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# The Athlete Issue

This issue will highlight our athletic performance dogs. Soft tissues and muscles are at risk of sprains, strains and injuries in the sporting population, so prevention and treatment for these injuries is key. Here at the Canine Fitness Centre we offer a baseline sporting assessment, which provides with a full-body objective evaluation of the dog. The therapist identify major or minor issues, as well as creates a baseline document that can be compared back to in the future. We also offer puppy and performance assessments where our therapists will identify and treat what they find. It's a great way to get a leg up on a dog's condition before problems present themselves. This issue of the CFC New will also explore soft tissue injuries and how we treat them, a feature on K-Tape and the importance of warming up and cooling down for your performance dog. Please read on!

## Returning to sport following an injury or surgery

Following an injury or surgery it is imperative that canine athletes rehabilitate properly in order to return to sport. Neuromuscular retraining plays a major role in the reconditioning of these athletes. Essentially, neuromuscular retraining is a term used to describe the rehabilitative retraining of coordination, skill training, and higher levels of strengthening. When a sporting dog is led through the rehabilitation process the end goals are more advanced, and their retraining is reflective of that. Their neuromuscular training could incorporate the following: exercises up and down hills, trotting exercises, acceleration / deceleration activities, dynamic balancing and eccentric strengthening among others. Stretching is a popular prescription among health care professionals to improve flexibility in both healthy and injured clientele. Reintroducing and retraining sport-specific movements is imperative to successful reintegration to an athletic career. Furthermore, injury prevention strategies should be incorporated into their program to carry them forward. Our therapists are highly trained and knowledgeable about 'Return to sport' our canine athlete population.

Fall 2018

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## Start Early with a Puppy Assessment

Especially for performance dogs, it is important to start your canine athlete out on the right paw and have your puppy assessed by a therapist certified in canine rehabilitation.

Puppies grow very quickly and as they are navigating their new world and playing with their littermates, it is important to make sure that they are developing properly. Sometimes puppies can develop joint dysfunctions that can affect normal muscle and joint development.

Some of the common things that a therapist will screen for are: pelvis dysfunction, rib dysfunction, hypermobility of the shoulders, hip stability, patellar stability and position, and general conformation. If there are dysfunctions, there are plenty of ways that a therapist can manage the issues before they negatively impacts a puppy's development.

Also, for prevention, a therapist can show an owner exercises to do with their puppy to improve coordination, balance and strength of specific muscles.

We love to help puppies achieve their full athletic potential!



## Soft Tissue Injuries

Soft tissue injuries are often an under-diagnosed source of canine lameness. Sporting and working dogs may be particularly at risk of suffering acute traumatic muscle strains, ligamentous sprains or degenerative tendinosis lesions resultant from poor healing of repetitive strain injuries. Less conditioned animals may also be at risk when performing infrequent burst activities or endurance tasks. Muscle strains may be caused by poor flexibility, inadequate warm-up, fatigue, sudden forceful contraction, insufficient breaks, strength imbalances and overtraining. Multi-joint muscles are at greater risk for strain because they can be stretched by the movement at more than one joint.

Tendon injuries can also happen, but typically are secondary to acute trauma or repetitive loading. Barring a direct trauma muscle strain, it is more likely that a soft tissue injury is a tendinosis lesion. When an athlete first notices tendon pain, tissue damage may already be advanced. Prolonged immobilization may have detrimental effects such as a tendon atrophy, decrease in tensile strength and strain at failure; and an increase in number of reducible collagen cross links. Therefore a proper balance between guided activity and relative rest is imperative. Stretching has been shown to increase collagen synthesis and improve collagen fibre alignments, resulting in higher tensile strength. Hands on manual therapy treatments, such as deep transverse frictions can also be used to treat soft tissue lesions. Additionally, other modalities such as ultrasound, laser, shock-wave and pulsed electromagnetic field may be beneficial in the treatment of muscle and tendon lesions. As part of the rehabilitation process, our therapists will assess and treat soft tissue injuries with the methods which are most appropriate to each case. Care is always specific to the patient. No cookbooks here!!

## Featured Product

Our Lolipup Disc is a great piece of exercise equipment that will keep all dogs in tip top shape! It allows your dog to work on both balance and proprioception. In addition it can help build core strength and stability. The level of difficulty can be changed by inflating or deflating the disc. Exercises can include backing up onto the disc, sit to stands and lateral stepping on and off the disc. Maintaining proprioception throughout a dogs life is important for overall body awareness and injury prevention. We carry a variety of balance boards and are happy to set a dog up with one that best fits their needs.



## K-Tape

### What is it?

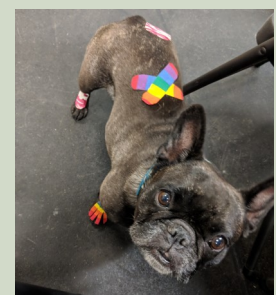
- Kinesiology tape is an adhesive tape that provides therapeutic benefits, such as decreasing pain and providing awareness to joints.
- It stretches along the longitudinal axis to provide support during exercise without restricting motion.

### How does it work?

- The tape lifts the hair, which lifts and decompresses the skin and underlying tissues.
- The decompression action promotes an increase in blood and lymph flow.
- Stimulates mechanoreceptors which inhibit pain generating nociceptors.

### What benefits can it provide?

- Better body mechanisms to promote proper movement.
- Short term decrease in pain following injury.
- Stimulates proprioceptors to promote proper better body awareness.
- Dog maintains freedom of movement with tape on.



## Baseline Sporting Assessment

Sporting dogs are the elite athletes of the canine world. They work hard to get in shape, learn new skills and perform at their best ability. Have you ever wondered how to monitor and keep track of their level of conditioning? How do you know if there are underlying issues unless they present themselves as an injury or an inability to perform a certain task?

At The Canine Fitness Centre, we have organized a thorough assessment and objective measures to assess a sporting dog's physical well-being. Our Sporting Dog Baseline Assessment aims to evaluate every aspect of a dog's physical status. This information can be useful in identifying any underlying musculoskeletal issues as well as create a baseline that can be compared to in the future. How evenly does your dog weight bear? How is their core strength, balance and coordination? Is their muscle mass even on both sides? Are there areas of heat or inflammation that haven't presented themselves yet? How is their flexibility and joint range of motion? These are the questions we aim to answer!

Our evaluation incorporates 8 stations for weight and limb/body measurements, balance tests, motor control tests, infrared thermography, a stance analyzer and a thorough soft tissue palpation, joint and spinal assessment. This information is then compiled in a comprehensive document for the owner. This information can be paramount for identifying asymmetries, muscle imbalances, joint or muscle dysfunctions that may not be obvious until they become a problem at a later date. The assessment is a great tool to help owners get a baseline measurement of their canine athlete at the beginning of the season, at the end of the season or gearing up for a special event.

Give us a call today to schedule your fur-athlete for one of these comprehensive evaluations!



## The importance of warming up and cooling down

In order to keep sporting dogs at their best it is important to be mindful of how you warm up and cool down your dog.

### Warm up guidelines

- Warm up should last 5 to 10 minutes
- Complete on same terrain that the dog will be working on
- Use specific movements to target all major joints
- No signs of fatigue should be seen

### Cool down guidelines

- Mentally and physically important to cool down
- Provides some focused time to praise and bond with our dogs
- Cues them to relax and settle down
- Helps restore shortened muscles back to their original length

For a more in depth look “Warm up and Cool Down of the Canine Athlete” By Caroline McIntyre is an e-book that is great resource for more information on this topic.

<http://www.mcrehabilitation.com/products.html>

Use promo code CFC20 to receive a 20% discount.

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## Importance of identifying injuries in puppies— A Case Study

We all know that puppies are rambunctious and play hard with their littermates and sometimes other family dogs. Usually the pups bounce up and do not appear to have any injury. That, however, may not be the case.

Unless an owner has specific expectations of a particular puppy, these minor injuries likely go unnoticed.

Wings is one of those special puppies that was born to an excellent breeder and destined for a variety of activities – conformation, field trials, hunting, rally and obedience.

Typical activity for her was 30 to 60 minutes of off leash play but no specific injuries were noted during those play sessions.

Her owner was starting some basic structural assessment and stacking practice in preparation for the show ring and noticed that Wings was stacking with one hind foot more forward than the other. She also was not able to assume a “square” sit. When Wings came in for her initial physio assessment she was less than 3 months old. She was found to have several rib dysfunctions on the left side – ribs 1, 6, 7, 8, 9 as well as tenderness to the left of L6-7 and a rotation / upslip of the left ilium (SIJ dysfunction).

She was treated with manual therapy techniques and specific exercises to improve muscle coordination, balance and proprioception. Her immediate response to the treatment was an even stance in the hind and a square sit.

Wings has been seen on five occasions following the initial evaluation. She required some further manual therapy to the left SIJ but more importantly she required some very specific exercises to teach her how to recruit the muscles of the left pelvic girdle. The left side of her pelvis was not held up level with the right and she advanced the LH in a circumduction motion and also exhibited some poor control of the left tarsal joint. Her actual proximal thigh girth was equal.

As well as the manual therapy we added myofascial release to the left pelvic girdle, pelvic diaphragm and even tail to sacrum. We used some K Tape to increase her awareness during exercises (which became quite challenging but fun for her). Her owner is very committed to the program and Wings progressed well.

By mid-July Wings was in her first conformation show as a baby puppy (under six months old) and won two Best Baby Puppy in Group and one Best Baby Puppy in Show.

However as her owner commented – the best part is having a puppy that is able to grow and function well and will not go on to have future problems.

