

TABLE OF CONTENTS – Laser Therapy in Veterinary Medicine: Photobiomodulation

About the Editors

List of Contributors

Foreword

Preface

Part I The History of Laser Therapy 1

1 The History of Laser Therapy 3

Ronald J. Riegel

Part II The Theory and Science of Laser Therapy 7

2 Fundamental Information 9

Ronald J. Riegel and John C. Godbold, Jr.

3 Laser Physics in Veterinary Medicine 19

Bryan J. Stephens

4 Therapy Laser Safety 29

Kenneth E. Bartels

5 Basic Principles of Photobiomodulation and Its Effects at the Cellular, Tissue, and System Levels 36

Juanita J. Anders, Ann Kobiela Ketz, and Xingjia Wu

Part III Practical Applications of Laser Therapy 53

6 General Principles of Laser Therapy 55

Jeffrey J. Smith

7 Contraindications, Special Considerations, and Precautions 67

John C. Godbold, Jr. and Ronald J. Riegel

Part IV Clinical Applications of Laser Therapy in Companion Animals 75

8 Laser Therapy and Pain Management 77

Jennifer F. Johnson

9 Intra- and Postoperative Laser Therapy 88
Steven Buijs and John C. Godbold, Jr.

10 Wounds 100
David S. Bradley

11 Dermatological and Non-musculoskeletal Soft-Tissue Conditions 114
Daniel M. Core and John C. Godbold, Jr.

12 Snake Bites 128
Barbara R. Gores

13 Musculoskeletal Disorders and Osteoarthritis 132
Lisa A. Miller

14 Upper and Lower Respiratory Conditions 150
Ray A. Arza

15 Oral Conditions 161
Ray A. Arza

16 Abdominal Conditions 169
Richard L. Godine

17 Neurological Conditions 179
Richard L. Godine

18 Laser Therapy for the Geriatric Patient 188
Erin O'Leary

19 Feline-Specific Conditions 198
Jennifer O. Lavalley and James Olson

Part V Clinical Applications of Laser Therapy in Canine Sports Medicine 213

20 Laser Therapy for the Canine Athlete 215
Debra Canapp

21 Discipline-Specific Canine Sports Medicine Applications 227
Deborah M. Gross

Part VI Clinical Applications of Laser Therapy in Companion Animal Rehabilitation 239

22 Laser Therapy and Multimodal Postoperative Rehabilitation 241
Jeffrey J. Smith

23 Laser Therapy and Injury Rehabilitation 252
Matthew W. Brunke

24 Laser Therapy and Multimodal Performance Maintenance 267
Deborah M. Gross

25 Laser Therapy and Geriatric Rehabilitation 277
Dianne Adjan Logan

Part VII Clinical Applications of Laser Therapy in Exotic Animals 285

26 Laser Therapy for Exotic Small Mammals 287
Jörg Mayer and Robert D. Ness

27 Laser Therapy for Birds 298
Robert D. Ness and Jörg Mayer

28 Laser Therapy for Reptiles 306
Jörg Mayer and Robert D. Ness

29 Laser Therapy for Aquatic Species 313
Donald W. Stremme

30 Zoological Applications of Laser Therapy 320
Liza Dadone and Tara Harrison

Part VIII Clinical Applications of Laser Therapy in Equine Practice 335

31 Fundamentals of Equine Laser Therapy 337
Ronald J. Riegel

32 Administering Laser Therapy to the Equine Patient 344
Ronald J. Riegel

33 Laserpuncture for the Equine Patient 369
Ronald J. Riegel

34 Laser Therapy for the Treatment of Equine Wounds 375
Ronald J. Riegel

35 Laser Therapy and Equine Performance Maintenance 390
Sean Redman

36 Laser Therapy and Multimodal Equine Rehabilitation 401
Brenda McDuffee

37 High-Intensity Laser Therapy for the Equine Patient 415
Damiano Fortuna

Part IX Clinical Applications of Laser Therapy in Food Animal Practice 423

38 Laser Therapy in Food-Animal Practice 425
Julie Gard

Part X Laser Therapy and Alternative and Regenerative Therapies 431

39 Laser Therapy and Acupuncture 433

Carolina Medina

40 Laser Therapy in Veterinary Regenerative Medicine 439

Debra Canapp

Part XI Integrating Laser Therapy into Veterinary Medicine 449

41 Successful Implementation and Marketing of Laser Therapy 451

Diane J. Miller

42 The Role of Veterinary Technicians and Nurses in Laser Therapy 461

Renaud Houyoux and Laura Kortelainen

43 Return on Investment for a Therapy Laser 471

David J. Fenoglio

Index 478.