Welcome to CSU’s new Sports Medicine and Rehabilitation Service’s first newsletter! As you may know, this service was started by Dr. Felix Duerr 2 years ago. In celebrating our 2nd anniversary we are starting this newsletter to keep you informed - we hope you will enjoy it!

Our Service

The Sports Medicine and Rehabilitation service provides a multi-disciplinary approach to musculoskeletal problems encompassing rehabilitation, musculoskeletal disease, diagnostic imaging, pain management and nutrition. We provide all other services within CSU with rehabilitation for their patients. We have three specific goals:

- To provide the ideal treatment for musculoskeletal diseases and injury prevention strategies to your pet.
- To educate students to become the best veterinarians with cutting edge knowledge that will advance veterinary medicine.
- To perform clinical research that improves pets’ lives by objectively evaluating arthritis treatment and injury prevention strategies.

Our Team - for more information and bios please visit our website at SmartPets.Colostate.edu

If you haven’t met all of us, please come by and visit! From left to right:

Dr. Felix Duerr, Faculty, Sports Medicine and Orthopedics
Dr. Nic Lambrechts, Faculty, Sports Medicine and Orthopedics
Dr. Sandra Allweiler, Faculty, Pain Management and Rehabilitation
Dr. Natasha Olsen, Small Animal Sports Medicine and Rehabilitation Research Intern
Dr. Juliette Hart, Resident in Sports Medicine and Rehabilitation
Sasha Foster, Faculty, Rehabilitation
Laura Southworth, Staff, Rehabilitation Technician

Ongoing Research

Thanks to a wonderful donation by the Eldred foundation we were able to purchase a pressure mat gait analysis system that provides objective assessment of lameness and we have started several studies evaluating different treatments for osteoarthritis. As such, we are currently looking for medium-large breed dogs with lameness due to osteoarthritis located in the Fort Collins area. We also are in the process of launching a study evaluating partial limb amputation/prosthetics in dogs.

For questions, suggestions, to unsubscribe from future newsletters or to support our service and research efforts please contact us either via email (caninerehab@colostate.edu) or phone (970-297-5000) or mail (Dr. Felix Duerr, CSU-VTH, 300 W Drake Rd, Fort Collins, CO 80523). Currently our greatest needs are a therapeutic ultrasound machine and a Sports Medicine and Rehabilitation technician/client liaison to help our growing service needs and to make sure we meet your expectations.
‘Keeping Pets and Athletes Going Strong’

What can I do to prevent my dog from developing arthritis?

Degenerative joint disease or osteoarthritis (OA) is one of the most debilitating diseases in people and animals. Unfortunately, there still is no cure for arthritis (however, there are many ways to manage the pain associated with arthritis). Hence, it is of utmost importance to prevent arthritis from developing. Pets and canine athletes put an enormous stress on their joints because - as you have likely experienced - most of the time they only know one speed…. There are a few things that you can do as a pet owner to decrease the degree of arthritis that may develop in your dog’s joints:

**Early diagnosis of joint disease** - There are two types of arthritis: primary (arthritis from daily ‘wear and tear’) and secondary (arthritis due to an underlying joint disease). This is important since secondary arthritis is common in dogs and by diagnosing underlying diseases early, appropriate treatment can be established. Great examples are elbow and hip dysplasia. Both diseases can be diagnosed easily with commonly used imaging modalities (X-rays for hip and CT-scan for elbow dysplasia). Early diagnosis offers many different treatment options. For example, when hip dysplasia is diagnosed early, a procedure named ‘juvenile pubic symphysiodesis’ (JPS) can be performed that tightens both hips with one procedure. This procedure is minimally invasive, does not require post-operative exercise restriction and is as effective as much more expensive and invasive procedures performed in adult animals. The only catch: it has to be performed before 5 months of age. Similarly, we commonly see dogs with chronic elbow OA that results from abnormal configuration of the elbow joint (elbow dysplasia). If we find this abnormality early in life we can improve the joint configuration and reduce the amount of OA developing over the years. Once elbow OA is established, treatment is much more difficult since (other than for the hip joint) elbow joint replacements are currently not established in veterinary medicine.

**Weight management/control** - It is well established that an ideal body condition has positive effects on the joints of healthy animals as well as those with OA. Dogs with an ideal body weight develop less arthritis, and those with OA are more active/experience less pain. Furthermore, it has been shown that lean dogs live longer than overweight dogs. It is, however, difficult to judge a dog’s body condition. The body condition scoring helps with that judgment, however, the best way is to regularly weigh your dog or have your veterinarian determine the ideal body condition by palpation.

**Exercise/activity** - The best way to accomplish an ideal BCS and to perform active muscle strengthening is with regular activity. While there is some controversy regarding warm-up and stretching, we do recommend controlled exercises prior to performing athletic activities (such as ball chasing or running an agility course). For working or competing canines we suggest a conditioning program that includes ‘cross-training’ activities similarly to people.

**Joint supplements** - There is evidence supporting the use of omega-3 fatty acids (‘fish oil’) and Glucosamine chondroitin sulfate for dogs with OA. Although there is no conclusive research indicating that these supplements prevent arthritis, particularly omega-3 fatty acids have been shown to be beneficial for joint mobility and have a wide variety of other benefits including improved hair coat, vision and trainability. Therefore, it seems appropriate to at least supplement fish oil to a regular, high-quality diet. Alternatively joint diets (that include appropriate amounts of fish oil) can be given to avoid the inconvenience of supplementing fish oil. Please contact us with any questions!

Written by Felix Duerr