



Performing the Large Animal Physical Examination

Edited by

Gayle Leith • Sarah Eaton

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WILEY Blackwell

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Published by John Wiley & Sons, Inc., Hoboken, New Jersey.
Published simultaneously in Canada.

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Library of Congress Cataloging-in-Publication Data Applied for

Hardback: 9781119830351

Cover Design: Wiley

Cover Images: Courtesy of Ryane Englar, Courtesy of Sarah Eaton, Courtesy of Skyler Bentley

Set in 9.5/12.5pt STIXTwoText by Straive, Pondicherry, India

Dedications

By Ryane E. Englar, DVM, DABVP (Canine and Feline Practice)



Image courtesy of Susan Englar.

***Though I cannot see it with my eyes,
I trust that the current knows where it is going.
I shall let go,
And let it take me where it will.
~Richard Bach***

At the tail end of February 2024, just 5 months before the first draft of this text was due to the publisher, I was diagnosed with Fuch's dystrophy, a bilaterally progressive corneal disease. In the days that followed this unexpected diagnosis, I learned that I was facing a clinical condition with no medical cure and without any medical intervention that could slow disease progression. I was, in essence, going blind. My only hope to regain what sight had been lost was to pursue surgical correction through corneal transplantation. Initially that step seemed like a distant dream. Then, over 2.5 weeks, my sight tanked: from 20/40 in my right eye, with newly updated prescription glasses, to 20/60 and from 20/30 in my left eye, to 20/80. Over the course of days, I steadily lost visual acuity and contrast sensitivity. By the time draft one of this text was

submitted for formatting, I received my first corneal transplant in my left eye. Two months later, I received my first corneal transplant in my right eye.

By the time this textbook comes out in print, I hold onto hope that I will be able to see it. That this is even a possibility is because of the selflessness, generosity, and compassion of organ donors.

I will likely never know the names of my donors.

I will likely never know the kind of people they were, or who they loved.

I will likely never know their likes and dislikes.

I may never know their memories as my own.

Their favorite song and even if they had a favorite dance.

Their favorite color. Movie. Actor. Artist.

Their favorite food.

Whether they preferred sunrise to sunset.

Whether they chose tea over coffee or Pepsi over Coca-Cola.

I likely won't know who made them smile and what made them laugh.

I likely won't know whether they lived the life they'd hoped to live, fully, without regret.

There are so many questions I have that I'll likely never know the answer to – about the two people who gave to me so freely, without ever knowing me, without asking for anything in return.

There is so much I want to know, but don't, and likely won't about the two people who made the choice to become a part of my whole.

What I do know is this: corneal donors not only grant the chance at second sight; they restore your mind's eye, too – how you see yourself – how and where you find your “fit” in the world – and how you choose to make your mark, how you choose to pay it forward. After all, it's that kind of *gifted* vision mixed with fierce determination and passion that inspires and motivates and lights a fire inside of me to get up in the morning and face each day.

To organ donors – past, present, and future – thank you for the gift that keeps on giving – that grants new lives, new days, and new chapters, literally and figuratively.

What you leave behind is not what is engraved in stone monuments, but what is woven into the lives of others.

~Pericles

This book is dedicated to all the animals who patiently help train future veterinarians. Your time, patience, and tolerance is seen, appreciated, and loved.

Sarah Eaton, DVM, DACT, CVA, DABVP (Equine)

Thank you to my husband, Preston Bailess, and my daughter, Jordyn Xiao E. Leith Bailess, for always supporting me.

Gayle Leith, DVM, MA, MS, DABVP (Equine Practice)

Thanks to Dr. Englar for the opportunity to collaborate on this text, the wonderful team at the University of Arizona College of Veterinary Medicine for the support, and everyone in the small ruminant community both in the United States and abroad who have shared their passion and knowledge – particularly those available to share wisdom at midnight, in the rain, during lambing season.

Skyler Bentley

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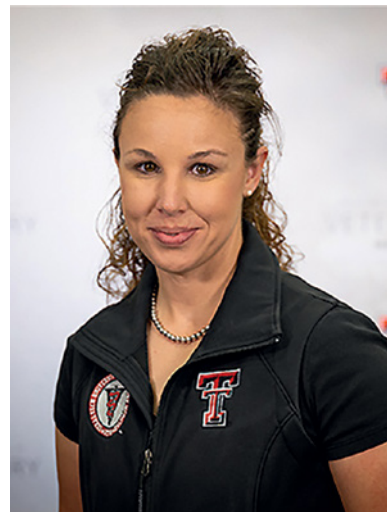


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About the Editors

Ryane E. Englar

Ryane E. Englar, DVM, DABVP (Canine and Feline Practice), graduated from Cornell University College of Veterinary Medicine in 2008. She practiced as an associate veterinarian in companion animal practice before transitioning into the educational circuit as an advocate for preclinical training in primary care. She debuted in academia as a clinical instructor of the Community Practice Service at Cornell University Hospital for Animals. She then transitioned into the role of assistant professor as founding faculty at Midwestern University College of Veterinary Medicine. She joined the faculty at Kansas State University between May 2017 and January 2020 to launch the Clinical Skills curriculum.

In February 2020, Dr. Englar reprised her role as founding faculty when she returned “home” to Tucson to join the University of Arizona College of Veterinary Medicine. As a dual appointment Associate Professor of Practice and Executive Director, Dr. Englar currently oversees the design and delivery of the Clinical and Professional Skills curriculum.

Dr. Englar is passionate about advancing education for generalists by thinking outside of the box to develop new course materials for the hands-on learner. This labor of love is preceded by seven texts that collectively provide students, clinicians, and educators alike with functional, relatable, and practice-friendly tools for success:

- ***Performing the Small Animal Physical Examination*** (John Wiley & Sons, Inc., 2017)
- ***Writing Skills for Veterinarians*** (5M Publishing Ltd., 2019)
- ***Common Clinical Presentations in Dogs and Cats*** (John Wiley & Sons, Inc., 2019)
- ***A Guide to Oral Communication in Veterinary Medicine*** (5M Publishing Ltd., 2020)
- ***The Veterinary Workbook of Small Animal Clinical Cases*** (5M Books Ltd, 2021)
- ***Low-Cost Veterinary Clinical Diagnostics*** (Wiley-Blackwell, 2023)
- ***Supporting Pet Owners Through Grief: A Veterinarian's Guide to Loss*** (5M Books Ltd, 2023)

Dr. Englar's students inspire her to write so they have the resources that they need to not just survive but thrive in clinical practice.

When Dr. Englar is not advancing companion animal primary care through teaching or textbook-writing, she competes with her Arrowhead Arthur Murray dance instructor, Lowell E. Fox.



Ryane E. Englar



Ryane E. Englar



Ryane E. Englar



Ryane E. Englar

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Sarah Eaton DVM, DACT, CVA, DABVP (Equine Practice), graduated from the Purdue University College of Veterinary Medicine in 2006 with a focus on equine practice. She completed a one-year internship in general equine practice and theriogenology followed by a theriogenology residency at the Western College of Veterinary Medicine. She became a diplomate of the American College of Theriogenologists in 2009. After her residency, Dr. Eaton practiced at a mixed animal practice in British Columbia, an equine racetrack practice in New York, and a primary/referral practice in Michigan. Dr. Eaton became certified in veterinary acupuncture in 2015 and a diplomate of the American Board of Veterinary Practitioners (ABVP - Equine) in 2021. In late 2021 she left private practice to join the University of Arizona College of Veterinary Medicine as faculty.

Dr. Eaton has taken on an active role in many professional organizations, including the American Veterinary Medical Association (AVMA), American Association of Equine Practitioners (AAEP), American Board of Veterinary Practitioners (ABVP), Society for Theriogenology (SFT), and American College of Theriogenologists (ACT). Her volunteer activities focus on increasing awareness within veterinary groups about large animal-specific educational needs and internships, assisting veterinarians and students as they pursue board specializations, and practicing theriogenology across species. Dr. Eaton has published in peer-reviewed journals on a variety of topics including equine neonatal sepsis, equine hysteroscopy, the combined use of acupuncture and traditional medicine in the treatment of various equine conditions, and the shortage of veterinary specialists in academia.

Within the University of Arizona College of Veterinary Medicine, Dr. Eaton co-leads the design and delivery of equine clinical skills over four consecutive courses, teaches theriogenology in all species, and teaches portions of multiple large animal courses focusing on horses. She is passionate about increasing learners' awareness and interest in equine practice through various equine-related student organizations and extracurricular events.



Sarah Eaton



Sarah Eaton

Gayle Leith

Dr. Gayle Leith graduated from the University of Wisconsin (UW) – Madison School of Veterinary Medicine in 1988. During her first year of veterinary school, she completed her Master of Science degree (Equine Reproductive Physiology), writing and defending her thesis on early equine embryo intrauterine mobility under Dr. Ollie Ginther.

Following graduation from UW – Madison, she was selected as an intern at Arizona Equine Medical and Surgical Centre. Upon completion of the internship, she was offered an associate position. In 1996, she had the opportunity to purchase the practice with Dr. Scott Taylor. In 2019, she joined the University of Arizona College of Veterinary Medicine (UA-CVM) while working at Arizona Equine Medical and Surgical Centre. In 2021, she joined the UA-CVM team full time.

During her years as a practicing veterinarian, Dr. Leith worked at numerous equine competitions as the event veterinarian. The events included Hunter/Jumper Shows, Arabian Horse Shows, Arizona Driving and Carriage Society, and IGRA rodeo.

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Throughout her clinical practice, Dr. Leith bred, trained, and showed horses for the Hunter/Jumper discipline. Dr. Leith continues to ride and show her Thoroughbred and Warmblood geldings.

Dr. Leith is a current and active member of the American Veterinary Medical Association (AVMA), American Association of Equine Practitioners (AAEP), Arizona Veterinary Medical Association (AzVMA), and United States Equestrian Federation (USEF).



Gayle Leith

Skyler Bentley

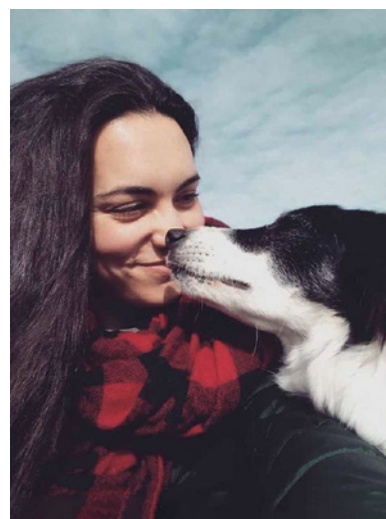
Skyler Bentley graduated from the University of Arizona with a bachelor's degree in veterinary science in 2013. She moved to California in 2015 and managed two livestock operations, focusing on small ruminant medical care thanks to the guidance of specialists from UC Davis and others in the small ruminant community.

While in California, she achieved certification in Career Technical Education with a focus on animal husbandry and built livestock curriculum for middle and high school students from southern California, primarily the LA area and surrounding areas. She is invested in making livestock medicine and husbandry accessible for students and the public, particularly those who haven't had exposure, with the potential of opening up new career paths and passions.

Skyler moved back to Arizona during the launch of the University of Arizona's veterinary program, and in her current role, supervises the college-owned livestock used for curriculum. She also has created small ruminant and other professional curriculum for the students and assists with teaching Clinical Skills coursework.



Skyler Bentley



Skyler Bentley

Lisa Hallam

Lisa Hallam has been working in veterinary medicine as a Certified Veterinary Technician (CVT) since 1999. Her passion for advocating for animals has allowed her to explore many avenues of veterinary medicine from small animal practice to large animal practice. Recently, she contributed to veterinary education at the University of Arizona by creating non-animal teaching models and other simulators for pre-clinical students. When she is not helping animals, she enjoys anything outdoors, hiking, swimming, and spending time with family and friends.



Lisa Hallam

Preface

When I published *Performing the Small Animal Physical Examination* in 2017, as a founding faculty member of Midwestern University College of Veterinary Medicine, I had only just begun to get my feet wet in academia. I was an inexperienced educator, eager to make a mark on a profession that I had fallen in love with long before I could even pronounce it. I wanted others to develop a passion for veterinary medicine as I had, and I longed to be a part of forging paths for others to realize their dreams.

Part of building the foundation and laying the bricks meant creating tools and resources that facilitated the journey from novice to experienced clinician. My goal was to provide learners access to what I never had in veterinary school: a step-by-step photographic guide that walked through how to complete a comprehensive examination. The overarching goal was not rote memorization or to showcase every possible clinical presentation in the practice of veterinary medicine. Instead the purpose was to highlight the bread and butter of clinical practice so that learners could recognize and ultimately distinguish normal from abnormal findings. As veterinarians, we are often tasked with challenges that we have never before encountered. In those moments, when we are given zebras in lieu of horses, it is easy to become lost. It is easy to default to, “I don’t know” and throw in the towel. Yet, going back to the basics to ask, “Is this normal or not?” is a critical place for the perplexed diagnostician to start. Clinical reasoning starts with what you know.

With all the bells and whistles available to the veterinary team in the modern teaching hospital, it is easy to forget that at the heart of every successful veterinary encounter is astute observation and skillful palpation. *Performing the Small Animal Physical Examination* was the first of its kind: a reminder that there is no substitute for a thorough exam. Exams provide answers, but only when we know what it is that we are looking for. *Performing the Small Animal Physical Examination* offered an approach to train

the eyes, ears, nose, and fingertips to discern innumerable details that are so often overlooked in clinical practice. Those details are no less important to the large animal practitioner.

This text is an attempt by our team to provide the same window of insight and opportunity for learners interested in equine, bovine, and small ruminant clinical practice.

Richard Bach once wrote that, “You teach best what you most need to learn.”

That philosophy resonates within the pages of this text. As faculty members and as experienced clinicians, educators run the risk of losing touch with what learners need access to most. In our flawed attempts in the classroom to cover it all, we forget what is most essential. This text is a critical reminder that physical examination skills are foundational to the practice of medicine.

The comprehensive physical examination is where art meets science and where we learn to trust in senses that, in all other walks of life, we are apt to overlook.

Learning to see with your hands and feel with your eyes is how we become diagnosticians.

Allow yourself permission to dabble in those senses.

In fact, cultivate them.

They will be of greater benefit to you than any other diagnostic test you will ever perform in a lifetime of veterinary practice.

They bridge what you already know to what you need to learn and will provide answers where before there were none.

Be patient with yourself in the process. Observation and palpation skills do not develop overnight. They take a lifetime to strengthen. Yet they are worth developing because in the words of Richard Bach, “A tiny change today brings a dramatically different tomorrow.”

~Ryane E. Englar, DVM, DABVP
(Canine and Feline Practice)

Acknowledgments

To those we carry in our hearts -

“Nothing you love is lost. Not really. Things, people—they always go away, sooner or later. You can’t hold them, any more than you can hold moonlight. But if they’ve touched you, if they’re

inside you, then they’re still yours. The only things you ever really have are the ones you hold inside your heart.”

— *Bruce Coville, Jeremy Thatcher, Dragon Hatcher*



In Memoriam
Dr. Abraham (Braam) Bezuidenhout
October 6, 1942 – January 11, 2023