

Blackwell's Five-Minute Veterinary Consult
Clinical Companion



Canine and Feline Behavior

Second Edition



Debra F. Horwitz



WILEY Blackwell

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WILEY Blackwell

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Dedication

My love of animals dates back to my preteen years. I always wanted to be a veterinarian. I feel so lucky to be able to pursue this profession that I love and which suits me so well. I owe so much to my parents, who supported me in my aspirations and helped to make it happen. But none of this would have been possible without my husband Eugene, who was by my side throughout veterinary school and always offered his loving support and encouragement; it was a true partnership of equals I miss him every day. Over the years, our family expanded and our children, Jeff, Laura, and Ben, now have families of their own who continue to support me in all my endeavors. I have also learned so much from my colleagues, they are too numerous to mention here, but thank you. Finally, as any veterinarian will tell you, in the end their career is the sum total of all the pets they have ever lived with, treated, and loved. Their contributions to my life and career have been invaluable.

Contents



Contributor List	xiii
How to Use This Book	xv
Preface	xvii
Acknowledgments	xix
About the Companion Website	xxi

section 1 Aggression

<i>chapter 1</i>	Aggression: Medical Differentials	3
	<i>Amy L. Pike</i>	

Part 1 Canine Aggression 11

<i>chapter 2</i>	Aggression/Canine: Classification, Overview, and Prognosis	13
	<i>Ellen M. Lindell</i>	
<i>chapter 3</i>	Aggression/Canine: Fear Based or Defensive	24
	<i>Ellen M. Lindell</i>	
<i>chapter 4</i>	Aggression/Canine: Food	35
	<i>Ellen M. Lindell</i>	
<i>chapter 5</i>	Aggression/Canine: Human Directed/Familiar People	45
	<i>Ellen M. Lindell</i>	
<i>chapter 6</i>	Aggression/Canine: Human Directed/Unfamiliar People	58
	<i>Ellen M. Lindell</i>	
<i>chapter 7</i>	Aggression/Canine: Idiopathic	70
	<i>Ellen M. Lindell</i>	
<i>chapter 8</i>	Aggression/Canine: Interdog/Familiar Dogs	79
	<i>Ellen M. Lindell</i>	
<i>chapter 9</i>	Aggression/Canine: Interdog/Unfamiliar Dogs	89
	<i>Ellen M. Lindell</i>	
<i>chapter 10</i>	Aggression/Canine: Possessive/Resource Guarding	100
	<i>Ellen M. Lindell</i>	
<i>chapter 11</i>	Aggression/Canine: Redirected	110
	<i>Ellen M. Lindell</i>	

chapter 12 Aggression/Canine: Territorial 119
Ellen M. Lindell

chapter 13 Aggression/Canine: Veterinary Office. 130
Ellen M. Lindell

Part 2 Feline Aggression 143

chapter 14 Aggression/Feline: Classification, Overview, and Prognosis. 145
Theresa L. DePorter

chapter 15 Aggression/Feline: Fear Based or Defensive 159
Theresa L. DePorter

chapter 16 Aggression/Feline: Intercat. 172
Theresa L. DePorter

chapter 17 Aggression/Feline: Offensive/Frustration. 189
Theresa L. DePorter

chapter 18 Aggression/Feline: Petting Induced 199
Theresa L. DePorter

chapter 19 Aggression/Feline: Play Related 211
Theresa L. DePorter

chapter 20 Aggression/Feline: Redirected 219
Theresa L. DePorter

chapter 21 Aggression/Feline: Territorial 228
Theresa L. DePorter

chapter 22 Aggression/Feline: Veterinary Office. 241
Theresa L. DePorter

section 2 Anxiety, Fear, and Phobic Disorders

chapter 23 Anxiety Disorders: Canine and Feline Overview 253
Carlo Siracusa

chapter 24 Acral Lick Dermatitis: Canine 265
Carlo Siracusa

chapter 25 Fear of People: Canine and Feline 274
Carlo Siracusa

chapter 26 Fear of Places and Things: Canine and Feline 285
Carlo Siracusa

chapter 27 Fear of the Outdoors: Canine 297
Carlo Siracusa

chapter 28 Firework Sensitivities and Phobias: Canine and Feline 308
Karen Sueda

<i>chapter</i> 29	Generalized Anxiety: Canine and Feline	321
	<i>Karen Sueda</i>	
<i>chapter</i> 30	Noise Sensitivities and Phobias: Canine and Feline	335
	<i>Karen Sueda</i>	
<i>chapter</i> 31	Separation Anxiety: Canine	348
	<i>Debra F. Horwitz</i>	
<i>chapter</i> 32	Separation Anxiety: Feline	363
	<i>Debra F. Horwitz</i>	
<i>chapter</i> 33	Thunderstorm Sensitivities and Phobias: Canine and Feline	375
	<i>Amy L. Pike</i>	

section **3** Compulsive and Repetitive Behaviors

<i>chapter</i> 34	Compulsive and Repetitive Behavior Disorders: Canine and Feline Overview	391
	<i>Melissa Bain</i>	
<i>chapter</i> 35	Flank Sucking: Canine	404
	<i>Melissa Bain</i>	
<i>chapter</i> 36	Fly Snapping: Canine	413
	<i>Melissa Bain</i>	
<i>chapter</i> 37	Licking, Excessive: Canine and Feline	425
	<i>Melissa Bain</i>	
<i>chapter</i> 38	Pica: Canine and Feline	436
	<i>Melissa Bain</i>	
<i>chapter</i> 39	Psychogenic Alopecia/Overgrooming: Feline	447
	<i>Melissa Bain</i>	
<i>chapter</i> 40	Shadow and Light Chasing: Canine	456
	<i>Melissa Bain</i>	
<i>chapter</i> 41	Tail Chasing or Spinning: Canine and Feline	469
	<i>Melissa Bain</i>	
<i>chapter</i> 42	Wool Sucking and Fabric Eating: Feline	481
	<i>Melissa Bain</i>	

section **4** Creating Household Harmony

<i>chapter</i> 43	Introducing Pets into the Human Family	493
	<i>John Ciribassi</i>	
<i>chapter</i> 44	Introducing Pets to One Another	505
	<i>John Ciribassi</i>	

section 5 Enrichment

chapter 45 Canine Enrichment 521
Rachel Malamed

chapter 46 Feline Enrichment 532
Rachel Malamed

section 6 Geriatric Behavior Problems

chapter 47 Behavior Problems in Older Cats 549
Margaret Gruen

chapter 48 Behavior Problems in Older Dogs. 557
Marsha Reich

chapter 49 Cognitive Dysfunction: Canine and Feline 570
Marsha Reich

section 7 Handling

chapter 50 Canine-Friendly Handling Techniques. 585
Meghan Herron and Traci Shreyer

chapter 51 Feline-Friendly Handling Techniques. 606
Ilona Rodan

chapter 52 Managing and Accomplishing Routine Tasks: Canine
 and Feline 630
Lore I. Haug and Elizabeth S. M. Feltes

section 8 House Soiling

chapter 53 House Soiling: Canine 655
Valarie Tynes

chapter 54 House Soiling: Feline 668
Meredith Stepita

chapter 55 House Training a Puppy 680
Kenneth Martin and Debbie Martin

chapter 56 Urine Marking: Canine 690
Valarie Tynes

chapter 57 Urine Marking: Feline 700
Meredith Stepita

section 9 Mourning Behavior

- chapter 58** Mourning Behavior: Canine and Feline 715
Meredith Stepita

section 10 Nuisance Behaviors

- chapter 59** Attention-Seeking/Soliciting Behavior: Canine and Feline 727
Sagi Denenberg
- chapter 60** Begging: Canine and Feline 736
Sagi Denenberg
- chapter 61** Chewing: Canine and Feline 745
Sagi Denenberg
- chapter 62** Coprophagia: Canine 754
Sagi Denenberg
- chapter 63** Destructive Play and Exploration: Feline 761
Sara L. Bennett
- chapter 64** Digging: Canine 767
Sara L. Bennett
- chapter 65** Hyperactivity: Canine and Feline 774
Sara L. Bennett
- chapter 66** Jumping on People: Canine 783
Sara L. Bennett
- chapter 67** Jumping on Tables and Counters: Feline 789
Sara L. Bennett
- chapter 68** Mounting Behavior: Canine 795
Wailani Sung
- chapter 69** Mouthing/Play Biting and Aggressive Play: Canine 805
Wailani Sung
- chapter 70** Nocturnal Behavior: Canine and Feline 815
Wailani Sung
- chapter 71** Predatory Behavior: Canine and Feline 824
Wailani Sung
- chapter 72** Reactivity on Leash Walks: Canine 835
Amy L. Pike and Mandy Eakins
- chapter 73** Roaming: Canine and Feline 847
Carlo Siracusa
- chapter 74** Scratching Behavior: Feline 855
Carlo Siracusa

chapter 75 Stealing Household Objects: Canine and Feline 864
Carlo Siracusa

chapter 76 Travel-Related Problems: Canine and Feline 873
Carlo Siracusa

chapter 77 Vocalization, Excessive: Canine and Feline 885
Carlo Siracusa

section 11 Pediatrics: Puppies and Kittens

chapter 78 Kitten Behavior Problems. 897
Jeanine Berger

chapter 79 Puppy Behavior Problems 906
Kenneth Martin and Debbie Martin

chapter 80 Starting Kittens Off Right 918
Jeanine Berger

chapter 81 Starting Puppies Off Right 932
Kenneth Martin and Debbie Martin

section 12 Rescue and Shelter-Adopted Dogs and Cats

chapter 82 Bringing Home the Rescue Dog or Cat 945
Jeanine Berger

section 13 Appendices

appendix A Psychopharmacology 961
Carlo Siracusa and Debra F. Horwitz

appendix B Learning and Behavior Modification 975
Lisa Radosta

appendix C History Sheets and Resources
See "About the Companion Website" page for full list of online resources

appendix D Handouts
See "About the Companion Website" page for full list of online resources

Index 987



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How to Use This Book



This edition has adopted a new approach, grouping chapters by disorder category, which should make it easier for the reader to reach the correct diagnosis. However, the outline of each chapter is the same as in the first edition, so that the reader can feel confident that all the information they need to diagnose and treat a behavioral disorder is right in front of them.

As veterinary healthcare professionals, whenever there is a change in behavior it is always essential to do our medical due diligence before moving on to a behavioral diagnosis, realizing that both can occur together, and that is how we begin with Chapter 1.

Aggression is a serious behavioral illness with numerous underlying motivations, and is dangerous both to humans and to other animals. The chapters on aggression are now grouped by species, with canine aggression being covered in Chapters 2–13, and feline aggression in Chapters 14–22.

Underlying most unwanted and undesirable behaviors in dogs and cats are anxiety, fear, and phobic disorders (Chapters 23–33). All of these types of illness are grouped together to facilitate diagnosis and treatment, since often more than one anxiety disorder may be present in a particular patient.

Next follows a section on compulsive and repetitive behaviors (Chapters 34–42), to help the reader to make the correct diagnosis and set up an appropriate treatment plan. These behavioral illnesses are usually abnormal, may occur in conjunction with medical disorders, and can have a negative impact on the animal's quality of life, welfare, and even their home.

The integration of pets into the home is often complex, as many homes have multiple pets of either the same or different species, or are combining families with pets. The aim of Chapters 8, 9, 16, 43, and 44 is to assist people in resolving the issues that may arise, and in addition several handouts are provided to help to facilitate a more harmonious integration. The key to creating harmony at home is enrichment, and Chapters 45 and 46 address this topic for dogs and cats, respectively.

Thanks to our medical expertise, cats and dogs are now living longer, but this often results in both medical and behavioral issues. Therefore an entire section is devoted to geriatric behavior problems (Chapters 47–49).

When routine care or treatment of an illness causes distress in our patients, the patient, the family, and the entire veterinary team are all affected. Three new chapters in this edition address patient-friendly and safe handling of dogs and cats (Chapters 50–52).

House soiling in dogs and cats is still a major reason for relinquishment of pets to a shelter, and an entire section of the book and several handouts are devoted to house soiling in unwanted locations (Chapters 53–57).

This is followed by a short section on mourning behavior in dogs and cats (Chapter 58).

Nuisance behavior problems are the numerous behaviors that may be normal but which are considered undesirable by the human family. There is an extensive section and treatment handouts on these behaviors and how to help to change them (Chapters 59–77).

Finally, information on puppies, kittens, and shelter and rescue pets is provided (Chapters 78–82).

In addition, it is hoped that the reader will find the four appendices very useful. They provide supplementary information on psychopharmacology (Appendix A) and learning and changing behavior (Appendix B), as well as history sheets and resources (Appendix C), and a set of 43 handouts (Appendix D), many of which have been written specifically for this second edition.

It is our hope that this new edition with its modified organization of chapters will help you to recognize and resolve behavioral illnesses and thus enable your patients to be kept in their homes well into old age.



Preface



The aim of the second edition of *Blackwell's Five-Minute Veterinary Consult Clinical Companion: Canine and Feline Behavior* is to be your practice companion, enabling you to integrate behavioral medicine as a routine part of your patient's healthcare plan. The treatment of behavioral illness has become increasingly important, as it remains one of the top reasons for pet relinquishment. Since the first edition of this book was published, much has changed in veterinary behavioral medicine, and the authors and I are eager to bring you up to date. All of the chapters have been either re-edited or completely rewritten, and the book has expanded from 64 to 82 chapters, with newly expanded appendices on pharmacology, learning and behavior modification, history sheets and resources, and a set of 43 handouts (of which 25 have been newly written for this edition). We have included information on how to make handling your patient safer, less stressful, and calmer for everyone—the veterinary team, the client, and above all, of primary concern to us, our patients.

This book is designed to help veterinarians answer behavior-related questions in any and every area of veterinary behavioral medicine. However, each chapter is designed for the general veterinarian rather than the specialist. It is essential to understand the significant role that safety and management can play in treating behavioral illnesses. Most importantly, we must remember that when a certain behavior is ongoing, the consequence of that behavior results in something desirable for the animal. The nature of that reward may be unclear to us, but it is nevertheless the case that behaviors which are rewarded are repeated.

When considering behavior problems and illnesses, it is important for us to understand that whether the behavior is desirable or undesirable, and whether it is normal or abnormal, whenever an animal performs a particular behavior, they have chosen it because they thought it was appropriate for the situation. This may not mean that we like the behavior, but neither does it mean that the animal is trying to be mean, spiteful, willful, stupid, or dominant. We need to move away from the idea of “bad dog” or “bad cat”, and instead ask why the pet has the need to perform this behavior. This requires us to look at the behavior from the pet's perspective. Therefore we must identify the underlying emotion—usually anxiety, stress, fear, or all three of these—and also consider other influences, such as environment, development, learning, and genetics.

Behavior tends to occur for one of the following reasons. It may be a normal but unwanted behavior (e.g., barking, scratching furniture, jumping up to greet people), which can often be helped by providing appropriate outlets for the behavior and/or by teaching new behaviors to replace the undesirable ones. Alternatively, the animal may be performing the behavior in order to change what they perceive to be the expected outcome of the social situation. In this case, it becomes important for us to try and understand why the animal perceives a different outcome to the one we anticipate, and how

to change their underlying emotional state and teach them new tasks. This is the only way in which we can move forward with more desirable behaviors, and less fear, anxiety, and stress. By understanding the animal's perspective and their ethological basis for behavior we can provide better solutions. Finally, the animal might be suffering from a pathological state that is not under their control, such as a compulsive disorder, phobia, seizure, impulse disorder, or some other medical malady.

In cases of aggression, ensuring the safety of all those who might be in contact with the pet is the first priority. Safety precautions when followed can improve the quality of life for everyone involved, including the family and the pet. Management also plays a fundamental role in shaping behavioral change. Many behavior problems often continue because of the opportunity to repeatedly engage in the undesirable behavior. However, with appropriate management we can keep people safe, prevent the escalation of undesirable behaviors, and stop any reinforcement that the pet receives by engaging in the behavior.

Finally, in many situations we will need additional help from pheromones, nutraceuticals and other products, diets, and medication. The end result is that providing behavior services will save the lives of our patients.

Debra F. Horwitz

Acknowledgments



The creation of the second edition of *Blackwell's Five-Minute Veterinary Consult Clinical Companion: Canine and Feline Behavior* has taken place many years after the first, but would not have been possible without my previous co-author, Dr. Jacqueline Neilson DACVB, who was unable to join me in this new edition due to other work commitments. I have missed her in this role, but as the chapters have been rewritten and new ones added, and I have read through each chapter one final time, I could still hear her voice and tone in so many places. In reality, then, Jacqui's presence can be felt in this second edition, too, and I thank her again for her vital contributions to this book.

I also want to thank my editors at Wiley-Blackwell, especially Erica Judisch, Executive Editor, who never gave up until she had persuaded me to write this second edition. I am also grateful to Nancy Turner, Senior Project Editor, who helped me when I was struggling with the enormity of the task, and for all her editing once it was completed.

It would be remiss of me not to thank all my colleagues who reread, rewrote, and authored new chapters and handouts. Your insight was invaluable and has brought this book to a new level. Some of you took on entire sections of the book, which was a huge undertaking, and together we managed to keep a consistent voice from chapter to chapter. Thank you so much for all your hard work. However, every single author—regardless of whether they helped with one chapter or with a dozen or more—has brought a high level of professionalism and knowledge to this book. Collectively they have made this edition outstanding.

About the Companion Website



This book is accompanied by a companion website:

www.fiveminutevet.com/behavior

The website includes:

- five history sheets and resources for downloading:
 - Behavior Resources
 - Canine Consultation Questionnaire
 - Clinician's Checklist
 - Feline Consultation Questionnaire
 - BSAVA "Ladder of Aggression"
- 43 client education handouts for downloading and use, including 25 new handouts written for this second edition:
 - *Acute Management of Problem Behavior*
 - *Assessing Prognosis in Aggressive Dogs*
 - *Basic Principles for Children and Dogs*
 - *Basic Principles for Introducing Pets to a New Baby*
 - *Begging: How to Stop Begging at the Table*
 - *Bringing Home Your New Pet*
 - *Canine Body Language*
 - *Canine Enrichment*
 - *Carrier Training: Improving the Veterinary Visit for Your Cat*
 - *Creating Harmony in Homes with Multiple Cats*
 - *Desensitization and Counterconditioning: The Details*
 - *Feline Body Language*
 - *Feline Enrichment*
 - *"Go to Place"*
 - *Happy Veterinary Visits for Dogs*
 - *House Training: Teaching a Dog to Eliminate on Cue*
 - *House Training the Adult Dog*
 - *How to Reduce Food-Guarding Behavior in Dogs*
 - *How to Give Your Cat Medication*
 - *Instructions for Handling Feline Aggressive Events*
 - *Introducing Cats to One Another*
 - *Introducing Dogs to One Another*
 - *Jumping Up: Teaching Controlled Greetings*
 - *Kitten Socialization*

- *Litter-Box Tips*
- *Managing Noise and Storm Phobias*
- *Markers and Reinforcers*
- *Maximizing Treatment Success*
- *Muzzle Training: Training Your Dog to be Comfortable Being Muzzled*
- *Nail Trimming and Medicating Dogs and Cats*
- *Puppy Socialization and Exposure*
- *Safety Recommendations for Aggressive Animals*
- *Senior Dogs and Cats: Improving Quality of Life*
- *Separation Anxiety Treatment Protocol*
- *Structuring Your Relationship with Your Pet*
- *Target Training*
- *Teaching a New Response to the Doorbell*
- *Teaching a Puppy to Eliminate Outdoors*
- *Teaching “Drop It”*
- *Teaching “Leave It”*
- *Teaching Your Pet How to be Confined*
- *Tranquility Training Exercises*
- *Using Classical Counterconditioning to Change Emotional State*

The password for the site can be found at the following location: second word in the legend to Figure 49.1.



Aggression



Aggression: Medical Differentials



DEFINITION/OVERVIEW

When an animal exhibits aggressive behavior, the first step should be to rule out any possible medical contribution. Classically, the veterinary profession tends to separate the causes of behavioral changes such as aggression into “behavioral” and “metabolic/organic” diseases. This may be inappropriate, since some aggression that is characterized as “behavioral” in nature may in fact be due to primary organic brain disease that has yet to be characterized, such as abnormalities in serotonin receptors. For the purposes of this chapter, medical causes associated with aggression will encompass those diseases for which we can currently identify an established pathology associated with the disease. Metabolic or organic diseases that may present with aggressive behavior include a vast assortment of disease categories, including degenerative diseases, developmental disorders, endocrine and metabolic diseases, nutritional imbalances, neoplastic disease, neurological disorders, immune-mediated or allergic disease, infectious disease, idiopathic or iatrogenic disease, toxin exposure, traumatic injury, and vascular disorders. The presentation of some diseases may be affected by age (see Table 1.1). Please note that this chapter does not include every possible medical illness that could present with aggression as a complaint.

TABLE 1.1. Neurological Conditions to Consider for Behavioral Changes, by Age

Pets < 1 year of age	Pets > 5 years of age	No age association
Hydrocephalus	Cerebral neoplasia	Meningioencephalitis
Lissencephaly	Hypoglycemia secondary to insulinoma	Thiamine deficiency
Lysosomal storage diseases	Acquired hepatic disorders	Toxicity
Trauma	Trauma—infarcts	Trauma
Lead poisoning		
Hypoglycemia		
Hepatic disorders—portocaval shunt		
Metabolic diseases secondary to congenital diseases		

MEDICAL CONSIDERATIONS FOR AGGRESSIVE BEHAVIOR

Degenerative/Developmental

- Lissencephaly.
 - A rare disease that has been described in Lhasa Apsos, Beagles, and Irish Setters, and in cats, in which the gyri and sulci of the cerebral cortex fail to form properly, resulting in a smooth surface.
 - Behavioral complaints are often apparent by 3 months of age, and can include difficulty in training (especially house training), irritability, aggression, dementia, and depression.
 - By 1 year of age, most pets suffering from this condition exhibit seizure activity.
 - Imaging studies can confirm this non-treatable disease.
- Hydrocephalus.
 - Hydrocephalus is usually a congenital problem, but can be acquired secondary to functional CSF obstructions or infectious diseases.
 - Behaviorally, these pets may present with non-specific clinical signs such as “difficult to train”, “stubborn”, demented, aggressive, or irritable, or with seizure activity.
 - Hydrocephalus may present solely as aggression and irritable behavior in very young dogs.
 - It is estimated that hydrocephalus accounts for 0.8% of aggressive behaviors.
 - Signalment can lead a clinician to suspect hydrocephalus, and imaging studies can confirm this diagnosis.
- Fucosidosis.
 - This has been reported in American-bred English Springer Spaniels.
 - It is a heritable condition involving an alpha-L-fucosidase enzyme deficiency.
 - Affected animals will experience abnormal accumulation of fucose in cells throughout the body.
 - Neurological signs predominate, and may include confusion, inability to recognize the owner, and seizures. Fearful behavior can develop into defensive aggression. The disease is progressive and results in death.
- Hepatic encephalopathy.
 - As a result of congenital shunts, enzyme deficiencies, or severe liver disease, animals may show signs of hepatic encephalopathy.
 - Owners often report periodic behavior changes, including listlessness, depression, pacing, circling, head pressing, hysteria, and viciousness.
 - The behavioral signs are most evident after a protein-rich meal.
 - Behavioral changes may be associated with alterations in perception, or due to incoordination.
- Feline ischemic encephalopathy.
 - This unique vascular disorder of the CNS is thought to be related to *Cuterebra* larva myiasis.
 - Unilateral cerebral disease is often noted, and signs may include paresis/ataxia, tonic-clonic seizures, blindness, circling toward the side of the lesion, dilated pupils, and severe aggression.

- Treatment options are limited, and often cats are euthanized due to the severity of signs.
- Porencephaly.
 - This is cystic malformation of the cerebrum which usually communicates with the subarachnoid space or the lateral ventricle.
 - It can be congenital or acquired.
- Degenerative sensory changes.
 - Although degenerative sensory changes often occur gradually, and affected animals learn to adjust to them, these changes could potentially cause aggressive behavior.
 - Visual and auditory deterioration may affect the animal's ability to monitor activity, and therefore they may be startled more easily. Some startled animals react with aggression.

Endocrine/metabolic

- Hyperthyroidism.
 - Although primary hyperthyroidism in dogs is rare, it can present as aggression.
 - Iatrogenic hyperthyroidism should be considered in irritable or aggressive dogs on supplementation.
 - Hyperthyroidism in cats is the most common feline endocrine disease, and around 25% of cats with hyperthyroidism present with increased aggression.
 - Aggression usually resolves with successful treatment.
- Hypothyroidism.
 - Hypothyroidism has been implicated as a cause of many non-specific behavioral signs, such as aggression and anxiety.
 - Hypothyroidism has been reported to be the underlying problem in 1.7% of dogs with aggressive behavior.
 - These dogs do not necessarily show the other classical signs of hypothyroidism, such as thin hair coat, lethargy, and weight gain.
 - The dog acts relatively normally, but will increasingly become grumpy or aggressive in routine situations.
 - The aggression is inconsistent.
 - Dogs affected by hypothyroid aggression have been described as dominant aggressive (social conflict aggression) or fear aggressive.
 - Caution is needed to avoid quickly labeling a pet as hypothyroid instead of delving further into other possible medical or behavioral causes of the presenting problem.
 - Several recent studies have not shown a statistically significant difference in thyroid status between dogs with and without aggression.
- Sex hormones.
 - From a clinical standpoint, there are sex-linked behaviors that are testosterone driven, such as intermale aggression.
 - Neutering significantly reduces this aggression in 60–80% of dogs and cats.
 - Neutering also prevents genetic transmission of this trait.
 - Pseudocyesis may result in aggressive behavior in the bitch. Hormonal changes

may cause behavioral changes typically associated with pregnancy, although the bitch is not pregnant. Nesting, nervousness, mothering of objects, and maternal aggression may be observed. These signs tend to occur about 6–8 weeks after the heat cycle, and will gradually decline as the hormones return to anestrus levels. Ovariohysterectomy in anestrus will prevent relapse.

- Spaying bitches before 6 months of age may increase the incidence of inter-dog aggression.

Nutritional

- Thiamine deficiency.
 - This may occur in cats and dogs that are fed predominantly raw tuna, salmon, carp, or other fresh and saltwater fish, due to the presence of thiaminase in these diets.
 - Sudden and progressive onset of disease occurs, which includes the following: anorexia; diarrhea; muscle tremors; obtunded or excited and aggressive behavior; seizures and other cerebral and vestibular signs.
 - This nutritional deficiency can cause hemorrhage and necrosis of the brainstem.
- Tryptophan deficiency.
 - Tryptophan is the amino acid precursor of serotonin.
 - Escalation of aggressive behavior can be a result of this dietary deficiency.
- High levels of dietary protein.
 - High levels (32%) of dietary protein have been incriminated in aggressive behavior in dogs, and specifically in fear-based territorial aggression.
 - High levels of dietary protein may decrease the amount of tryptophan that is naturally absorbed, causing a deficiency.
 - To date, definitive studies linking tryptophan, dietary protein, and aggression have not been conducted.

Neoplasia

- Neoplasia includes intracranial masses such as meningiomas, temporal lobe, limbic system, and hypothalamic lesions.
 - Neoplasia, both primary CNS lesions and metastatic lesions, may present as aggressive behavior.
 - Although most neoplastic lesions that affect the brain will eventually cause some obvious neurological abnormalities, such as seizures or head tilt, it may take up to a year for these to become evident.
 - Any breed can be susceptible to neoplasia. However, the brachycephalic breeds have a higher incidence of astrocytomas, and the dolichocephalic breeds have a higher incidence of meningiomas.
 - The temporal lobe, limbic system, amygdala, and hypothalamus are all implicated in the modulation of aggression, and therefore lesions that affect these areas could have an impact on aggressive behavior.