
Insider

Client communication of treatment schedule with clear instructions





Clear owner
communication with
specific verbal &
written instructions



Clearly inform
side effects
potential and
what owners
should do



Spruce Pets



Follow up with
owner regularly with
open
communication



Ease of administration is essential for compliance



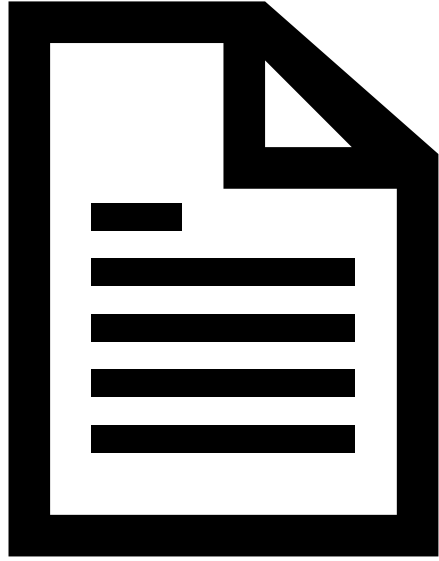
Training your pet to take medication

Animal Beh...
84 subscribers

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35

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Changes must
be
communicated
clearly with the
owner





Still unsure
about what
to do?



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



AMERICAN COLLEGE OF
VETERINARY ANESTHESIA
AND ANALGESIA



ACVB

www.dacvb.org

Summary





Take Aways: Part 2

- Be proactive
- Use tools/recommendations to assess pain
- Engage owner as part of the team
- Preemptive, multimodal, tiered pain management
- Reevaluate patient regularly & modify accordingly

Resources



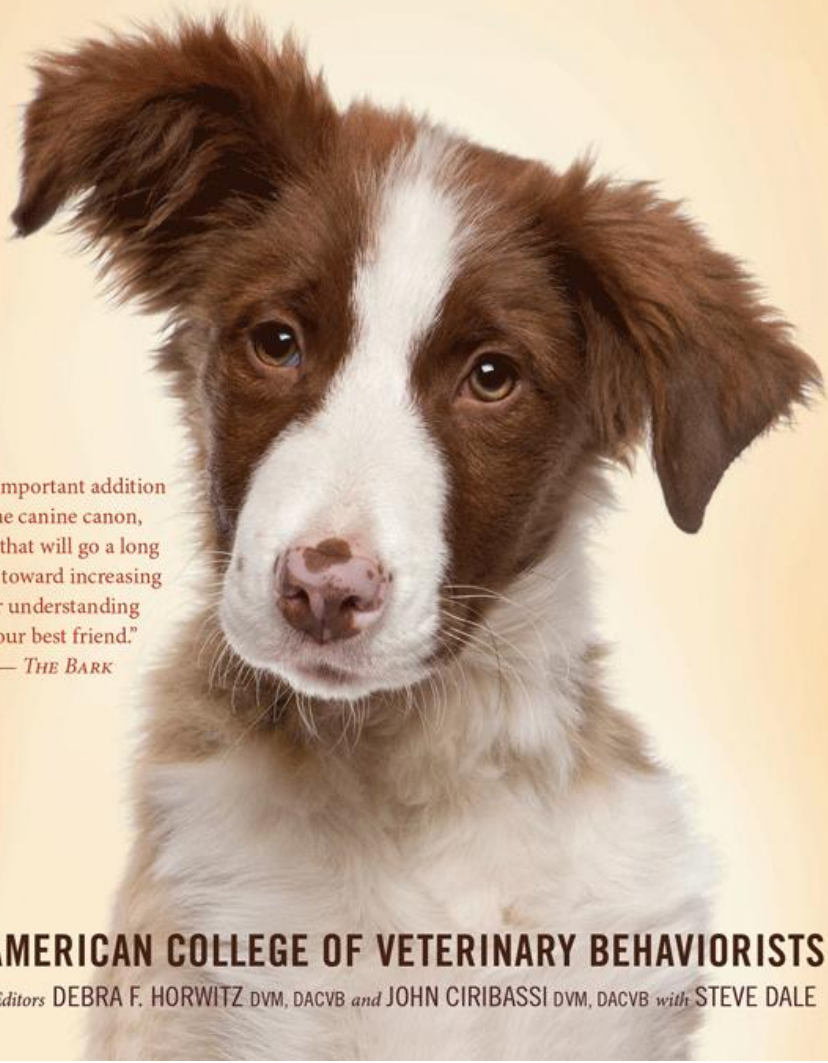
2022 AAHA Pain Management Guidelines for Dogs and Cats*

Margaret E. Gruen, DVM, MVPH, PhD, DACVB[†],
B. Duncan X.Lascelles, BSc, BVSc, PhD, CertVA, DSAS(ST), DECVS, DACVS, FRCVS[†],
Elizabeth Colleran, DVM, MS, ABVP feline specialty, Alison Gottlieb, BS, CVT, VTS (ECC),
Jennifer Johnson, VMD, CVPP, Peter Lotsikas, DVM, DACVS-SA, DACVSMR,
Denis Marcellin-Little, DEDV, DACVS, DACVSMR, Bonnie Wright, DVM, DACVAA

(J Am Anim Hosp Assoc 2022; 58:55–76. DOI 10.5326/JAAHA-MS-7292)

*Explaining Common Dog Behaviors
and How to Prevent or Change Unwanted Ones*

Decoding Your Dog



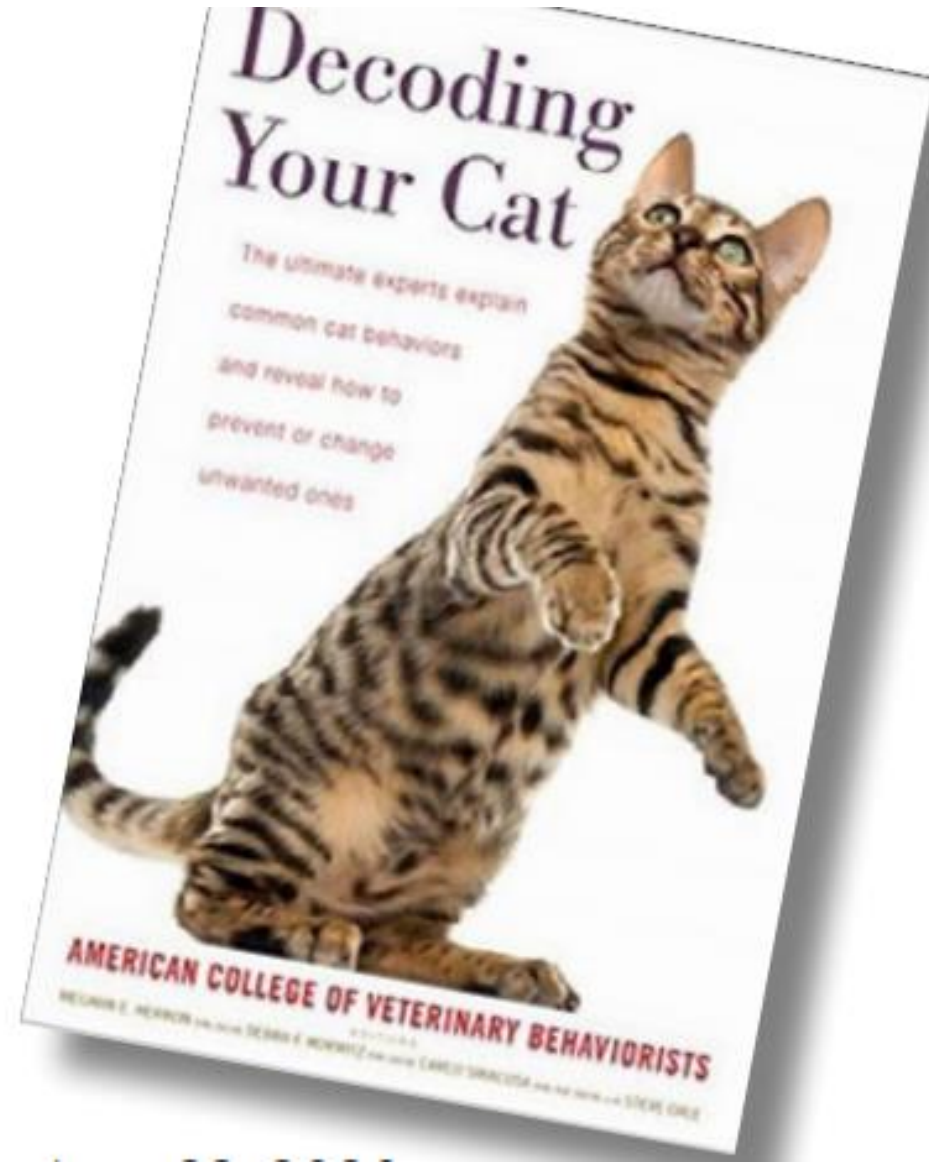
"An important addition
to the canine canon,
one that will go a long
way toward increasing
your understanding
of your best friend."

— THE BARK

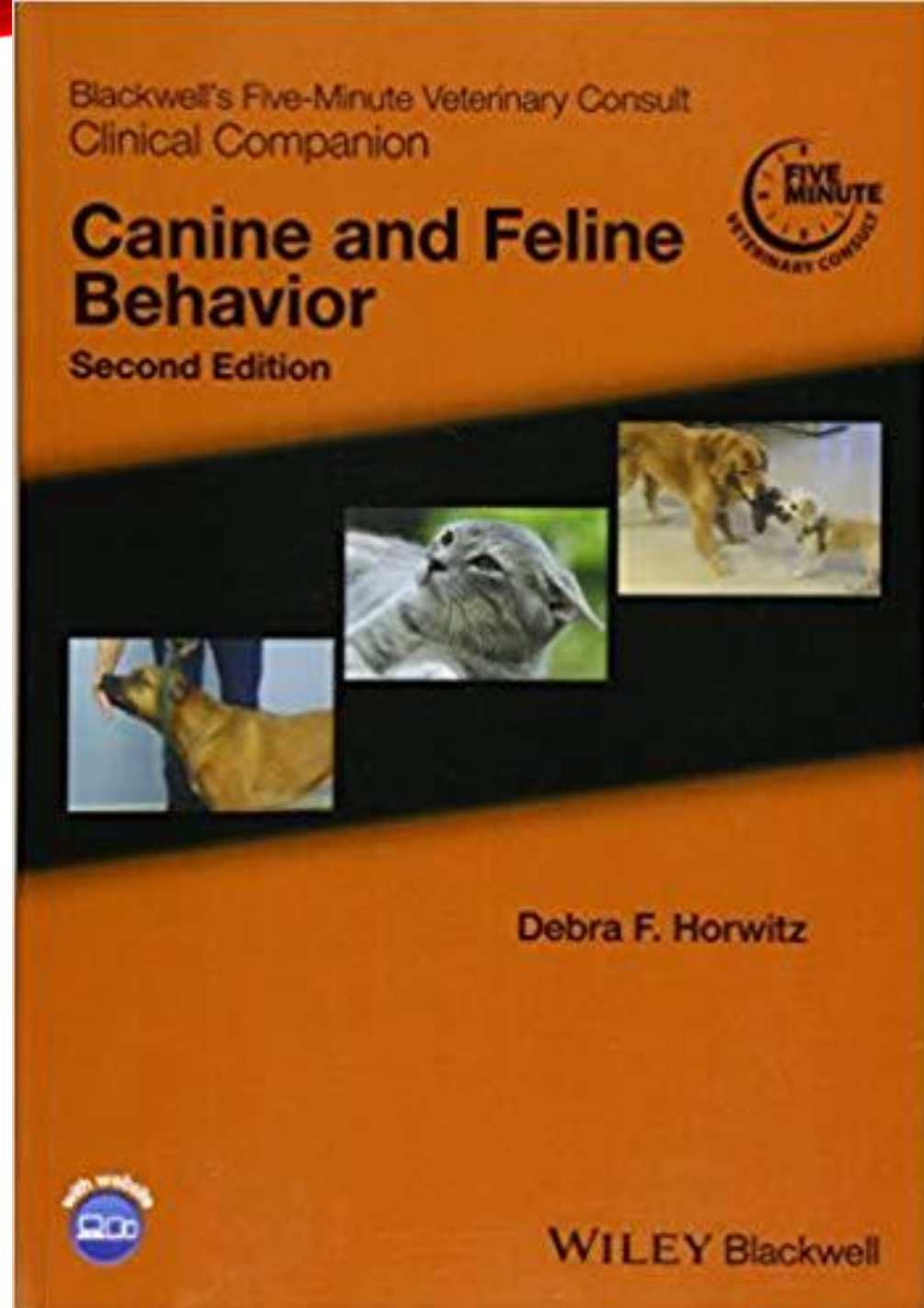
AMERICAN COLLEGE OF VETERINARY BEHAVIORISTS

Editors DEBRA F. HORWITZ DVM, DACVB and JOHN CIRIBASSI DVM, DACVB with STEVE DALE

Decoding Your Dog / Cat



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





Thank You!



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