# Athletic Conditioning: From A to Z in Less Than 30 Seconds

Speakers, Lecture Titles, and Synopsis/Goals



2023 Yearly Conference (Nov 10<sup>th</sup> – 12<sup>th</sup>)
National University of Health Sciences
Lombard, IL

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#### 2023 Healing Oasis Conference Athletic Conditioning: From A to Z in Less Than 30 Seconds

**Dates:** Nov  $10^{th} - 12^{th}$ , 2023

Location: National University of Health Sciences, 200 E. Roosevelt Rd., Lombard, IL

Hotel of choice: Crowne Plaza Lombard-Downers Grove. 1250 Roosevelt Rd.,

Lombard, IL. (630-629-6000)

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### Alice Baker, DVM, MS, DACVSMR. Optimal Animal Health and Performance, CO





Titles:

#### 1. Activity modification for the aging canine athlete

**Synopsis or goals:** Many high drive dogs that have trained in various sports their whole lives still want/think they can do the task, so many clients seek ways to stimulate their brain without undue risk of injury as their dog ages. Most sports, including agility, flyball, disc, and dock diving, can be modified. Adding in other stimulating activities, such as nose work, can also give older dogs a sense that they are working while being less physically strenuous.

2. No foot, no dog: The importance of proper nail care and foot-related injuries in the canine athlete.

**Synopsis:** A review of the dog's foot and toenail functional anatomy. A review of injuries to the foot and toe. Detailed discussion on performing proper nail trims.

3. Sport-Specific Training for the Herding Dog: From the Competitors' POV

**Synopsis or goals:** An overview of what is required of the dog for the various levels of herding. Discussion of common injuries in herding dogs. Cross-training exercises for strengthening the herding dog.

#### Jessica Bowditch, RVT, VTS (Physical Rehabilitation)

Small Animal Physical Rehabilitation Purdue University Veterinary Hospital



#### 1. Brain Games: Rehabilitation for the Traumatic Brain Injury Patient

**Synopsis or goals:** This lecture will cover a whole-body approach to TBI patients; including rehabilitation exercises and modalities, the importance of clinical signs, monitoring changes in neurologic function, and continued nursing care.



#### Matt Durham, DVM, DACVSMR Senior Techinical Services Veterinarian, Platinum Performance



#### 1. The Role of Omega-3 Fatty Acids in Equine Health

**Synopsis or goals:** A review of the common polyunsaturated fatty acids in use in equine medicine with a review of the current science on omega-3:6 ratios, and the different roles of short and long chain fatty acids. Discussion on the risk of rancidity and role of oxidation in saturated fats

### Kevin Haussler, DVM, DC, PhD, DACVSMR. Professor Colorado State University, School of Veterinary Medicine



1. Updates on equine manual therapy research

**Synopsis or goals:** This presentation will provide a review of the current scientific literature addressing massage therapy, stretching, joint mobilization, and manipulation in horses. Information will include the clinical effects on measures of spinal pain, stiffness, muscle hypertonicity, and limb lameness.

- 2. Neurophysiological effects of spinal mobilization and manipulation Synopsis or goals: This presentation will review the current scientific literature on the neurophysiologic effects of spinal mobilization and manipulation in animals. The focus will be on nociceptive, mechanoreceptive, and behavioral mechanisms related to neuromuscular function.
- 3. Redefining lameness in a sports medicine practice Synopsis or goals: This presentation will explore novel insights and clinical approaches to diagnosing and managing subtle lameness issues in sports horses. Topics of discussion will include asymmetries, laterality, and motor control, focusing on appendicular-axial skeleton interactions.

### Kimberly Henneman, DVM, FAAVA, DABT, DACVSMR. Animal Health Veterinary Integrative & Performance Specialists, UT





#### Titles:

### 1. Using Thermal Imaging to Prevent Injuries in Rehab & Fitness in the Active & Working Canine

**Synopsis:** Conditioning normal or recently injured musculoskeletal tissue is a common task for those managing working or competitive dogs healthcare. It is also an essential part of rehabilitating an injured active canine back to full working function. One of the most challenging parts of musculoskeletal conditioning and rehabilitation is recogniziing and avoiding new or repeat tissue damage. Thermal imaging is a readily available, inexpensive, but often misunderstood modality that can provide important information on blood flow and nerve supply to active or injured tissue. It must be applied and used with appropriate equipment and training like any other imaging modality. This presentation will show how thermal imaging can be used to regularly evaluate active dogs in training, conditioning, and rehabilitation programs to identify musculoskeletal problem areas before they turn into significant injuries.

### 2. Feed a Dog Sugar?! What Sled Dogs Can Teach us About Providing Energy to Any Active Canine

**Synopsis:** Recent research on the racing sled dog is starting to change what we thought we knew about how dogs generate energy for work, play, scent, and even rest. While most working and even active pet dogs don't run hundreds of miles in a few days, recent MWD (military working dog) and marathon sled dog research applies to understanding how any active dog uses proteins, fats, and carbs for energy. And, yes, we'll discuss how sugar DOES play an essential role in a busy dog's energy needs.

### 3. #3 Using Thermal Imaging to Prevent Injuries in Rehab & Fitness in the Competition Horse

**Synopsis:** One of the most difficult parts of musculoskeletal conditioning and rehabilitation is anticipating and avoiding tissue damage; the key for successful management is early recognition. Thermal imaging is an easily available and relatively inexpensive but often misunderstood modality that can provide important information on blood flow and nerve supply to active or injured tissue. Like any other imaging modaity, thermography must be applied and used with appropriate equipment and training. This presentation will continue from Part 1, showing how thermal imaging can be used to regularly evaluate the functional musculoskeletal status of horses in training and competition for potential problem areas so changes can be made to avoid injuries.

#### Amber Ihrke, DVM, DACVSMR, CVSMT

Veterinary Sports Medicine and Rehabilitation of Homer Glenn, IL



#### Titles:

#### 1. Functional Anatomy and Physiology of OA

**Synopsis/Goals:** Osteoarthritis can be a common cause of chronic pain in our athletes. This is a progressive and degenerative condition and as the degenerative process continues can lead to joint failure. The consequences of this failure can limit activity, decrease performance, cause pain and discomfort, and decrease the quality of life for the patient. Understanding the anatomy and physiology of osteoarthritis can lead to improved outcomes for your patient.

#### 2. Intra-Articular Therapy – What are the options?

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**Synopsys/Goals:** There are many options for intra-articular therapy for patients diagnosed with osteoarthritis. This lecture will cover the most common therapies, their mode of action and when might be the most beneficial time to use them.

#### Andris Kaneps, DVM, PhD, DACVS, DACVSMR Kaneps Equine Sports Medicine and Surgery, MA





#### Titles:

#### 1. How do we measure fitness progress?

**Synopsis/Goals**: Determining the fitness level of sports horses is imperative for virtually all competitive disciplines and the horse's general health. The discussion will be about exercise testing, such as measuring heart rate and lactate, using wireless monitors that measure heart rate, the exercise time in each gait, gait symmetry, and speed/distance via GPS.

#### 2. Can we improve equine core stability?

**Synopsis/Goals**: Core stability is necessary for an agile equine athlete and is lost during lay-ups from regular exercise. Various types of exercises may be used to enhance core stability, as well as the use of "stability pads," ground poles, riding over multiple terrains, and swimming or underwater treadmill exercise.

### 3. How do bone, soft tissue, cardiovascular and respiratory systems respond to lay-up and return to exercise?

**Synopsis/Goals**: The responses of these body systems to exercise, and lack of exercise, will be reviewed.

#### Sarah Love, DVM, DACVIM (SAIM), DACVSMR, CVSMT Sport Dog Specialty Medicine, Yampa, CO



### 1. Athletic Conditioning and Effects on the Immune System Synopsis/Goals:

- Attendees will learn how exercise can affect the immune response in the exercising or working dog.
- Attendees will learn how immunosuppression in the exercising dog population may occur and how it may affect performance.
- Attendees will learn about the evidence regarding immunomodulation in the working and performance dog population.

### 2. Gastrointestinal health in the working and performance dog Synopsis/Goals:

- Attendees will learn to recognize how exercise and work can affect the microbiome in this population and its modification.
- Attendees will recognize common gastrointestinal disorders in the working and performance dog.
- Attendees will learn to address gastrointestinal disorders in the working and performance dog.

#### 3. Canine conditioning for performance

#### Synopsis/Goals:

- Attendees will learn about designing a training program for working and athletic dogs, extrapolating data from human exercise physiology methodology.
- Attendees will learn the terminology and be able to use the concepts of overload, overtraining syndrome, and specificity in regard to conditioning dogs.
  - Attendees will learn about conditioning principles to improve aerobic and anaerobic power, strength, and flexibility.

#### Carolina Medina, DVM, DACVSMR





#### 1. The Impact of Pain on the Canine Athlete

**Synopsis/Goals:** This lecture will discuss the pathophysiology of pain and how it impacts canine athletes. Pain management will also be discussed and will encompass a multimodal approach.



#### Donna Raditic, DVM, DACVIM (Nutrition)

Nutrition and Integrative Medicine Consultants, GA





#### Think about Diet and Supplements for Your Canine Athletes

To be presented during breakfast on Nov 11th, 2023

**Synopsis/Goals:** Optimal performance in the canine athlete requires optimal nutrition and gut health. We realize gut health's important role in the brain and nervous system. If you think about it, how attentive and engaging are you when you suffer from gastrointestinal upsets? This area of research has now been termed the Gut-Brain Axis. It is recognized that the brain and nervous system have continual bidirectional communication with the gut and its microbiota, which are essential for healthy brain and gut functions.

For our canine athletes to learn and deliver optimal performance – we need to identify and implement dietary, probiotic, prebiotic, or other supplement interventions that impact Gut-Brain health. Learn about the Gut-Brain Axis and how diet and supplement strategies should be considered part of managing the canine athlete.

### Note: Standard Process will provide CE; please register directly with the representative.

Contact person: Susan Eberle at <a href="mailto:seberle@Standardprocess.com">seberle@Standardprocess.com</a>

CE Broker Tracking Number for this lecture is 20-10839982

The lecture is scheduled for Saturday, 11th of November, from 7:00AM to 7:50AM. See schedule

### Avi Shaprut, DVM Veterinary Communication Manager, Nestlé Purina PetCare



#### Title:

#### **Nutritional Management of Canine Obesity & Osteoarthritis**

To be presented during breakfast on November 12<sup>th</sup>, 2023 **Synopsis/Goals:** This lecture will cover key nutrients and methods of nutritional management of obesity and osteoarthritis in dogs.

Note: CE will be provided by Purina. NO NEED for advanced registration. You will be able to register on site with the QR code.

CE Broker Tracking Number for this lecture is: 85-17644464 Lecture scheduled for: Sunday, 12<sup>th</sup> of November, from 7:00AM to 7:50AM. See schedule

# Stephanie Thomovsky, DVM, MS, DACVIM (Neuro) Clinical Associate Professor, Neurology & Neurosurgery Dpt., Purdue Univ. College of Vet Med., IN



Titles:

#### 1. From the Thought to Motion: Gait Generators

**Synopsis/Goals**: An exploration of how gait is generated in quadrupeds as compared to bipeds focusing on the motor tracks and gait generators within the spinal cord

#### Rehab to Fab - rehabilitating the veterinary neurologic patient following immobility and nervous system injury <u>Parts I and II</u>

#### Synopsis/Goals:

- Many neurologic patients face periods of decreased mobility. This talk will be a
  discussion of the physiologic sequela to decreased mobility in the veterinary
  neurologic patient with a focus on proprioception and muscle contraction
- We will also talk about current literature discussing the use of rehab in neurologic patients
- We will discuss the effects of gait generation following SC injury and how rehab can play a role in gait improvement following SC injury.

#### Julia Tomlinson, BVSc, DVM, PhD, DACVS, DACVSMR, CVSMT Twin Cities Animal Rehabilitation & Sports Medicine, MN





#### 1. Sports-specific training for jumping

**Synopsis/Goals:** This lecture will cover the hows and whys of training an athlete for jumping, including retraining after injury. Some biomechanics and an update on the latest research will be included. This lecture focuses mainly on canine athletes

#### 2. Sports-specific training for IGP sports

**Synopsis/Goals:** IGP (formerly known as IPO) involves tracking, obedience, and protection. The competition includes a retrieve over a 1-meter hurdle, climbing over a scaling wall, retrieving over the scaling wall, and protection (bite and hold) work. Fitness focusing on bite work and climb/hurdle work will be discussed

3. Bodybuilding in the sprint/agility athlete pros and cons of muscle building Synopsis/Goals: This lecture will include muscle types, methods of muscle gain, and a discussion of the effects of added weight in addition to added power.

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#### Rachel Yoquelet, BS, RVT, VTS (ECC), CVMRT

Purdue University – College of Veterinary MedicineVeterinary cott, MD Physical Rehabilitation Department





### 1. Clinical Applications – Understanding the Spider's Web of the Muscle Spindle

**Synopsis/Goals:** In this lecture we will take a tour of the muscle spindle, how it functions, and its relevance in a clinical setting. We will discuss the physiology of muscle contraction and pertinent characteristics of the myocyte and its neurologic innervation as it pertains to rehabilitation following injury. Specifically, we will focus on what is happening within the muscle during activities such as stretching, shifting weight, and active exercises.

#### Pedro Luis Rivera, DVM, FACFN, DACVSMR, FCoAC



#### 1. Spinal Manipulative Therapy and Seizures – A Literature Review

Synopsis/Goals: Seizures and epilepsy are commonly observed in veterinary patients and are the direct result of many different causes, including but not limited to congenital disease, metabolic derangements, and traumatic injury. Treatment protocols in human medicine vary from standard treatments such as avoiding known triggers, anticonvulsant medications, vagal nerve stimulation, and surgical resection of seizure foci to more holistic approaches including acupuncture, dietary adjustment, nutritional supplements, and reflexology. Spinal manipulative therapy (SMT), or chiropractic adjustments, have also been suggested as possible adjunctive treatments for seizures in refractory human epileptics. To the authors' knowledge, there are no published reports of SMT as a therapy for seizures in domestic animals. This paper aims to review the use of SMT as an adjunctive treatment for seizures in humans and to consider its use as a potential additional therapy for seizures in domestic animals.

#### 2. USS Photobiomodulation - The Final Fronteir

**Synopsis/Goals**: This lecture will provide uptodate information as it applies to the use of photobiomodulation in Veterinary Medicine. Updates on the MOA, indications and contraindications will be discussed. Clinical applications will also be discussed.

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