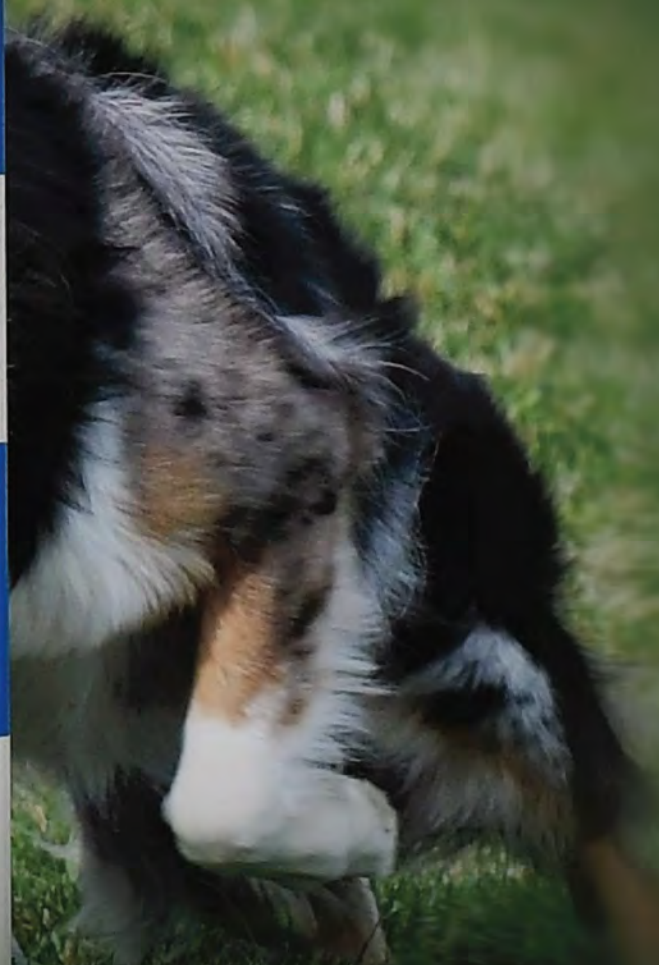


# WARM UP & COOL DOWN OF THE CANINE ATHLETE

An Evidence-Based Approach to Improving Performance & Preventing Injury

*by Carolyn McIntyre, PT (Registered Physiotherapist)*



  
**MCINTYRE**  
CANINE REHABILITATION



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# About Carolyn

Hello, I'm Carolyn McIntyre, a physiotherapist who owns a mobile canine rehabilitation practice in Guelph, ON Canada (McIntyre Canine Rehabilitation – [www.mcrehabilitation.com](http://www.mcrehabilitation.com)). I specialize in helping canine athletes reach superior physical performance while minimizing injury and improving longevity in their respective sports. I offer both in-person consults as well as online sport-specific conditioning training. In addition, I was the canine physio practitioner for Team Canada IFCS World Agility Championships in 2019 and had a blast representing my country while also enriching dog and handler teams. I continue to look forward to helping other competitors in dog sports from those competing at local to international championships.

As a former varsity athlete and professional women's hockey referee competing at the National level, I recognize the importance of a structured pre/post competition routine to maximize athletic performance. I implement the same principles with my own dogs and those of my clients. My experience as a human physiotherapist for 11 years combined with my active participation in four different canine sports has prepared me to bring out the best in your canine athlete and empower you to progress your dog to the next level.

I am the proud owner of Quinn (Aussie), Fifty (Sheltie) and Shades (Sheltie).



I hope you find this e-book to be a great resource to help guide your warm up and cool down routine! Please remember that this e-book is intended for personal use only. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by means of photocopying or other electronic methods, without the prior written permission of Carolyn McIntyre. Additionally, no portion of this document can be posted on the internet or reprinted in newsletters or circulated in publications without written consent of Carolyn McIntyre.

Editors:

Matt Brunke, DVM, DACVSMR, CCRP, CVPP, CVA  
Diplomate, American College of Veterinary Sports Medicine and Rehabilitation  
VOSM - Veterinary Orthopedic & Sports Medicine Group  
[www.vosm.com](http://www.vosm.com)

Jess Voll, MPH, HSPR Dip., CE

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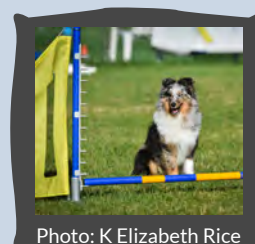


Photo: K Elizabeth Rice

## CHAPTER 1: THE SANDWICH EFFECT

### *Before we get started...*

#### Disclaimer:

*Prior to starting any new specific canine conditioning exercise or stretch with your dog, you should always consult your veterinarian or canine health care professional to make sure that the exercise is safe and appropriate for your dog. They will determine if your dog has any physical limitations or health conditions that could be aggravated by exercise.*

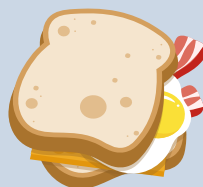
### DOES WARMING UP AND COOLING DOWN REALLY MATTER?

Close your eyes for a moment and think about your favourite part of working with your performance dog. Maybe you're imagining an awesome training session, the kind that leaves you grinning from ear to ear. Or maybe you're imagining seeing you and your dog's name at the top of the placement list in a tough round of competitors. Heck, you might even be imagining chatting with friends at your training club or the camaraderie at trials. What you probably *weren't* imagining was taking the extra 5-10 minutes before training or trialing to warm up your dog and another 5-10 minutes after to cool them down.

I get it - warming up and cooling down can seem like a drag. As a Registered Physiotherapist, this is a common objection I hear from my clients. Warming up and cooling down requires additional time and this might seem like "just one more thing" to try to fit into a tight schedule. But, instead of thinking about the time it costs you to fit it in, consider instead what it might cost you not to.

All dogs competing in popular performance events such as agility, obedience, conformation, flyball, herding (and the list goes on - there are too many fun ways to play with your dog to name) require two things: high quality movement and maximum performance (whether subjectively or objectively judged). I also like to refer to this as the "**sandwich effect**".

Without the slices of bread on either side, the sandwich fillings are not as enjoyable to eat. Melted cheese and slices of turkey, without bread to contain them, are messy and unbalanced. **The sandwich effect** is about bringing all of the pieces together so that they can create something better than the sum of their parts. The same is true for our approach to competitive dog sports. How our dogs perform in the ring is largely influenced by what we do before and after - the warm up and cool down. If we only focus on one part of the sandwich - or our dog's performance in the ring - we are missing the bigger picture.





## THE MISSING LINK

If you enjoy participating in performance sports with your dog as much as I do, you're probably pretty motivated to prevent your dog from experiencing injuries. You might even be very diligent about following a canine conditioning program and ensuring your dog is assessed regularly by a health care professional. But what about warming your dog up before you play and train - is that part of your routine?

Although fairly simple in practice, warming up and cooling down our dogs appears to be one of the most neglected areas of preventing injuries in our canine companions. Regardless of what sporting ventures your dog participates in, it's important to develop a before and after routine to help ensure your dog is properly warmed up and cooled down. The specific benefits of warming up and cooling down are included on page 8.

### *Did you know?*



Debra Canapp DVM, Diplomate, American College of Veterinary Sports Medicine and Rehabilitation, has stated that research and experience indicate that injury rates could be reduced by up to 25% if owners took appropriate preventative action. In particular, the use of proper warm up, cool down, conditioning programs, wellness exams by professionals, and maintenance treatment could keep our canine athletes from being sidelined. These measures help to detect early onset injuries, provide objective baseline data to be used in the event of an injury, and effectively treat and apply necessary exercises during an injury or accident.



Photo: D. Vout

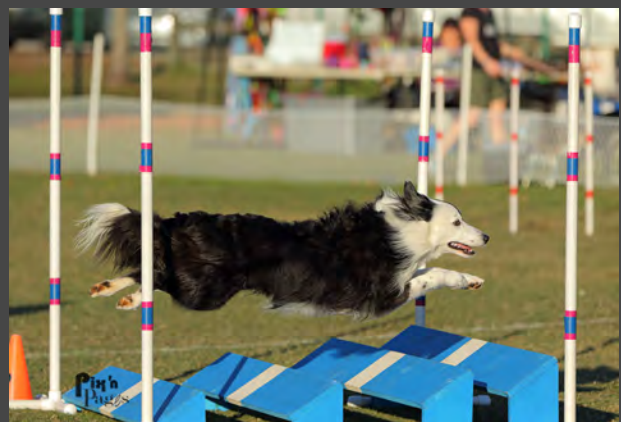


Photo: N. Dronoff-Guthrie

## SPORT SPECIFIC CONSIDERATIONS



After reading about the benefits of warming up and cooling down your performance dog, you might be thinking, “Sure, that sounds good, but why does it really matter for my dog’s sports?” Many factors influence the risk of injury and can be specific to the sports our dogs participate in. The unique demands of each sport are also more likely to be linked with certain injuries.

When determining the best warm up routine, we must keep in mind the physical requirements of the sports we are participating in. By understanding the sports our dog participates in, we can gain a better awareness of which muscle groups are being used and what physical requirements are needed by our dog to successfully complete their performance task. This will help to guide our routine to ensure every muscle that is being used in their performance has been properly warmed up. For example, obedience dogs don’t generally require as much lateral stretching in their forelimbs as part of their warm up because they aren’t required to reach laterally for excessive distances (like we see in weave poles) as an agility dog.

The chart on the following pages provides an overview of why many of the popular performance dog sports require a warm up part of their routine. This is not an exhaustive list of all the possible sports you and your dog might enjoy participating in. Instead, think of it as providing a primer to help you think about how the demands of each sport require warming up and cooling down for shared, yet different reasons.



Photo: K. Elizabeth

## SPORT SPECIFIC CONSIDERATIONS

### CONFORMATION

#### Special Warm Up Considerations

Conformation dogs are judged on their quality of movement. This includes having the flexibility and strength for proper reach and drive, as well as a well-balanced, efficient, and symmetrical trotting gait. Physically, there are many demands on the show dog:

- Long hours spent in a crate
- Prolonged standing on the grooming table and ring side
- Mental and physical stamina to withstand long show days
- Heightened body awareness to properly place their feet on various surfaces (e.g. concrete, rubber matting, grass) and stay balanced during their left-hand turns

#### Warm Up Benefits

A proper warm up can lead to superior performance in the show ring and will help your dog's body perform at its peak capacity. Dynamic stretches and trotting practice warm up your dog's muscles and joints to enhance performance and prevent potential injuries.



Photo: A. Guy

### AGILITY & DISC

Agility is a demanding athletic activity, requiring dogs to:

- Have excellent mobility and flexibility in order to complete tight turns
- Rapidly accelerate (i.e. explosive power) and decelerate (collection)
- Complete difficult contact and weave entries
- Perform challenging jumping maneuvers (e.g. back sides, slices)
- Complete fast course times on a variety of different surfaces (e.g. dirt, sand, turf, grass) and within different environments (e.g. rain)

Similar to agility, disc is a sport that places high physical demands on the dog including:

- Explosive power
- Excellent spine flexibility
- The ability to withstand and absorb force upon landing
- Movements in all planes of motion

In a survey of handlers training or competing in agility with their dogs, 33% reported their dog experienced an injury within the last two years, particularly to the shoulder assembly and back, indicating the need to pay special attention to preparing these areas for efficient and coordinated movement (Sellon et al., 2018).

A proper three dimensional warm up is essential for our agility and disc dogs given the physical demands of the sport. A series of dynamic stretches, movements, and exercises will ensure that all needed muscles have been properly warmed up to minimize the risk of injury and maximize their performance.

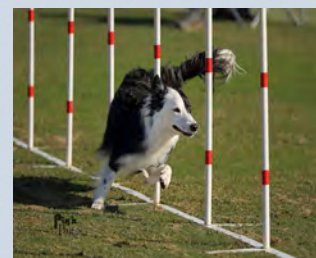


Photo: N. Dronoff-Guthrie

## SPORT SPECIFIC CONSIDERATIONS

### OBEDIENCE/RALLY

#### Special Warm Up Considerations

Traditional continuous heeling on the left side of the handler, in addition to multiple position changes (e.g. a single rally course can have upwards of 20 different signs requiring sit, down, stand, and turn variations) can predispose dogs to:

- Muscle imbalances and tightness in their neck as they shorten their stride on their right front leg (e.g.. left side heeling) and increase weight shifting to their left front leg
- Generalized fatigue after 2-4 minutes of continuous heeling
- Tightness/muscle fatigue through their spine/hips/rear end from continuous pivoting, about turns and various left and right movements

In addition to the physical demands of obedience and rally, handlers frequently enter multiple runs during the day which requires mental and physical stamina on the dog's part.

#### Warm Up Benefits

Including a proper warm up prior to your obedience/rally run will give your dog superior physical performance in the ring. These sports require your dog to perform a variety of different movements and motions within a short period of time. Your warm up routine will help to make sure these muscles are ready for such an activity and help to minimize the chance of injury.



Photo: A. Raszewski

### FLYBALL

The sport of flyball is very fast and intense and requires a great deal of physical exertion in a short period of time. Dogs require:

- Maximum anaerobic capacity to exert themselves intensely in a short period of time
- Exceptional explosive speed to drive down the line of four jumps, retrieve the ball, and come barreling back over the four jumps
- Sufficient flexibility and strength through their toes, carpal joints, shoulders, spine, and hips to avoid chronic repetitive stress injuries from the force required to propel off the box

The inclusion of a proper warm up for the flyball dog will help to minimize potential injury risk and ensure the dogs muscles can activate maximally and appropriately.

Given the explosive nature and speed of this sport, warmed up muscles will help to contribute to a better overall performance.

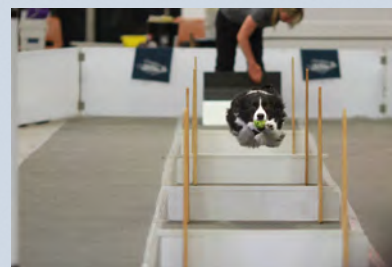


Photo: C. Lawrence

## WHAT THE RESEARCH SAYS

The research behind human athletic performance is robust and offers us some important insight into areas we need to consider for our dogs. Unfortunately, there is very limited research replicating some of these concepts for our canine counterparts.

Although humans and quadrupeds are quite different in function and structure, there are significant similarities in their musculoskeletal systems with respect to how tissues respond and recover. Therefore, we can confidently conclude the findings from human research to create guidelines for our performance dogs by using our professional expertise and experiences to form sensible conclusions. Here is a brief outline of what the research says about the following areas relevant to warming up.



### Findings from the Research

#### Static stretching vs. dynamic stretching in warm up on injury prevention and performance

- There is moderate to strong evidence that regular static stretching as part of a warm up routine does not reduce overall injury rates (Small, McNaughton, & Matthews, 2008).
- Comparisons between static and dynamic stretching warm up protocols have found that static stretching decreased maximal strength performance, but dynamic stretching did not (Bacarau et al., 2009).
- Static stretching in a warm up results in greater acute flexibility when compared to dynamic stretching, which is a contraindication for activities that require high levels of force as elongated muscles can't contract as quickly (Bacarau et al., 2009).
- Dynamic stretching is less likely to negatively effect maximal strength (Bacarau et al., 2009).
- Static stretching in between repeated bouts of sprinting and change of direction sprint drills has been shown to result in slower sprint times (poorer performance) compared to simply resting in between sets (Beckett et al., 2009).
- Dynamic warm ups, when compared to no warm up, PNF stretching (hold-release-hold stretching) (Kirmizigil, Ozcaldiran, & Colakoglu, 2014), or static stretching based warm ups, resulted in better immediate performance in power and agility based tasks (McMillian, Moore, Hatler, & Taylor, 2006); the same findings were found for sprinting and vertical jumping even when there was a 24h period between stretching and the performance activity (Haddad et al., 2014).

## WHAT THE RESEARCH SAYS

### Warm up structure



### Findings from the Research

- Optimum number of sets: one to two sets of active dynamic stretches before sprint work has been found to improve athletic performance, whereas three sets can have a negative effect on performance (Turki et al., 2012).
- The addition of a brief, task-specific warm-up activity has shown to have some performance benefits (Bishop, 2003)
- A recovery period of more than five but less than 15-20 minutes between the warm up and performance activity is optimal (McMillian et al., 2006).
- The intensity of the warm up should be balanced against its length, proximity to performance event, and type of performance activity. For example, steady state aerobic activities that last longer than 30 minutes should have a lighter/more moderate warm up (Bishop, 2003). Warm ups that are too intense can decrease performance (Bishop, 2003). Total warm up time of less than or equal to 10 minutes for warm up is ideal (Bishop, 2003).



Photo: D. Vout

### WHY WARM UP?

The previous section emphasized a few main findings from the research when it comes to warming up:

- Active and dynamic warm ups are superior to static stretching or no warm ups at all on task performance
- Warm ups result in better immediate performance in power and agility based tasks
- Warm up time of less than or equal to 10 minutes is ideal for maximum performance gains
- Regular static stretching as part of a warm up routine does not reduce overall injury rates and can reduce/effect performance before or in between performance tasks

Okay, I know- you still might not be convinced that your dog really needs to warm up. After all, you've seen them go from zero to 60 in the backyard when it comes to chasing squirrels without a warm up. The truth is our dogs can just as easily injure themselves by sprinting across the backyard without a warm up as they can in the performance ring. We can't control everything our dogs do, but what we can control, we should take advantage of by ensuring their bodies are prepared for the activities at hand.

### BENEFITS OF WARMING UP



- Improves musculotendinous (the connection between a muscle and its tendon) extensibility
- Reduces susceptibility to strain a muscle, tendon, or ligament
- Improves the muscle's range of motion
- Increases heart and breathing rate
- Increases blood circulation and blood flow to the muscles and ligaments
- Increases the muscle and joint temperature (which allows for maximum range of motion) and increases the glide of the muscle fibers and joints (decreasing potential strain)
- Increases the rate of muscle contractions
- Encourages mental focus and your connection to your dog
- Allows you to detect if something feels "off" or wrong with your dog
- Allows nerve impulses to travel faster
- Helps to stretch the muscles, ligaments, and tendons
- Distributes joint fluid over the surfaces of the joint for improved lubrication

## WARMING UP: FREQUENTLY ASKED QUESTIONS

Now that you understand the importance of warming up and its impact on your dog's performance in the ring, let's jump into some of the common questions I hear about warming up.

### How is the warm up different than conditioning exercises?

#### Conditioning Exercises:

- Aim to fatigue a particular muscle or muscle group
- Specific conditioning exercises require overload and progression in order to effectively improve the dog's strength
- Often use balance equipment/props and are repeated for multiple sets and reps

#### Warm Up:

- Includes dynamic and progressive movements that mimic the activity's goal without inducing fatigue (by using fewer reps and not sustaining specific positions)
- No balance equipment/props are needed
- Not intended to help gain/ improve the dog's strength, but rather to prepare them for their upcoming activity



Figure 2-1 Commonly used fitness equipment (round disc, Fit Pods from FitPAWS ©).  
Photo: C. Lawrence

## WARMING UP: FREQUENTLY ASKED QUESTIONS

### What is the difference between dynamic and static stretches?



#### Dynamic Stretches:

- Involves functional exercises that require active movement and muscular effort for the stretch to occur
- Sport specific movements for the limbs/spine and should mimic the actions that the dog has to perform in their activity
- Increases the range of motion in the muscles to improve the dog's flexibility
- Allows the dog to regulate how far the stretches are taken
- Reduces the risk of muscle tears, tendon ruptures, and joint injuries

#### Static Stretches:

- Passive stretches, are held by the handler/dog owner (figures 2-3 and 2-4)
- Completed slowly, with no active movement by the dog and are held for a set period of time (20-30 seconds)
- When performed 2-3x a week can help to maintain joint range of motion and flexibility
- Risks: It is possible to overstretch a muscle and static stretches should never be done on cold muscles. Additionally, negative effects have been reported up to 24 hours following static stretching prior to any performance event (Haddad et al, 2014).



Figure 2-2 Passive left shoulder extension.  
Photo: A. Raszewski



Figure 2-3 Passive left hip extension.  
Photo: A. Raszewski

## WARMING UP: FREQUENTLY ASKED QUESTIONS

### When should I warm up?



Warming your dog up should ideally occur before they participate in *any* activity that will require physical exertion and an elevated heart rate. Although a warm up routine is typically associated with sport performance (e.g. training or competing), it should also be completed prior to many of the common activities we do with our dogs such as:

- Tossing a ball/playing fetch
- Going for a hike
- Swimming
- Endurance or sprint work
- Attending a performance class
- Asking your dog to work on any unstable/stable conditioning fitness equipment (e.g. FitPAWS ©, Totofit ©, Flexiness ®)

If you are competing in a sport that has multiple runs over the course of the day (e.g. 3-4 agility runs/a day), be sure to warm up before *each* run as the benefits of the first warm up will not necessarily carry over to all the runs later in the day, especially if there is a large time gap between them. The purpose of the warm up is to physiologically prepare the body (e.g. blood circulation, tissues warmed up, increased heart rate) for the upcoming demands that are about to be placed on it in order to minimize injury and maximize performance. If we have long breaks between runs, the body returns to a relaxed, cooled down state that is not primed for exercise or activity. If we go back to this relaxed state where no demands are placed on the body, we should warm up again.

Regardless of the sport, you will want to complete your warm up and cool down routine before and after each competition, trial, run, show etc. If you happen to have two runs that are back to back, you might consider a shorter warm up for your second run if the dog is already warmed up (their tissues are still warm, their heart rate is elevated and they haven't been sitting in a crate for any period of time!). It's also very important to never have your dog sit down and rest before going into the ring – if you finish your warm up early, keep them moving or repeat so the muscles don't get a chance to cool down.



Photo: C. McIntyre

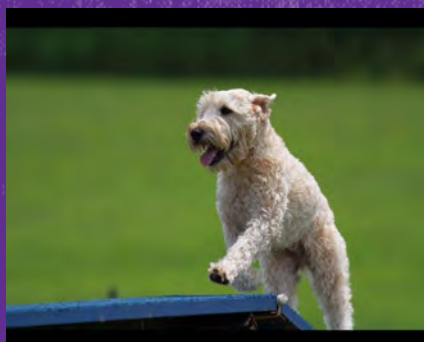


Photo: P. Bernhardt



Photo: A. Raszewski

## WARMING UP: FREQUENTLY ASKED QUESTIONS



**Question:** When I attend a local agility trial, I often volunteer at the trial and am entered in many runs as a leash runner, bar setter or course builder. If I only have a few minutes before my dog is ready to run, what could I do to ensure my dog is properly warmed up?

**Answer:** Ideally, you will want to find a running AND volunteer schedule that allows you to have at least 5-10 minutes before and after your run to properly warm up and cool down your dog – both are of equal importance! However, if you only have 1-2 minutes and are scrambling you should:

A) Jog your dog back and forth to try and warm up their cardiovascular system and increase their blood circulation

B) Do NOT passively stretch your dog before or after their run - the research shows that it is actually better to do NO warm up than any sort of passive stretching and that passive stretching is detrimental to your dog's performance! (Haddad et al., 2014).



Photo: P. Bernhardt

## WARMING UP: FREQUENTLY ASKED QUESTIONS

### How do I know that I'm warming up the necessary body parts?

Before we can design a warm up routine for our dogs, we need to understand how the sports our dogs are competing/training in should influence our selection of warm up movements. Understanding the nature of sport specific demands is possible when we appreciate that dogs move in three planes of motion. As such, our warm up routines should also be completed in all three planes of motion to ensure relevant movement patterns and accompanying muscles, joints, and tendons have been sufficiently warmed up. It should be noted that many of the movements that occur in sports use more than one plane of motion at a given time.

Dogs move in three planes of motion: medial/sagittal, dorsal, and transverse.

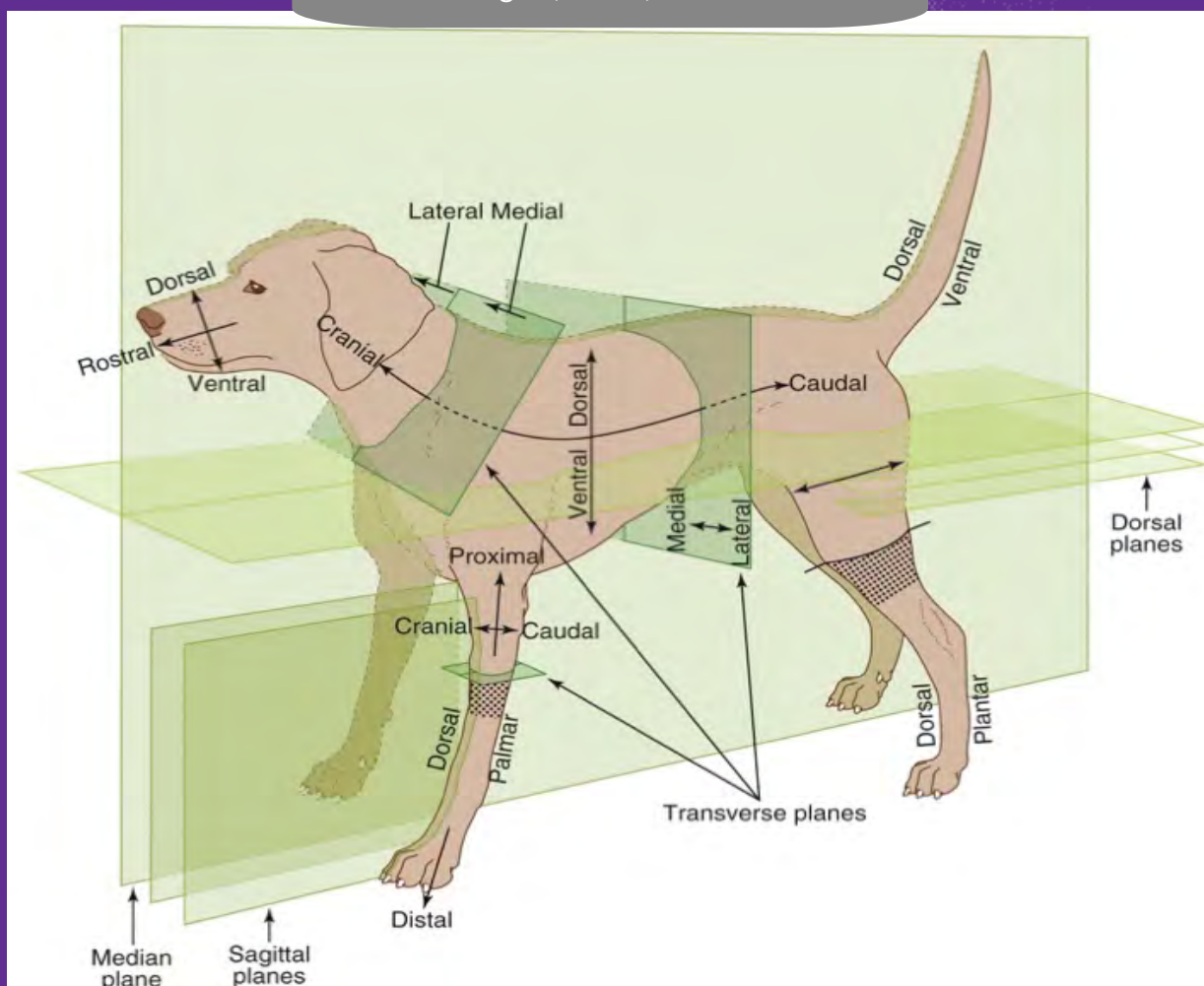


Figure 2-4 Orientation of planes of motion and directional terms for the dog.  
Photo: K. Dyce (2010)

## WARMING UP: FREQUENTLY ASKED QUESTIONS



Plane Of Motion	Movement	Every Day Examples	Sport Specific Examples
Medial/Sagittal	Movement occurs in both the forward and backward direction – the body is divided into left and right sides	Trotting forward, walking straight, backing up, play bow, stand to down, sit to stand	Running down the line toward the fly ball box, straight jumps/tunnels, recall/front commands in obedience, dock diving
Dorsal	Movement involves any bending or curved motion – the body is divided into top and bottom sections	Head turning to the side while walking in the neighborhood, circles left and right	Heeling with head turned towards owner, pivoting left/right and about turns in obedience, trotting in the conformation ring, lure coursing, wrapping a barrel
Transverse	Movement involves twisting or rotational actions – dog's body is divided into front and back regions as well as distal (further away from the body) and proximal (closer to the body) regions	Sidestepping, rolling over, left lifts, male dog lifting his leg to pee	Dog retrieving the ball from the flyball box, back side slices, tight turns off the A-frame/dog walk, weave poles, freestyle tricks (with twisting motions)

## WARMING UP: FREQUENTLY ASKED QUESTIONS

### What should my warm up include?

- Specific movements to target all major joints (feet, wrists, hips, shoulders, stifles, elbow, neck, spine, and tail)
- Movements that will mimic what your dog is about to do in their event. You will want to include warm up exercises that match the planes of motion that your dog is about to move in. This will ensure all muscles required for the activity are properly warmed up.
- More often than not, the fast paced dog sports we participate in (e.g. flyball, agility) will require our dogs to move through all three planes of motion
- Some sports will only require your dog to move through two planes of motion. Examples of this would be the conformation dog. As they gait and move around the ring, they move in both the sagittal (forward) and dorsal (turning their head) plane. This would be the same for a lure-coursing dog.
- It is rare for a dog to only use one plane of motion. This might include isolated tricks (e.g. backing up, crawling) or a sport like dock diving where the dog is jumping off a dock in the same plane of motion (forward).
- Completing the warm up on similar terrain to that on which the sport will be performed (e.g. turf, grass, dirt)

### How long should my warm up and cool down last?

- Your warm up should last approximately 5-10 minutes
- Aim for two sets of five repetitions for each dynamic warm up stretch or exercise
- You shouldn't see signs of fatigue during a warm up – that means you're doing too much!
- Common signs of fatigue: yawning, excessive panting, walking away from you, difficulty maintaining posture or form in the warm up exercise, arched or roached back



Photo: D. Vout

## WARMING UP: FREQUENTLY ASKED QUESTIONS

### Special Considerations



Although the guidelines I previously presented will apply to most dogs, there are some instances in which your warm up routine should be modified:

- If your dog has a previous injury, further warm up exercises may be needed or the warm up routine may need to take a bit longer – always consult your rehabilitation professional if your dog has a previous injury to help develop an appropriate warm up routine
- During colder weather or if they have been travelling a long distance in a crate, your dog will need a longer and more gradual warm up
- In addition to understanding the sport you are competing in, it's crucial to understand the limitations of your own dog. There are a variety of individual risk factors for injuries for our dogs, such as: age, strength, conditioning, weight, previous injuries/disease, and conformation/structure of the dog.
- If your dog has recently returned to sport from a previous injury, they may require a longer warm up time. Similarly, if your dog tends to be chronically tight in its back muscles, emphasizing spine flexibility will be important in your warm up routine.
- Warm up routines will also vary based on the level of exertion expected of the dog. Performance events that are more physically demanding on your dog require longer warm ups than less strenuous events. Think about your own activities - you will want to warm up longer before doing sprint work than you would taking a Pilates class.



Photo: L. Martin

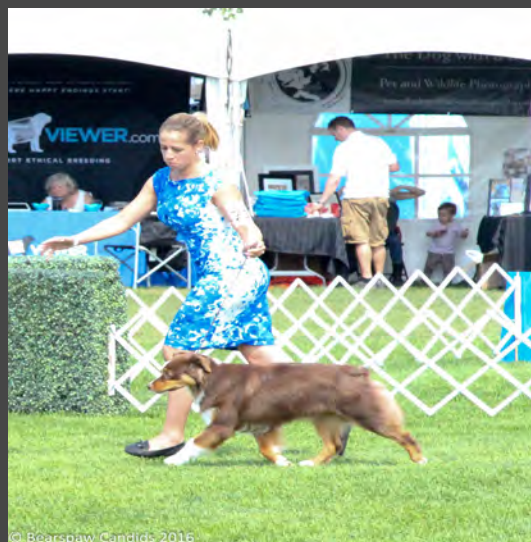


Photo: N. Prokopishyn

## WHY COOL DOWN?

After you have finished your training or competition and are ready to take a break or stop for the day entirely, it's imperative to take the few extra minutes required to cool down your dog before you call it quits.

Not only is this *physically* beneficial but it is also *mentally* important for your dog as it allows them to calm down and unwind. It can also be very discouraging for our dogs if we simply put them back in their crates and ignore them. The cool down serves three main purposes: 1) it provides us some focused time to praise and bond with our dogs after working together, 2) it can help cue them to relax and settle down, and 3) it helps restore shortened muscles back to their original length.

The cool down also assists with stretching muscles, removing lactic acid build up (Calleja-González et al., 2015), and reducing the likelihood of chronically tight muscles. Lactic acid build up is a result of normal strenuous activity and contributes to early muscle soreness and fatigue (Han, Kim, Yang, & Sung, 2014). Over time, shortened muscles will create less power and can potentially cause uneven pressures on the articular cartilage, as well as lead to a variety of compensatory issues elsewhere in nearby muscles. Additionally, the cool down will help your dog's heart rate return to its resting rate and cause a constriction in the blood vessels in the dog's legs and re-distribute this blood back to the body. This is important because it will a) reduce the potential of blood pooling in the dog's extremities and b) prevent any post exercise dizziness that can occur when the exercise is stopped (Zink, 2008).

## COOL DOWN GUIDELINES

- The cool down should be as long as your warm up, or approximately 5-10 minutes
- Can include the same exercises you completed as part of the warm up, but not to the same intensity or number of reps
- Be mindful of the temperature! Use cooling aids in the hot weather – cool coat, water (ears, belly, pads) and coats in cold weather to prevent rapid cooling of muscles which contributes to lactic acid build up and cramping.
- Never put your dog away right after the activity– not only is this discouraging to your teammate, but it doesn't allow for the re-distribution of the blood and proper physiological cool down of the body

## OVERVIEW

Now that you understand the benefits of using primarily dynamic stretches in your dog's warm up routine, let's look at some stretches you can use to get your dog's heart pumping, muscles warm, and joints moving freely. Within your warm up routine you should include a variety of movement patterns incorporating the three planes of motions (as we discussed earlier) and various dynamic stretches to effectively warm up your dog. Although some the exercises below (e.g. trotting) are great for all sports and help to increase the dog's heart rate and more generally warm up their muscles, tendons, and ligaments, you will also want to consider some sport specific stretches or movements that mimic what the dog is about to do.

## WARM UP ROUTINE AT A GLANCE

- The function of the warm up is to prepare the body physiologically for upcoming performance work
- We want to gradually stimulate the cardiorespiratory system to will help to increase blood flow to the working muscles and elevate muscle temperature
- The warm up should begin with 2-3 minutes of whole body activities using large muscle groups (e.g. fast walking, light trotting)
- Once the body's temperature is elevated, a period of dynamic stretches should be incorporated that are sport specific and related to the activity being performed
- After this stretching, the intensity of the warm up can be gradually increased by performing sport specific skills related to the activity the dog is about to perform (e.g. active heeling for obedience, one jump practice for agility)
- Total warm up time 5-10 minutes with a combination of dynamic stretches and various movements

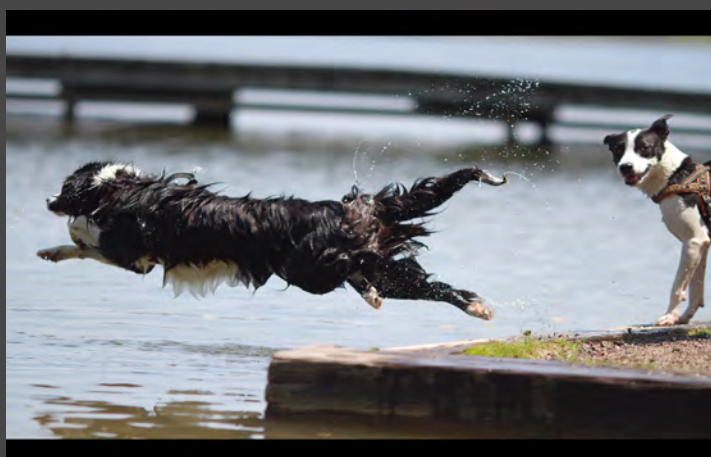


Photo: C. Lawrence

## THERAPEUTIC JACKETS, WRAPS, AND JOINT SUPPORTS

Back on Track© and Vet Therapy© are two popular companies that offer a variety of products geared towards joint and muscle protection for the performance dog or dog that is recovering from an injury. You have likely seen many dogs at an agility trial or flyball event with these “jackets” on and wondered – what are these and how do they work? Both products contain heat reflective ceramic particles that reflect heat back onto the body as they are heated up by body warmth. The reflected heat acts as a long-lasting radiated warmth, which is very similar to long-term infrared radiation. This helps to stimulate blood flow, reduces inflammation, and decreases muscle pains, aches, and lactic acid build up. The sleek design permits normal dog movement so that they can be worn during warming up your dog, in between training/working, and after training sessions.

Canadian Retailers:

- MCR Fir Fleece: <http://www.mcrehabilitation.com/products.html>
- Back on Track Canada: <https://botcanada.com>



Figure 4-1 Back on Track dog mesh rug. Photo: A. Raszewski



Figure 4-2 Vet Therapy dog rug. Photo: A. Raszewski

## TUGGING

**Benefits:** Actively stretches front end muscles, adductors and hamstrings, as well as raises heart rate

**Instructions:**

- Choose your dog's favourite toy and engage in a game of tug.
- You want to ensure that your dog does the pulling while you resist
- Avoid any head jerking or head shakes
- Keep the tug toy low to avoid excessive head extension



*Figure 4-3 (above) Tugging example with head low.*  
Photo: A. Raszewski

*Figure 4-4 (below) Tugging example with dog pulling backwards.*  
Photo: K. Elizabeth Rice



## PLAY BOW

**Benefits:** Stretches the triceps, mid back, hips, and hamstrings

**Instructions:**

- Lure your dog's nose downwards to a play bow position – back legs stay extended and straight and only their front legs should lower down
- Initially, press the food in and toward your dog so that they come down into the play bow position
- Goal is to have your dog's elbows touching the floor (slowly work towards this goal if they are hesitant or not understanding the behaviour)
- If your dog happens to go into the down position, support their belly underneath (gently push upwards to prevent their belly from touching the floor) to achieve the play bow position
- Hold stretch for five seconds and slowly release
- Lots of dogs will naturally go into a play bow after coming out of the crate or after they lay down – take advantage of their natural ability!



*Figure 4-11 Play bow with elbows touching the ground and knees in full extension (straight).*  
Photo: A. Raszewski

# DYNAMIC STRETCHES

## HIP FLEXOR STRETCH

*Benefits:* Stretches the dog's hip flexors and the muscles in their back

*Instructions:*

- Use a platform of an appropriate height surface for your dog to place their front feet on (e.g. stool, chair, pause table)
- Make sure the surface is not slippery
- Have your dog stand with their front feet elevated on the platform
- Encourage your dog to reach for the cookie in front of them while their front feet remain on the platform
- Make sure they don't jump forward but rather gently stretch and reach for the cookie (back feet should remain on the ground)
- Always watch the position of the dog's back during this exercise - you want to ensure their back stays straight and doesn't roach or sway while trying to reach for the cookie



Depending on the size of your dog and your own physical health, if you don't have access to a chair or anything your dog can stand on, you can use yourself for the dog to place their front feet on.



Figure 4-5 Hip flexor stretch on a low stool.  
Photo: A. Raszewski



Figure 4-6 Hip flexor stretch using a chair.  
Photo: A. Raszewski



Figure 4-7 Hip flexor stretch with front feet on the owner.  
Photo: A. Raszewski

## COOKIE STRETCHES

**Benefits:** Actively stretches all four areas of the spine (cervical, thoracic, lumbar, and sacral); how far the dog bends and rotates through their spine will dictate where the stretch is occurring. For example, luring a cookie between the dog's front legs can stretch both cervical and thoracic region depending on how far the dog reaches for the cookie.

### Cervical:

- Cookie to shoulder
- Cookie upwards nose to the sky; (neck extension)
- Cookie downwards to the floor (nose to the floor; neck flexion)

### Thoracic:

- Cookie to hip
- Cookie downward and between front legs (nose to the floor and between front legs)

### Lumbar/sacral:

- Cookie to stifle (knee) or hock (ankle)



### Instructions:

- Have your dog stand in a normal position perpendicular to you
- Have food in one hand and place your other hand on your dog's pelvis and stabilize their rear end to prevent them from turning, sitting, or spinning towards you
- Keep your dog's nose level and lure them to either their shoulder, hip, or stifle/hock region
- Hold each stretch for 3-5 seconds and release slowly
- Repeat 3x to each targeted area on both sides
- Monitor any differences between the range of motion obtained between the left and right side of your dog's body



Red X: Shoulder  
Blue X: Hip  
Green X: Stifle  
Yellow X: Hock

Figure 4-8 Cookie stretch target areas  
Photo: C. McIntyre



Figure 4-9 Cookie stretch to hip.  
Photo: A. Raszewski



Figure 4-10 Cookie stretch to stifle.  
Photo: A. Raszewski

# DYNAMIC STRETCHES

## PAWS UP/WAVE

*Benefits:* Stretches the muscles of the dog's front assembly in the transverse plane of motion

- There are multiple ways to train this exercise
- **Option 1:** Place a treat in your palm and close your hand - if they paw at your hand, open your hand, give them the treat, and repeat
- **Option 2:** Place a post-it note or piece of scotch tape on your dog's eyebrow or head. Once your dog paws at it, use a clicker or your verbal reward marker (e.g. yes) to indicate the correct behaviour. Repeat.
- **Option 3:** If your dog already has a "shake" or "give a paw" command already, ask for this. If they need your hand to target initially, that's completely fine. Begin to fade out your hand so they are independently lifting their paw and lowering it back down on their own.
- Make sure your dog's paw (that is on the ground) remains on the ground throughout the exercise and that they don't offer both front feet. They should only offer one paw at a time. If they start to offer both paws at once, encourage a lower wave with one paw at a time. You can slowly build for height as the dog understands the exercise.
- Be sure to work both front paws.
- Once your dog understands the exercise, begin to ask for a high five or wave a bit higher or even out to the side to activate different muscles.
- Repeat 5x for each paw

**Note:** You can also complete this exercise with their rear feet and ask for a rear foot target to engage the rear muscles



Figure 4-12 Left paw wave in the sitting position.  
Photo: A. Raszewski

While dynamic stretches are great for moving specific joints through their range of motion, warm up exercises offer the unique advantage of mimicking the sport specific movements that are required of our dogs. Warm up exercises not only also assist in preparing our dogs for sport by increasing their heart rate and warming up their muscles, but they also prime our dog's nervous systems by practicing the movement patterns they will use in their sports. This priming helps to make our dogs more efficient at these movements, as well as ensuring their bodies are prepared to load their tissues in the same way they will during sport to help prevent injury.



Photo: C. Lawrence

## CIRCLES/SPINS ON THE FLAT (360 DEGREE TURNS)

*Benefits:* Increases neck, spine, and tail flexibility

*Instructions:*

- Have your dog spin 360 degrees to the left and right, ensuring your dog is turning *slowly* to properly stretch out their spine
- If your dog doesn't have a spin right and left on cue, you can simply lure them with a food reward or their favourite toy
- Reward in the forward direction with your dog's head straight
- Always repeat in both directions
- Repeat 5x in each direction



Figure 4-13 Left 360 degree spin on a flat surface. Photo: A. Raszewski

# WARM UP EXERCISES

## WEAVE BETWEEN LEGS

*Benefits:* Warms up your dog's neck, spine, and tail

*Instructions:*

- Make sure your legs are positioned and spaced far enough apart to allow your dog to go through and weave around your leg – this will vary based on the size of your dog
- Have your dog complete a figure eight through your legs by having them follow a cookie
- With time and practice, your dog will naturally circle your leg and complete this motion without needing a lure
- You can use your body motion to motivate your dog by weight shifting to the side they are weaving around, which can eventually become the cue itself
- Repeat 5x in each direction



Figure 4-14 Weave between legs  
Photo: A. Raszewski

## SIDE STEPPING

*Benefits:* Warms up the abductors and adductors, core muscles, shoulders, and hips

*Instructions:*

- Have your dog stand perpendicular to you, with their ribcage touching your legs
- Using your body pressure, slowly walk towards your dog in the direction you want them to go, while still keeping them perpendicular to you by keeping their nose on a food lure; note that your dog will cross their front feet and/or rear feet - this is the desired behaviour!
- Marking their movement away from you can help them understand what you are asking of them and be less concerned about your pressure coming into them
- Keep the treat at their natural head level
- Be sure to work both directions (your dog moving into its right and left)
- Repeat 5x in each direction



Figure 4-15 Side stepping on a flat surface with front legs crossing.  
Photo: A. Raszewski

## BACK UP

*Benefits:* Helps to improve your dog's awareness of their rear feet, distributes weight to each rear foot evenly, and warms up their hind end muscles (e.g. hamstrings and glutes)

*Instructions:*

- You can either train this either on the flat or with a target for your dog's rear feet (e.g. a mat)
- You are looking for the dog to independently move both back feet, without hopping
- To train it, sit on the floor or a low stool and toss treats between your dog's front legs
- As your dog backs up to retrieve the cookies, use your reward marker "yes" and repeat
- If you are using the mat as a target, mark when any part of their back feet touch the mat, eventually raising your training criteria so that they need to place both back feet on the mat to earn a cookie
- Hard treats are ideal to use because you dog hears them hit the floor
- Once your dog is offering this behaviour, you can add your back up command to their movement back (e.g. beep beep, back)
- Repeat 5x
- Goal: work up to being able to complete this exercise when your dog needs to travel 6-8 feet to get to the mat

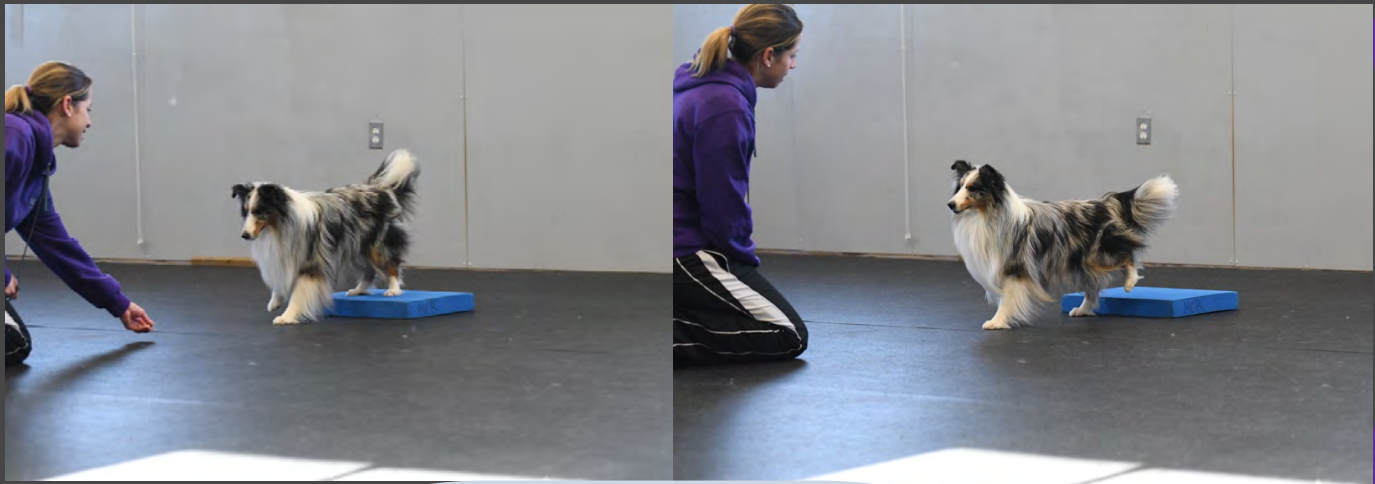


Figure 4-16 Backing up to a mat.  
Photo: A. Raszewski

# WARM UP EXERCISES

## STAND TO DOWN

*Benefits:* Warms up your dog's core muscle group, hips, shoulders, stifles, elbows, and wrists (without foot movement)

*Instructions:*

- Have your dog start in a natural standing position
- Using a food lure or a hand target, have your dog follow a cookie down towards the ground and on a 45 degree angle towards them (this helps to encourage the fold down position/behaviour)
- You are looking for your dog to keep their front and rear feet in place while their shoulders and hips rotate to a down (the movement is complete when your dog is in a fully downed position with elbows on floor and rear feet tucked in; also called a sphinx position)
- If your dog is having trouble with "folding down", check your reward position. Often this can be fixed with ensuring your reward is in the right position.
- Repeat 5x



*Figure 4-17* Stand to down. **Step 1** – Your dog stands in front of you in a comfortable natural stack. **Step 2**– Your dog begins to fold down without any foot movement. **Step 3** - Your dog lies down in a sphinx position.  
Photo: A. Raszewski

## TROTTING

**Benefits:** Stimulates the cardiovascular system to increase blood flow to working muscles. This is a rhythmic and balanced two beat gait in which diagonally opposite legs move together (e.g. right hind with left front, left hind with right front etc.). It is a very efficient gait because the dog's centre of gravity does not shift from side to side.

**Instructions:**

- Have your dog on a leash and trot back and forth for approximately 20-30m, working your dog on both sides of you
- Ideally your dog should be looking ahead and not at you
- Tip: make sure you are looking forward towards the destination versus looking at your dog – this will minimize how much your dog looks at you which can cause them to become off balance and shorten their stride
- Repeat for 2 minutes



Figure 4-18 Trotting exercise with your dog either on the left or right side of you.  
Photo: A. Raszewski

If you don't have a large space/area to trot your dog, or physically not able to sustain this for 2-3 minutes, consider using cavaletti poles to complete the same exercise with minimal handler involvement.

**Instructions:**

- Ensure the cavalettis are spaced to approximately the height of your dog's withers
- Height of the cavalettis should be kept low (below your dog's hocks)
- Have your dog pass 15-20 times through the cavalettis using a trotting gait (in substitution for 2-3 minutes of trotting)
- Always make sure your dog's head is looking forward – you can use a remote food dispenser (e.g. manner's minder), food bowl, or target (e.g. mat/food lid) to achieve this



Figure 4-19 Outdoor cavaletti set up with the dog using the preferred trotting gait.  
Photo: A. Raszewski

# WARM UP EXERCISES

## SHADOW HANDLING

*What is shadow handling?*

- Shadow handling exercises involve your dog following your motion without any equipment
- Includes cueing speed, direction, and changes of side
- Commonly practiced shadow handling includes: running circles (with your dog on the outside or inside of the circle), turning your dog towards you as you change direction, flipping your dog away from you, and staying beside you when you slow down or stop
- Sport specific examples: fast and slow heeling, pivots, front crosses, blind crosses
- Repeat x 1 minute (various handling maneuvers)

*Benefits:* Stimulates the cardiovascular system, practices movements that the dog will be using in competition, combines flexibility with movement



Figure 4-20 Shadow handling – dog following your motion forward.  
Photo: A. Raszewski



Figure 4-21 Shadow handling – dog completing turns in various directions.  
Photo: A. Raszewski

## JOGGING IN A CIRCLE



*Benefits:* Stimulates the cardiovascular system to increase blood flow to working muscles, reinforces being on the correct lead

This exercise can be used in conjunction with agility handling moves (e.g. front cross/blind cross) to add even more sport specific warm up to your routine. For example, you can change your arm position and have your dog follow your hands while you turn left or right, indicating various agility handling moves.

*Instructions:*

- You can either start with a large circle (and move to smaller circle) or vice versa
- Make sure you work both directions
- Dog should be trotting
- Repeat x 1 minute

## SIT TO STAND

*Benefits:* Engages the core and hip flexors, increases range of motion in their hind end

*Instructions:*

- Tuck sit: front feet remain stationary and back feet “tuck” under the dog into a sit
- Your dog then performs a kick back stand without moving their front feet
- If your dog is struggling to “kick” back their feet into a stand, start this exercise on the flat by sitting on a chair with your dog right in front of you
- In this position, you can hold the dog’s collar (if they are comfortable with that to prevent their front feet from moving) and gently nudge their back feet with yours to initiate the kick back
- Once your dog starts to offer this behaviour with little assistance from you, you can add a cue to the behaviour. (e.g. stand)
- Repeat 5x



Figure 4-22. Three steps of the sit to stand . **Step 1**- Have your dog in the sitting position positioned in front of you. **Step 2** – Ask your dog to stand. Front feet should stay relatively stationary and rear feet should kick back so their legs are extended and standing in their natural stack. **Step 3** – Ensure the dog fully kicks back so they are standing in a natural stack position.  
Photo: A. Raszewski

## POP UPS

*Benefits:* Warms up the core and rear end muscles

*Instructions:*

- Have your dog sit on either your left or right side
- Hold your hand at a height that requires your dog to lift their front feet off the ground to your hand target
- Ask your dog to target your hand, looking for their rear feet to stay relatively still
- As your dog gets more comfortable, you can ask them to stretch a bit higher to target your hand – make sure they keep proper form as they are asked to reach higher
- Repeat 5x



Figure 4-23 Pop ups at handler left's side.  
Photo: A. Raszewski

# WARM UP EXERCISES

## WRAPPING AN OBJECT

*Benefits:* Engages the full body by activating core muscles, increasing heart rate, and stretches the spine

*Instructions:*

- Have your dog wrap around a chair, garbage can, or any other tall and upright object you might find at a performance class or trial
- Start two to three feet away from the object and ask your dog to wrap this object in both directions
- You can either use food or their favorite toy for a reward
- As you start to increase the distance away from the object you are wrapping (thus increasing the dog's speed), they will have to re-adjust their stride in order to properly slow down (collect), bend their spine to complete the turn and then explode back to you to obtain their reward (food or toy)
- If your dog has never wrapped an object before, start close to the object and reward for any movement near the object, eventually marking each step around the object with a cookie
- In the initial stages of wrapping an object, reward away from you as the most difficult aspect of this exercise is having your dog go away from you to circle the object. They naturally want to come back to you!
- Repeat 5x in both directions



Figure 4-24 Wrapping an object (jump standard – left; cone – right) in both directions.  
Photo: A. Raszewski



## CATCHING A BALL

*Benefits:* Plyometric exercise working on rear leg range of motion, hip flexors, stimulating the mechanoreceptors in the front limbs

*Instructions:*

- Have your dog start in a standing position facing you
- Throw the ball to your dog and have them jump up to retrieve it
- Your dog's back legs should remain on the ground and the dog should extend forward (similar to over a jump) to retrieve the ball or toy
- Repeat 5x

- Do not throw the ball too high as this will cause the dog to leap off the ground and potentially land in an awkward fashion
- Be cautious to not engage in a game of fetch with your dog! We are looking for a slow, controlled and purposeful catch and are not trying to over stimulate the dog
- Avoid having the ball bounce first before the dog catches it
- We want to keep the throw as controlled as possible to ensure the dog retrieves it in a safe fashion



*Figure 4-25* Proper catching form with back legs remaining on the ground and dog jumping forward (similar to a jump) to retrieve the ball or toy.  
Photo: A. Raszewski

*Figure 4-26* Improper catching form with dog's back legs off and perpendicular to the ground – leads to excessive force through the back feet, knees, and hips upon landing.  
Photo: A. Raszewski

# WARM UP EXERCISES

## PIVOTING AROUND A STATIONARY OBJECT

*Benefits:* Engages forelimb and limb abductor/adductor muscles, stretches the spine, engages the core, promotes full body movement in the sagittal plane

*Instructions:*

- Have your dog place their front feet on a stationary, non-slip object (e.g. phone book with duct tape, stool)
- Have your dog rotate around this object (both directions)
- If you do not have access to a stationary object, you can start your dog in the heel position on the left side OR on the right side and turn into your dog (90 degrees)
- This will encourage the dog to swing their rear end and step laterally to stay in the proper position
- Start slow and reward often
- Initially you are looking for the dog to take a small step to either the left or right
- As they begin to understand the exercise, you can start increasing the distance stepped before giving a reward
- You can either use your hand position/food to get the dog to pivot to one side OR you can use your body to walk slowly towards the dog in the direction you want to travel
- Watch the dog's position throughout this exercise!
- You will want to keep their back flat (no roaching), head in a natural position and ensure that their front feet remain on the object at all times. Shuffling and hopping should be discouraged – we are looking for the dog to cross their hind legs or side step!
- Repeat 5x each direction



Figure 4-27 Pivot exercise using a stool.  
Photo: A. Raszewski

## ONE JUMP DRILLS

*Benefits:* Encourages your dog to practice the jumping skills required in the upcoming event (e.g. back sides or directional jumping) and warms up your dogs hind end muscles

*Instructions:*

- Find a warm up jump and set the bar to the height at which your dog is competing
- Practice a variety of one-jump skills, such as back sides, slices, wraps etc.
- Complete 4-5 jumps



*Figure 4-28* One jump drill with handler sending dog over a jump in both directions. Photo: A. Raszewski

## OVERVIEW

I've included some sample warm up and cool down programs in this section to help give you a starting point for mixing and matching the dynamic stretches and warm up exercises that are typically more relevant to common canine performance sports. Of course, this is just a starting spot. As I've mentioned throughout the book, customizing the warm up and cool down routine as much as possible to not only match your dog's sport but any individual strengths, weaknesses, or pre-existing injuries is key.



Photo (Clockwise): C. Lawrence; C. Lawrence; C. Lawrence; S. Paterson; A. Raszewski; D. Vout; C. Lawrence; N. Dronoff-Guthrie

## PROGRAM 1: AGILITY FOCUSED

### WARM UP ROUTINE

Exercise	Reps/Duration	Sets	Notes
Walking/Trotting	2 minutes	1	Walk/trot at a brisk and continuous pace for 1.5-2 minutes.
Shadow Handling / Circle Jogging	1 minute	1	Work various handling maneuvers on the flat (e.g. front cross, blind cross, rear cross).
Tugging	30s- 1 minute	2	To work focus forward you can run/sprint a short distance (~10-12 feet) with your dog towards a toy and then engage in a game of tug.
Circles/Spins	5x	2	Work both directions.
Weave Between Legs	5x	2	Work both directions.
Side Stepping	5x	2	Work both directions.
Pop Ups	5x	2	Have your dog either on your left or right side. As they understand the exercise you can ask for your dog to "pop up" higher.
Wrapping Object	5x	2	Wrap any object that you can find (e.g. cone, chair, tree). Ensure you work both directions.
1 Jump Practice	4-5x	2	Include various jumping skills (e.g. straight on, slices, wraps/backslides).
Ball/Toy Catching	5x	2	Can be included with tugging activity.

### COOL DOWN ROUTINE

Walking	2-3 minutes	1
Circles/Spin 360s	5x	1
Play Bow	5x	1
Hip Flexor Stretch	5x	1
Ball/Toy Catching	5x	1
Walking/Relaxing/ Petting	2-3 minutes	1

My warm up/cool down routine notes:

## PROGRAM 2: OBEDIENCE/RALLY FOCUSED

### WARM UP ROUTINE

Exercise	Reps/Duration	Sets	Notes
Walking/Trotting	2 minutes	1	Walk/trot at a brisk and continuous pace for 1.5-2 minutes.
Circle Heeling Work	1 minute	1	Work heeling skill (both left and right sides) in both directions. Vary speeds (slow, normal, fast). Vary circle size (large, small).
Backing Up	~6-8 feet, 5x	2	Work the distance your dog is comfortable; once they back up, have them drive to your hand for a cookie.
Paws up/Wave	5x	2	Work both front limbs.
Sit to Stand	5x	2	Focus on tuck sit with kick back stand (minimal front leg movement).
Down to Stand and Stand to Down	5x	2	
Perch Work	5x	2	Find a small stable object for your dog to perch on (e.g. stool, food pan/bowl, platform). Work both directions – left side (heel position); right side.
Cookie Stretches	2x each	2	Work all levels of the spine – cervical, thoracic, lumbar, and sacral.
1 Jump Practice	4-5x	2	Include various jumping skills (e.g. broad, high or bar jump).
Heeling Work with 360 Degree Spins	5x	2	Work both left heeling position and right side.

### COOL DOWN ROUTINE

Walking	2-3 minutes	1
Large Circles	5x	1
Play Bow	5x	1
Hip Flexor Stretch	5x	1
Side Stepping	5x	1
Down to Stand and Stand to Down	5x	1
Walking/Relaxing/Petting	2-3 minutes	1

My warm up/cool down routine notes:

If you've read this book from cover to cover, you're a special kind of dog owner. You're the kind of dog owner that consistently goes above and beyond because your dog is so many things to you- a loved family member, a teammate in sport, a hiking buddy, and a snuggly confidant- which is why you invest so seriously in their physical and mental wellbeing. It's my hope that this e-book has helped you to understand how a thorough warm up and cool down routine fits into the picture of ensuring comprehensive care for our performance dogs to prevent injuries, prolong their involvement in the enriching world of dog sports, and most importantly- give back to our dogs who give so much to us by investing in their health and future.

We'd love to hear about how you've used the knowledge and sample routines in this e-book with your dog, so reach out and let us know.

Carolyn McIntyre, HBKin., MSc. PT., PgCPain  
Registered Physiotherapist  
CEO and Owner, McIntyre Canine Rehabilitation  
Email: [Carolyn@mcrehabilitation.ca](mailto:Carolyn@mcrehabilitation.ca)



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Photo: K. Elizabeth

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