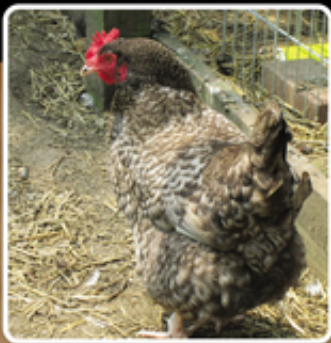


Third Edition

# Nutrition and Disease Management

for Veterinary Technicians and Nurses



Ann Wortinger | Kara M. Burns



WILEY Blackwell



## **Nutrition and Disease Management for Veterinary Technicians and Nurses**





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*Third Edition*

*Ann Wortinger and Kara M. Burns*

**WILEY** Blackwell

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## Preface

Nutrition is an area of veterinary medicine that is very easy for the veterinary nurse/technician to have an active role. Many of the commercial food producers have even concentrated on educating veterinary nurses/technicians on nutrition through webinars, conference tracks, and self-paced courses.

As with any other area of education, you still need to know the fundamentals to understand what is being taught. Unfortunately, the nutrition fundamentals are often not taught in veterinary technology education. While chemistry, microbiology, and math are required at most schools, even these do not adequately address basic animal nutrition. We all are taught the basic nutrients in a diet: water, protein, fats, vitamins, minerals, and carbohydrates but what is lacking is, how do they work together, what happens to them inside the body, and what changes occur with aging or disease?

So where does this leave a veterinary technician or veterinary nurse who wants to know more about nutrition, who wants to really understand what is going on inside the animal and how nutrients play a role? Usually, they start by going through the available veterinary nutrition books if they are not overwhelmed and terrified by the first chapter, it is a miracle! These books are often more detailed than a technician needs or wants to know; one can get lost in these details and miss the basic points. If you go to human nutrition

books, the unique nutritional needs of our most common species dogs, cats, horses, birds, and pocket pets, are not addressed, although basic nutrition may be presented in a less technical manner. Some people enroll in an online program, but the basics are still often missing from these, and referencing these, later on, can be challenging. We love having reference books available whenever we have a question or need clarification on a point of interest, and we often have questions and need clarification. Many commercial food producers also provide technical helplines, but you still need to understand the basics before you can ask for clarification!

We have plowed through nutrition books from the very basic pet owner books to the extremely technical veterinary books, and all of them have something to offer but will you read long enough to understand them? We were fortunate to have veterinarians willing to explain misunderstood points and concepts and encourage us to review specific tools and areas of interest. Without them, we would have had a much more difficult time understanding and utilizing nutrition in our day-to-day practice. After all, that is the ultimate goal of nutrition, is it not?

*Ann Wortinger and Kara M. Burns, 2024*

My goal in writing this book was to provide a book for a technician and nurse, that was both relevant and technical but understandable and usable. This is not a dummed-down version of a veterinary nutrition book, but one that focuses on the unique interests of technicians and nurses and how we use nutrition in practice and at home. For the third edition, I have asked my good friend and partner in nutrition, Kara M. Burns to provide her spin on disease management and alternate species nutrition. I am very excited to have Kara helping contribute to the third edition.

The book is organized into five sections. The first section addresses the basics of nutrition by looking at energy and nutrients; how the individual nutrients of water, carbohydrates, fats, proteins, vitamins, and minerals are utilized by the body; digestion; absorption of these nutrients; energy balance; the GI microbiome; and prebiotics, probiotics, and synbiotics, and finally those ever-popular, nutrition calculations!

Section II covers nutritional requirements for cats and dogs by going through the history and regulation of pet food, understanding how to read pet food labels, understanding nutrient content and types of foods and how they differ, and evaluating raw food diets, preservatives, and home-made diets, as well as offering resources for alternative diets.

Section III covers different feeding regimens and body condition scoring both definition and use and takes feeding from pregnancy and lactation through neonatal, growth, and adult maintenance feeding and into geriatrics. Section III will also cover feeding for performance animals, special feeding requirements for cats, nutrition myths, and how to calculate the cost of feeding.

Section IV covers the nutritional management of disease, looking at GI disease, critical

care nutrition, assisted feeding techniques, hepatic disease, dermatology, the role of fatty acids in disease management, endocrine and metabolic diseases, cancer, trauma and infection, weight management, FLUTD, and others. This section includes a lot of new content on commonly seen diseases and newer areas of research.

The final section addresses the feeding management of other species, including horses, birds, and pocket pets. Each section will build on the information covered in previous sections, allowing for practical use of the information learned.

My cats and chickens are not thrilled when I start calculating caloric intake, nutrient distribution, or metabolizable energy. I am sure that Kara's varied pet population feels much the same way, but they too will ultimately benefit from our knowledge, as have innumerable clients, patients, coworkers, and students.

My hope is that through this edition of our nutrition book, you too will come to appreciate the important role nutrition plays in veterinary medicine, both through prevention and therapeutic use. You will have a better understanding of basic digestion, nutrient use by the body, and how food can affect our patients from the prenatal period through their death (hopefully many years down the line). And lastly that you will bring nutrition into your practice and use it to improve the quality of care that is provided to your patients. Nutrition is an ever-evolving field in veterinary medicine, and I hope this book serves as a stepping stone for future learning. Kara and I love veterinary nutrition, and we hope that you will come to love it too! #nutritionnerds!

*Ann Wortinger, 2024*

## Acknowledgments

Working on this third edition has been challenging on many fronts. I changed jobs towards the final chapters, weathered a global pandemic, continued with my speaking schedule (virtually), became more comfortable with Zooming, and decided to add a sunroom on to our house! Enough activities to distract the hardest of writers.

Kara and I have expanded the chapters and information provided, allowing both of us to further spread the nutrition word! As many of you know, Kara and I were on the organizing committee for the Academy of Veterinary Nutrition Technicians (AVNT) and are still on the Executive Committee for the VTS (Nutrition). We are very lucky that in 2022, the AVNT attained full recognition from the NAVTA CVTS. A labor of love for both of us!

My feline editorial staff has changed since the last edition; Dusty, our blind Detroit stray,

remains in the chief lap warmer and contributor position, and Poppy, our TNR rescue, has stepped up to be my Zoom buddy. Jack, Millie, and BeeGee have the enviable job of seeing how much hair can be released on my desk, as well as making much use of our window cat-ledge. All of the cats had the unfailing ability to know exactly which book or article I was currently working on or would need next. You very kindly marked it with your furry bodies. Supervision was conducted from my lap, my desk, and the pet stairs. How does anyone work without a feline editorial staff?

And last but not least, my husband, Todd, who has had to undergo nightly discussions on new points of interest in nutrition, challenges with computers, and lots of late dinners! Thank you all for your continued support and for ensuring that I ate on a regular basis and knew I was appreciated and loved!

*Ann Wortinger*

I am honored to have again partnered with my good friend Ann Wortinger to write *Nutrition and Disease Management for Veterinary Technicians and Nurses, 3rd Edition*. We have seen this dream come to fruition, along with our other passion project: the Academy of Veterinary Nutrition Technicians. In 2022, the AVNT gained full recognition – a huge milestone which Ann and I are thrilled to see continue to grow. We both see the value of proper nutrition and the foundation for health that proper nutrition provides to veterinary patients.

Finding one's soul mate is a true gift from God. I am truly blessed to have been given the gift of Ellen Lowery, DVM, PhD, MBA, as my wife and best friend. You make my life complete and give me the courage to pursue all of my dreams. Thank you for your encouragement and support in this endeavor and for constantly supporting my desire to write this book! Thank you for being the love of my life!

Thank you to my parents, Bernard “Red” and Marilyn Burns who instilled in me a love of all of God's creatures.

I would like to thank the entire team at Wiley Blackwell for their support and expertise in making this third edition a reality!

I continue to have an expansive editorial staff that has contributed their supervisory abilities along this writing journey. Our cats O'Malley (our snowshoe) and Oliver Queen – “Ollie” (our Persian) have been consistently trying to help me with chapters by walking across my keyboard. Our French bulldogs Molly and Maggie, each trying to move their beds in my office to be the closest to me while I write. And Brees, our Border collie/Australian shepherd cross who has to put up with the Frenchies and keep them in line. Our Meyer's Parrot Bella, our Green Cheek Conure Loki, and our lovebirds Sookie, Stevie, and Mick. Thank you all for bringing such joy to my life.

*Kara M. Burns*



## About the Companion Website

This book is accompanied by a companion website:

**[www.wiley.com/go/wortinger/3e](http://www.wiley.com/go/wortinger/3e)**



This website includes:

- Cases and the Keys.
- Review Questions with the Answers.

