

FULLY REVISED & UPDATED

DOG OWNER'S HOME VETERINARY HANDBOOK

FOURTH
EDITION

All New Coverage of:

- Diseases & Aging
- Genetics
- Behavioral Findings
- Cancer Treatments
- Natural & Preventive Treatments



DEBRA M. ELDREDGE, DVM
LIISA D. CARLSON, DVM
DELBERT G. CARLSON, DVM
JAMES M. GIFFIN, MD

Dog Owner's Home

VETERINARY

Handbook

4th Edition

Debra M. Eldredge, DVM
Liisa D. Carlson, DVM
Delbert G. Carlson, DVM
James M. Giffin, MD

Edited by Beth Adelman



Wiley Publishing, Inc.

Dog Owner's Home

VETERINARY

Handbook

This book is not intended as a substitute for the medical advice of veterinarians. Readers should regularly consult a veterinarian in matters relating to their dog's health, and particularly with respect to any symptoms that may require medical attention.

In writing this book, we have described the signs and symptoms that will lead you to a preliminary idea of what is happening with your dog, so you can weigh the severity of the problem. Knowing when to call your veterinarian is very important. Delays can be dangerous.

At the same time, we have sought to provide guidance for the acute or emergency situations that you must handle on your own until you can get your dog to a veterinarian. Life-saving procedures such as artificial respiration and heart massage, and what to do in the event of poisonings, obstetrical problems, and other emergencies are explained step by step.

But a veterinary handbook is not a substitute for professional care. Advice from a book can never be as helpful or as safe as actual medical advice. No text can replace the interview and the hands-on examination that enables a veterinarian to make a speedy and accurate diagnosis.

However, the knowledge provided in this book will enable you to more effectively cooperate and better understand your interactions with your veterinarian. You'll be more alert to the signs of health problems and better able to describe them. You'll know more about basic care for your dog, and you'll be prepared in an emergency.

Dog Owner's Home

VETERINARY

Handbook

4th Edition

Debra M. Eldredge, DVM
Liisa D. Carlson, DVM
Delbert G. Carlson, DVM
James M. Giffin, MD

Edited by Beth Adelman



Wiley Publishing, Inc.

Copyright © 2007 by Howell Book House. All rights reserved.

Howell Book House
Published by Wiley Publishing, Inc., Hoboken, New Jersey

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600, or on the web at www.copyright.com. Requests to the Publisher for permission should be addressed to the Legal Department, Wiley Publishing, Inc., 10475 Crosspoint Blvd., Indianapolis, IN 46256, (317) 572-3447, fax (317) 572-4355, or online at <http://www.wiley.com/go/permissions>.

Wiley, the Wiley Publishing logo, Howell Book House, and related trademarks are trademarks or registered trademarks of John Wiley & Sons, Inc. and/or its affiliates. All other trademarks are the property of their respective owners. Wiley Publishing, Inc. is not associated with any product or vendor mentioned in this book.

The publisher and the author make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation warranties of fitness for a particular purpose. No warranty may be created or extended by sales or promotional materials. The advice and strategies contained herein may not be suitable for every situation. This work is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional services. If professional assistance is required, the services of a competent professional person should be sought. Neither the publisher nor the author shall be liable for damages arising here from. The fact that an organization or Website is referred to in this work as a citation and/or a potential source of further information does not mean that the author or the publisher endorses the information the organization or Website may provide or recommendations it may make. Further, readers should be aware that Internet Websites listed in this work may have changed or disappeared between when this work was written and when it is read.

For general information on our other products and services or to obtain technical support please contact our Customer Care Department within the U.S. at (800) 762-2974, outside the U.S. at (317) 572-3993 or fax (317) 572-4002.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books. For more information about Wiley products, please visit our web site at www.wiley.com.

Library of Congress Cataloging-in-Publication Data:

Dog owner's home veterinary handbook / Debra M. Eldredge . . . [et al.]. — 4th ed.
p. cm.

Includes index.

Rev. ed. of: Dog owner's home veterinary handbook / James M. Giffin and Liisa Carlson, 2000.

ISBN-13: 978-0-470-06785-7 (cloth)

ISBN-10: 0-470-06785-3

1. Dogs—Diseases—Handbooks, manuals, etc. I. Eldredge, Debra. II. Giffin, James M. Dog owner's home veterinary handbook.

SF991.C25 2007

636.7'089—dc22

2007016275

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

Fourth Edition

Edited by Beth Adelman

Cover design by Ruth Acosta

Book production by Wiley Publishing, Inc. Composition Services

FINDING IT QUICKLY

A special **Index of Signs and Symptoms** is on the inside of the front cover for fast referral. Consult this if your dog exhibits any unexplained behavior. It will help you locate the problem.

The detailed **Contents** outlines the organs and body systems that are the sites of disease. If you can locate the problem anatomically, look here first.

The **General Index** begins on page 607 and gives you a comprehensive guide to the book's medical information. Where a page number is in bold, it indicates more detailed coverage of the subject.

Cross-references note pertinent supplementary information.

A **Glossary** on page 585 defines medical terms used preferentially to best explain the subject or condition. Many of these words are now being used commonly among veterinarians and their clients. Glossary terms will usually be found in italics in the text. (Italics may also be used for emphasis.)

ACKNOWLEDGMENTS

I would like to thank Roxanne Cerda for thinking of me for this project and my incredible agent, Jessica Faust of Book Ends, for making it work. I can't say enough good things about working with Beth Adelman as my editor—it has been fun! Sandy Young, DVM, has done a great job in her technical review. And Marcella Durand has found us some images we thought might be impossible to find.

My thanks to my family, who have endured weird meals at weird times and dealt with the stress of occasional computer illnesses.

A special thank you to my three personal dogs, who oversaw this project. Ms Dani, my Belgian Tervuren bitch, offered counsel and company while making sure the school bus returned Kate and Tom every day. Hokey, my young male Belgian Tervuren, simply makes me smile—every day and often. Susan, the almost 15-year-old Pembroke Welsh Corgi who came to us as an 8-year-old, has been my shadow, my support, and an exemplification of true love.

—Debra Eldredge, DVM

TRIBUTE TO A DOG

The one absolutely unselfish friend that man can have in this selfish world, the one that never deserts him, the one that never proves ungrateful or treacherous, is his dog. A man's dog stands by him in prosperity and in poverty, in health and in sickness. He will sleep on the cold ground, where the wintry winds blow and the snow drives fiercely, if only he may be near his master's side. He will kiss the hand that has no food to offer; he will lick the wounds and sores that come in encounter with the roughness of the world. He guards the sleep of his pauper master as if he were a prince. When all other friends desert, he remains. When riches take wings and reputation falls to pieces, he is as constant in his love as the sun in its journey through the heavens.

—*Senator George Vest, 1870*

CONTENTS

Introduction xxvii

Chapter 1: EMERGENCIES 1

Handling and Restraint 2
 Muzzles 2
 Restraining for Examination and Treatment 2
 Carrying an Injured Dog 6
 Transporting an Injured Dog 7
Artificial Respiration and Heart Massage 7
 Artificial Respiration 8
 CPR 9
Shock 11
 Anaphylactic Shock 13
Acute Painful Abdomen 14
Broken Bones 15
Burns 16
Cold Exposure 17
 Hypothermia (Low Body Temperature) 17
 Frostbite 18
Dehydration 19
Drowning and Suffocation 20
Electric Shock 21
Heat Stroke 22
Poisoning 23
 General Treatment of Poisoning 24
 Contact Poisons 26
 Drug Poisons 26
 Rodent Poisons 27
 Antifreeze 28
 Poison Baits 29
 Insecticides 31
 Garbage and Food Poisons 33
 Chocolate 33
 Raisins, Grapes, and Other Food Poisons 34
 Corrosive Household Products 34
 Petroleum Products 35

<i>Poisonous Plants</i>	35
<i>Lead</i>	38
<i>Zinc</i>	38
<i>Toad and Salamander Poisoning</i>	39
Insect Stings and Bites	39
Snakebites	40
<i>Pit Vipers (Rattlesnakes, Cottonmouths, and Copperheads)</i>	40
<i>Coral Snakes</i>	41
<i>Treating Snakebites</i>	42
Wounds	42
<i>Controlling Bleeding</i>	42
<i>Treating Wounds</i>	44
<i>Bandaging a Wound</i>	47

Chapter 2: GASTROINTESTINAL PARASITES 51

Deworming Puppies and Adult Dogs	51
<i>Deworming Puppies</i>	52
<i>Deworming Adult Dogs</i>	53
How to Control Worms.	53
Ascarids (Roundworms)	56
Hookworms (Ancylostoma)	58
Tapeworms	60
Whipworms	61
Threadworms (Strongyloides).	62
Other Worm Parasites	62
<i>Pinworms</i>	62
<i>Trichinosis</i>	62
<i>Lungworms</i>	62
<i>Lung Flukes</i>	63
<i>Heartworms</i>	63

Chapter 3: INFECTIOUS DISEASES. 65

Bacterial Diseases	65
<i>Brucellosis</i>	65
<i>Leptospirosis</i>	66
<i>Bordetella Bronchiseptica</i>	67
<i>Salmonella</i>	68
<i>Campylobacteriosis</i>	69
<i>Coliobacillosis (E. Coli)</i>	69
<i>Lyme Disease</i>	70
Viral Diseases.	71
<i>Distemper</i>	71
<i>Canine Herpesvirus Infection</i>	73

<i>Infectious Canine Hepatitis</i>	74
<i>Rabies</i>	75
<i>Kennel Cough</i>	77
<i>Canine Parvovirus</i>	78
<i>Canine Coronavirus</i>	80
Fungal Diseases	80
<i>Histoplasmosis</i>	81
<i>Coccidioidomycosis (Valley Fever)</i>	81
<i>Cryptococcosis</i>	82
<i>Blastomycosis</i>	82
<i>Sporotrichosis</i>	83
Protozoan Diseases	83
<i>Neosporosis</i>	83
<i>Toxoplasmosis</i>	84
<i>Coccidiosis</i>	84
<i>Trichomoniasis</i>	85
<i>Giardiasis</i>	85
<i>Canine Babesiosis</i>	86
<i>Canine Hepatozoonosis</i>	86
<i>American Trypanosomiasis (Chagas Disease)</i>	87
Rickettsial Diseases	87
<i>Canine Ehrlichiosis and Anaplasmosis</i>	87
<i>Rocky Mountain Spotted Fever</i>	89
<i>Canine Salmon Poisoning Disease</i>	90
Antibodies and Immunity	90
Vaccinations	91
<i>Why Vaccines Fail</i>	92
<i>The Revaccination Debate</i>	93
<i>Core and Noncore Vaccines</i>	93
<i>Combination Vaccines</i>	93
Available Vaccines	94
<i>Canine Distemper (Core)</i>	94
<i>Infectious Hepatitis (Core)</i>	95
<i>Canine Parvovirus (Core)</i>	95
<i>Rabies (Core)</i>	96
<i>Leptospirosis Bacterin (Noncore)</i>	96
<i>Canine Parainfluenza (Noncore)</i>	96
<i>Bordetella (Noncore)</i>	97
<i>Lyme Disease (Noncore)</i>	97
<i>Coronavirus (Not Recommended)</i>	98
<i>Giardia (Not Recommended)</i>	98
<i>Porphyromonas (Not Recommended)</i>	98
Vaccination Recommendations	98

Chapter 4: THE SKIN AND COAT 101

The Dog's Coat	102
<i>Hair Growth and Shedding</i>	102
Avoiding Coat and Skin Problems	103
Grooming	103
<i>Brushing and Combing Techniques</i>	106
Removing Mats	106
Beyond the Brush	107
Trimming the Nails	107
Bathing	109
Dry Shampoos	111
Special Bath Problems	111
Sorting Out Skin Diseases	112
Fleas	117
The Flea Life Cycle	118
New Methods of Flea Control	118
Topical Insecticides for Flea Control	120
A Suggested Flea-Control Program	121
Eliminating Fleas on the Premises	122
Ticks	123
Other External Parasites	126
Scabies (<i>Sarcoptic Mange</i>)	126
<i>Cheyletiella</i> Mange (<i>Walking Dandruff</i>)	127
Chiggers (<i>Trombiculid Mites</i>)	128
Lice (<i>Pediculosis</i>)	129
<i>Pelodera Dermatitis</i> (<i>Damp Hay Itch</i>)	130
Flies	130
Using Insecticides	131
Insecticide Dips	132
Disinfecting the Premises	133
Lick Granuloma (<i>Acral Pruritic Dermatitis</i>)	134
Allergies	135
Hives	136
Flea Allergy Dermatitis	137
Atopic Dermatitis (<i>Canine Atopy</i>)	138
Food Allergy	140
Irritant and Allergic Contact Dermatitis	141
Disorders with Hair Loss	142
Hypothyroidism	142
Hyperadrenocorticism (<i>Cushing's Syndrome</i>)	144
Hyperestrogenism (<i>Estrogen Excess</i>)	145
Growth Hormone-Responsive Alopecia	146

Hypoestrogenism (Estrogen Deficiency)	146
Traction Alopecia	146
Acanthosis Nigrans	147
Vitiligo	147
Zinc-Responsive Dermatitis	148
Color Mutant Alopecia (Blue Doberman Syndrome)	149
Black Hair Follicle Dysplasia	149
Sebaceous Adenitis	149
Seborrhea	150
Ringworm	151
Demodectic Mange	154
Pressure Sores (Calluses)	156
Pyoderma (Skin Infections)	157
Puppy Dermatitis (Impetigo and Acne)	157
Folliculitis	158
Skin Fold Pyoderma	159
Acute Moist Dermatitis (Hot Spots)	160
Cellulitis and Skin Abscess	161
Juvenile Pyoderma (Puppy Strangles)	162
Mycetoma	163
Interdigital Cysts and Pododermatitis	163
Actinomycosis and Nocardiosis	163
Autoimmune and Immune-Mediated Skin Diseases	164
Pemphigus Complex	164
Bullous Pemphigoid	166
Lupus Erythematosus Complex	166
Toxic Epidermal Necrolysis	167
Erythema Multiforme	167
Nodular Panniculitis	168

Chapter 5: THE EYES 169

How Dogs See	171
What to Do if Your Dog Has an Eye Problem	172
Signs of Eye Ailments	172
How to Examine the Eye	173
How to Apply Eye Medicines	174
The Eyeball	175
Eye Out of Its Socket	175
Other Causes of a Bulging Eye	175
Enophthalmos (Sunken Eye)	176
Dermoid Cyst (Hair Growing from the Eyeball)	176

Eyelids	177
<i>Blepharospasm (Severe Squinting)</i>	177
<i>Blepharitis (Inflamed Eyelids)</i>	177
<i>Chemosis (Allergic Blepharitis)</i>	178
<i>Foreign Bodies in the Eyes</i>	178
<i>Burns of the Eyes</i>	179
<i>Sties and Chalazions</i>	179
<i>Distichiasis (Extra Eyelashes)</i>	179
<i>Facial Hair</i>	180
<i>Entropion</i>	180
<i>Ectropion</i>	181
<i>Eyelid Tumors</i>	182
The Nictitating Membrane (Third Eyelid)	182
<i>Film over the Eye</i>	182
<i>Eversion of the Cartilage</i>	183
<i>Cherry Eye</i>	183
The Outer Eye	184
<i>Conjunctivitis (Red Eye)</i>	184
<i>Neonatal Conjunctivitis</i>	185
The Tearing Mechanism	186
<i>Keratoconjunctivitis Sicca (Dry Eye)</i>	187
<i>Epiphora (Watery Eye)</i>	188
<i>Nasolacrimal Occlusion</i>	189
<i>Poodle Eye</i>	190
The Cornea	191
<i>Corneal Abrasion</i>	191
<i>Corneal Ulcer</i>	192
<i>Indolent Corneal Ulcers in Boxers</i>	193
<i>Keratitis (Cloudy Eye)</i>	193
<i>Corneal Dystrophy</i>	195
The Inner Eye	196
<i>Blindness</i>	196
<i>Cataracts</i>	197
<i>Anterior Uveitis (Soft Eye)</i>	199
<i>Glaucoma</i>	200
Retinal Diseases	201
<i>Collie Eye Anomaly Syndrome</i>	202
<i>Progressive Retinal Atrophy</i>	203
<i>Central Progressive Retinal Atrophy</i>	204
<i>Congenital Stationary Night Blindness</i>	204

Chapter 6: THE EARS 205

Basic Ear Care 206
 Avoiding Ear Problems 206
 Cleaning the Ears 207
 How to Apply Ear Medicines 208
 Antibiotics for the Ear 208
 The Ear Flap 209
 Bites and Lacerations 209
 Allergic Otitis (Ear Allergy) 210
 Swollen Ear Flap 210
 Fly Bite Dermatitis 211
 Frostbite 211
 Ear Fissure 211
 Marginal Seborrhea 212
 The Ear Canal 212
 External Otitis 212
 Otodectic Mange (Ear Mites) 214
 Foreign Bodies and Ticks in the Ear 215
 Ceruminous Gland Tumors 215
 The Middle Ear 216
 Otitis Media (Middle Ear Infection) 216
 The Inner Ear 217
 Internal Otitis (Inner Ear Infection) 217
 Labyrinthitis 217
 Deafness 218

Chapter 7: THE NOSE 221

Signs of Nasal Irritation 222
 Nasal Discharge 222
 Sneezing 222
 Mouth Breathing 223
 The Nose 223
 Stenotic Nares (Collapsed Nostrils) 223
 Nasal Solar Dermatitis (Collie Nose) 224
 Nasal Depigmentation 225
 Plastic Dish Nasal Dermatitis 226
 Hyperkeratosis (Nasal Callus) 226
 The Nasal Cavity 226
 Epistaxis (Nosebleeds) 226
 Foreign Body in the Nose 227

<i>Oral-Nasal Fistula</i>	227
<i>Allergic Rhinitis</i>	227
<i>Rhinitis and Sinusitis</i>	228
<i>Nasal Mites</i>	228
<i>Nasal Polyps and Tumors</i>	229

Chapter 8: THE MOUTH AND THROAT 231

How to Examine the Mouth	231
Signs of Mouth and Throat Disease	232
The Mouth	233
<i>Cheilitis (Inflammation of the Lips)</i>	233
<i>Lip Fold Pyoderma</i>	233
<i>Mouth Lacerations</i>	234
<i>Mouth Burns</i>	234
<i>Stomatitis (Sore Mouth)</i>	235
<i>Oral Papillomas</i>	236
<i>Foreign Objects in the Mouth</i>	236
<i>Growths in the Mouth</i>	238
Teeth and Gums	239
<i>Deciduous and Adult Teeth</i>	239
<i>Retained Baby Teeth</i>	240
<i>Abnormal Number of Teeth</i>	242
<i>Malocclusion (Incorrect Bite)</i>	242
<i>Unstable Jaw</i>	244
<i>Periodontal Disease</i>	244
<i>Cavities</i>	247
<i>Abscessed Roots</i>	247
<i>Broken Teeth</i>	248
<i>Enamel Hypoplasia or Damage</i>	248
Taking Care of Your Dog's Teeth	249
<i>Brushing the Teeth and Gums</i>	249
The Throat	251
<i>Pharyngitis (Sore Throat) and Tonsillitis</i>	251
<i>Foreign Body in the Throat (Gagging)</i>	252
Salivary Glands	252
<i>Hypersalivation (Drooling)</i>	252
<i>Salivary Gland Cysts, Infections, and Tumors</i>	252
The Head	253
<i>Head and Neck Abscesses</i>	254
<i>Cranio-mandibular Osteopathy (Swollen Jaw)</i>	254

Chapter 9: THE DIGESTIVE SYSTEM.	255
Endoscopy	256
Gastroscopy	256
Colonoscopy	257
The Esophagus	257
Regurgitation	257
Dysphagia (Difficult, Painful Swallowing)	258
Megaesophagus (Enlarged Esophagus)	258
Foreign Body in the Esophagus	259
Esophagitis	260
Esophageal Stricture	260
Growths	261
The Stomach	261
Stomach and Duodenal Ulcers	261
Gastric Outflow Obstruction	262
Gastric Tumors	263
Gastric Dilatation Volvulus (Bloat)	263
Addison's Disease (Hypoadrenocorticism)	267
Acute Gastritis	268
Chronic Gastritis	268
Motion Sickness	270
Vomiting	270
Causes of Vomiting	270
Home Treatment of Vomiting	272
Small and Large Bowels	273
Inflammatory Bowel Disease	273
Acute Infectious Enteritis	274
Malabsorption Syndrome	275
Colitis	276
Gastrointestinal Foreign Bodies	276
Intestinal Obstruction	277
Flatulence (Passing Gas)	278
Coprophagia (Eating Stool)	278
Peritonitis	279
Constipation	280
Fecal Impaction	282
Diarrhea	283
Home Treatment of Diarrhea	285
The Anus and Rectum	286
Anorectal Obstructions	287
Pseudoconstipation (Matted Stool Around the Anus)	287
Proctitis (Inflamed Anus and Rectum)	288

<i>Anorectal Prolapse (Protrusion of Anal Tissue)</i>	288
<i>Malformation of the Anus</i>	289
<i>Anal Sac Disease</i>	289
<i>Perianal Fistulas</i>	292
<i>Rectal Polyps and Cancers</i>	293
<i>Perianal Gland Tumors</i>	293
The Liver	294
<i>Liver Failure</i>	294
<i>Causes of Liver Disease</i>	295
The Pancreas	297
<i>Pancreatitis</i>	298
<i>Exocrine Pancreatic Insufficiency</i>	299
<i>Diabetes Mellitus (Sugar Diabetes)</i>	300
Feeding and Nutrition	302
<i>Protein and Dog Food</i>	302
<i>Commercial Dog Foods</i>	303
<i>Feeding Growing Puppies</i>	305
<i>Feeding Adults</i>	306
<i>Raw and Homemade Diets</i>	306
<i>Table Scraps and Extras</i>	307
<i>Supplements</i>	307
<i>Diets for Health Problems</i>	308
<i>Switching Diets</i>	308
<i>Weight Reduction</i>	308

Chapter 10: THE RESPIRATORY SYSTEM 311

Abnormal Breathing	311
<i>Rapid, Labored Breathing</i>	311
<i>Noisy Breathing</i>	312
<i>Stridor (Croupy Breathing)</i>	312
<i>Wheezing</i>	312
<i>Shallow Breathing</i>	313
<i>Brachycephalic Syndrome</i>	313
The Larynx (Voice Box)	314
<i>Laryngitis</i>	315
<i>Laryngeal Edema</i>	315
<i>Choking (Foreign Body in the Larynx)</i>	316
<i>Laryngospasm (Reverse Sneezing)</i>	317
<i>Laryngeal Paralysis (Vocal Cord Paralysis)</i>	317
<i>Laryngeal Trauma</i>	318
<i>Laryngeal Collapse</i>	318
<i>Debarking and Barking Problems</i>	318

Coughing	319
<i>Diagnosing a Cough</i>	319
<i>Treating a Cough</i>	320
Trachea and Bronchi	320
<i>Acute Tracheobronchitis (Kennel Cough Complex)</i>	320
<i>Foreign Body in the Lungs</i>	321
<i>Collapsing Trachea</i>	322
<i>Chronic Bronchitis</i>	323
The Lungs	324
<i>Pneumonia</i>	324
<i>Pulmonary Infiltrates of Eosinophils</i>	325
<i>Canine Influenza</i>	325
<i>Pleural Effusion</i>	326
Tumors of the Larynx, Trachea, and Lungs	326

Chapter 11: THE CIRCULATORY SYSTEM. 329

The Normal Heart	330
<i>Pulse</i>	330
<i>Heart Sounds</i>	331
<i>Circulation</i>	332
Heart Disease	333
<i>Chronic Valvular Disease</i>	333
<i>Dilated Cardiomyopathy</i>	334
<i>Congenital Heart Disease</i>	335
<i>Bacterial Endocarditis</i>	337
<i>Myocarditis</i>	338
Arrhythmias	338
Congestive Heart Failure	339
Heartworms	341
<i>Heartworm Life Cycle</i>	342
<i>Heartworm Disease</i>	343
<i>Diagnosis</i>	344
<i>Treating Heartworm Disease</i>	345
<i>Heartworm Prevention</i>	347
Anemia and Clotting Disorders	349
<i>Blood-Loss Anemia</i>	349
<i>Hemolytic Anemias</i>	350
<i>Inadequate Red Blood Cell Production</i>	351
<i>Clotting Disorders</i>	352

Chapter 12: THE NERVOUS SYSTEM	355
Neurological Evaluation	356
Head Injuries	357
<i>Skull Fractures</i>	357
<i>Open Fontanel</i>	357
<i>Brain Injuries</i>	357
<i>Treating Head Injuries</i>	358
Brain Diseases	360
<i>Encephalitis (Brain Infection)</i>	360
<i>Granulomatous Meningoencephalitis</i>	361
<i>Brain Tumors and Abscesses</i>	361
<i>Stroke</i>	362
Hereditary Diseases	363
<i>Hereditary Myopathies (Muscular Dystrophy)</i>	363
<i>Degenerative Myelopathy</i>	364
<i>Inherited Neuropathies</i>	365
<i>White Dog Shaker Syndrome</i>	366
<i>Cerebellar Diseases</i>	366
<i>Hydrocephalus</i>	367
Seizure Disorders	367
<i>Epilepsy</i>	369
<i>Narcolepsy and Cataplexy</i>	370
<i>Compulsive Behaviors</i>	370
<i>Aggressive Behaviors</i>	371
Coma	371
Weakness or Paralysis	372
<i>Tick Paralysis</i>	372
<i>Botulism</i>	373
<i>Coonhound Paralysis</i>	373
<i>Myasthenia Gravis</i>	373
<i>Hypokalemia (Low Serum Potassium)</i>	374
Spinal Cord Diseases	374
<i>Spinal Cord Injuries</i>	375
<i>Infections and Tumors</i>	376
<i>Ruptured Discs</i>	376
<i>Fibrocartilagenous Embolic Myelopathy</i>	379
<i>Wobbler Syndrome</i>	379
<i>Cauda Equina Syndrome</i>	379
<i>Spondylosis (Bone Spurs)</i>	380
Peripheral Nerve Injuries	380
<i>Dead Tail or Limber Tail</i>	381

Chapter 13: THE MUSCULOSKELETAL SYSTEM 383

Limping or Lameness	384
<i>Determining the Cause</i>	384
<i>Diagnostic Tests</i>	386
Bone and Joint Injuries	386
<i>Osteomyelitis (Bone Infection)</i>	386
<i>Sprains</i>	387
<i>Tendon Injuries</i>	387
<i>Muscle Strains</i>	388
<i>Luxation (Dislocated Joint)</i>	388
<i>Stifle Injuries</i>	390
Inherited Orthopedic Diseases	392
<i>Hip Dysplasia</i>	392
<i>Legg-Perthes Disease</i>	397
<i>Luxating Patella (Slipping Kneecap)</i>	397
<i>Elbow Dysplasia</i>	398
<i>Osteochondrosis</i>	400
<i>Panosteitis (Wandering Lameness)</i>	400
Arthritis	401
<i>Osteoarthritis (Degenerative Joint Disease)</i>	401
<i>Immune-Mediated Arthritis</i>	406
<i>Infectious Arthritis</i>	406
Metabolic Bone Diseases	407
<i>Hyperparathyroidism</i>	407
<i>Hypertrophic Osteodystrophy</i>	408
Vitamin and Mineral Supplements	408

Chapter 14: THE URINARY SYSTEM 411

Signs of Urinary Tract Disease	412
<i>Dysuria (Painful Urination)</i>	412
<i>Hematuria (Blood in the Urine)</i>	412
<i>Polyuria (Excessive Urination)</i>	413
<i>Urinary Incontinence</i>	413
Diagnosing Urinary Tract Diseases	413
Diseases of the Bladder and Urethra	414
<i>Cystitis (Bladder Infection)</i>	414
<i>Bladder and Urethral Stones</i>	415
<i>Obstructed Bladder</i>	416
<i>Urinary Incontinence</i>	416

Enlarged Prostate	418
<i>Benign Prostatic Hyperplasia</i>	419
Prostatitis	419
Prostate Cancer	420
Kidney Disease	420
Congenital Kidney Problems	420
Pyelonephritis (Kidney Infection)	422
Nephritis and Nephrosis	423
Uremia (Kidney Failure)	423
Dialysis	425
Kidney Transplant	426

Chapter 15: SEX AND REPRODUCTION 427

The Basics of Genetics	428
<i>Inheriting Problem Genes</i>	428
Breeding Purebred Dogs	430
<i>Following Bloodlines</i>	431
The Brood Bitch	432
The Stud Dog	435
The Estrous (Heat) Cycle	436
Hormonal Effects During Estrous	439
When to Breed	440
The Tie	440
Mating Procedures	441
Getting Ready	441
Normal Mating	442
Helping the Mating Along	442
A Prolonged Tie	443
Shy Breeders and Dogs Who Won't Mate	443
Artificial Insemination	444
Male Infertility	446
Impotence	447
Evaluating Infertility in the Stud Dog	447
Treating Male Infertility	448
Female Infertility	448
Evaluating Infertility in the Bitch	448
Infertility with a Normal Estrous Cycle	449
Abnormal Estrous Cycles	449
Fetal Loss During Pregnancy	452
Pseudocyesis (False Pregnancy)	454
Unwanted Pregnancy	455

Preventing Pregnancy	456
<i>Ovariohysterectomy (Spaying)</i>	456
<i>Contraceptive Drugs</i>	457
<i>Castration (Neutering)</i>	458
Diseases of the Female Genital Tract	459
<i>Vaginitis (Vaginal Infection)</i>	459
<i>Vaginal Hyperplasia and Prolapse</i>	460
<i>Pyometra and Cystic Endometrial Hyperplasia</i>	461
<i>Endometritis</i>	462
Diseases of the Male Genital Tract	463
<i>Balanoposthitis (Infection of the Prepuce and Head of the Penis)</i> . . .	463
<i>Phimosis (Strictured Foreskin)</i>	464
<i>Paraphimosis (Penis Trapped Outside the Sheath)</i>	464
<i>Undescended Testicles</i>	465
<i>Orchitis (Infection of the Testicles)</i>	465
<i>Testicular Hypoplasia and Degeneration</i>	466

Chapter 16: PREGNANCY AND WHELPING 467

Pregnancy	467
<i>Prenatal Checkups</i>	469
<i>Care and Feeding During Pregnancy</i>	469
<i>Preparing for Whelping</i>	471
Whelping	472
<i>Signs of Whelping</i>	473
<i>Labor and Delivery</i>	473
<i>Assisting a Normal Delivery</i>	476
<i>Helping a Puppy to Breathe</i>	477
Dystocia (Prolonged or Difficult Labor)	477
<i>Physical Blockage</i>	478
<i>Uterine Inertia</i>	479
<i>When to Call the Veterinarian</i>	480
<i>Cesarean Section</i>	480
Postpartum Care of the Dam	481
<i>Feeding a Nursing Dam</i>	481
<i>Drugs and Lactation</i>	482
Postpartum Problems	482
<i>Subinvolution of Placenta Sites</i>	482
<i>Acute Metritis (Infected Uterus)</i>	483
<i>Mastitis</i>	484
<i>Eclampsia (Milk Fever)</i>	485
<i>Agalactia (Absence of Milk)</i>	486
Maternal Neglect	487

- [**read Do Not Ask What Good We Do: Inside the U.S. House of Representatives**](#)
- [download online *Driving Home: An American Journey*](#)
- [read online *Crusade \(Starfire, Book 2\)*](#)
- [Skinny Bitch in Love pdf, azw \(kindle\)](#)
- [Magic Graphs for free](#)
- [read online *Hardening, Tempering and Heat Treatment \(Workshop Practice\)* pdf](#)

- <http://www.celebritychat.in/?ebooks/Meander--East-to-West--Indirectly--Along-a-Turkish-River.pdf>
- <http://growingsomeroots.com/ebooks/By-the-Sword--Adversary-Cycle-Repairman-Jack--Book-12-.pdf>
- <http://pittiger.com/lib/The-Heart--A-Novel.pdf>
- <http://anvilpr.com/library/Skinny-Bitch-in-Love.pdf>
- <http://anvilpr.com/library/Margaret-Fulton-s-Encyclopedia-of-Food-and-Cookery.pdf>
- <http://bestarthritiscare.com/library/The-Isle-of-Blood--The-Monstrumologist--Book-3-.pdf>