

## **Practical Applications of Dynamic Warm-up: *ACTivated Striding***

*Chad Benson (M.Sc) & Rachel Seay (D. HP & BCRPA)*  
Courtesy of [www.myfitnessarticles.com](http://www.myfitnessarticles.com)

Whether your goal is to achieve a personal best or enjoyment of a recreational pursuit, it is important to take an ACTIVE & practical approach to pre-training and event warm-up using a dynamic stretching program through activated striding. Activated Striding allows the body to prepare for the activity by warming up and preparing the muscles and joints. This approach will ensure enjoyment of the activity without aches, pains or overuse injuries.



***The 2005 Easter Seals 24 Hour Relay, Burnaby BC***

Most elite and almost all recreational athletes do a very poor job in their 'run' preparation. Aside from actually putting in the weekly miles, one of the most important preparation steps for any event, workout, or run is a great warm-up.

Many runners and walkers focus their attention to increasing mileage and tempo. However, your focus on increasing mileage and tempo is just as important as taking the time to prepare your body for the activity. To accomplish both these goals, research suggests that **the dynamic method of stretching is advantageous over the traditional static stretching and light calisthenics** (Young and Behm, 2002).



***"We take our health for granted until we become injured. It is only then that we wish we had taken extra precaution."  
-Unknown***

**What is Not Recommended:** Simply running at a reduced pace for 3-5 minutes plus a 2 minute static calf and quad stretching prior to your activity. Your body is not ready to participate in the activity and the end result is an injury. This also applies to race or event days.

**What is recommended:** Remembering the three steps of activity preparation: Always begin with a warm-up, and then apply dynamic stretching exercises and finally static stretching, in that order.

## Types of Stretching

There are two commonly used forms of stretching that you may already be aware of; *dynamic* and *static* stretching. Most people have been told to hold a stretch before the workout. It is important to remember that your body should be warmed-up before you “hold” a stretch. So which stretch is safer and what is the difference?

1. ***Dynamic stretching*** is when you are stretching while in motion.

Aerobics classes always incorporate dynamic stretching in their warm-up such as toe taps, reaches or hamstring curls prior to the cardio portion of the class. This is an appropriate form of stretching prior to a workout.

2. ***Static stretching*** is when you hold a stretch to the point of resistance without inflicting pain. This type of stretch will increase flexibility but should be done post-workout or after dynamic stretching and warm-up.



***Static stretching should  
be done following  
dynamic stretching or  
after a workout***

## **The Science behind Stretching**

Static flexibility prior to competition appears to prevent an athlete from reaching optimal performance. In fact, **evidence is mounting to suggest static stretching does not prevent injury from occurring** (Pope et al. 2000). It is theorized that the body may 'turn off' the natural mechanisms which allows involved muscles to lengthen and shorten each time a stride is taken. These changes can cause reduced stride length, lack of coordination, stride efficiency and increased incidence of muscle strain injuries. All guaranteed to prevent you from fully enjoying your daily activity experiences.



Therefore, warming up prior to any activity must be done in a dynamic fashion. The purpose of 'warming up' and 'priming' the neuromuscular system is to increase muscle elasticity and core muscle temperature, to stimulate blood flow, oxygen delivery, lactic acid, and is no less important for the everyday athlete as it is for elite level performance. In fact it can be argued that recreational athletes are more at risks of acute and overuse injury than the elite athletes who constantly push their limits because the daily routines of the recreational athlete isn't athlete focused; it is family, life, and work oriented. **A warm-up is as simple as walking for 5 to 10 minutes with an "Activated" long stride.**

## **Practical Applications**

Applying the dynamic method to your pre-game, pre-run, pre-event preparation requires you to logically progress or prime your mind, muscle and ligamentous structures. Though appropriate for all your sporting activities, this particular model is designed for linear activities such as running and walking. Add a few multidirectional movements for trail running. If you are short on time, skip the static stretches all together. However, if you are experiencing notable tightness in a specific area prior to beginning your warm-up, then at least perform static stretches for those areas. The more flexibility you have as an athlete, the greater range of motion you will have which will increase your performance in your sporting or recreational pursuits (Prentice, 2003).



**Example of a Static Hamstring and Glute Stretch**

**Before you hit the pavement, here are a few simple training solutions outlined below to incorporate in your linear training program:**

- A. **Running Specific Static Stretching:** 30-45 sec static stretches to ensure movement specific, end range of motion can be safely obtained prior to engaging dynamic range and plyometric (rebound) activities. Previous workouts and post exercise soreness can sometimes make it dangerous to achieve this end range using the dynamic method. Hold each static stretch for as long as needed to gently and slowly achieve the required end range of motion. Once end range is achieved move to dynamic Range of motion.
- B. **Core ACTivation & Dynamic Range of Motion:** Core activation integrates a 360° approach to waking up the core by incorporating the ankle, knee, hips and spinal joints. It involves muscles required for core stability (Transverse abs, multifidus, pelvic floor, & diaphragm) and muscles required for striding mobility. The striding action of running and walking directly works with the core thus the importance of core training.
- Ways to activate:** slow tempo ankles rolls or circles, arm circles, leg swings, standing 1ft knee tucks, inverted hamstring pose, side karate kicks, prisoner squats, & walking stretches. For more information visit [www.jumpman23.com](http://www.jumpman23.com) click 'breakfast club' or <http://www.nikebauer.com/?ref=bauer.com> click training for programs and video demonstrations of dynamic range of motion.

**C. Running warm up:** 3-5 minutes of continuous activity involving low impact and speed running patterns, progressively faster and increasingly plyometric movements. Include toe off long walking, high knee marching, light jogging, bum kicks, carioca, exaggerated striding, \*bounding, \*cycling split squats. (*\*Recommended under direct supervision*)

## **Conclusion**

Life is about being active and enjoying injury-free recreational activities or sports. Remember to warm-up and then apply a dynamic form of stretching prior to static stretching. A simple warm up for a run would be to begin with a walk, slowly increasing the pace while adding arm circles, knee lifts, butt kicks or hamstring curls and heel to toe foot striking with long "Activated" strides before you begin your running. With a practical approach you will prevent many common injuries and stay pain free for years to come.



**(This article was provided to the Easter Seals 24 hour relay organization courtesy of [www.myfitnessarticles.com](http://www.myfitnessarticles.com). Our website is an educational source of fitness, health and training information for the general public and fitness enthusiast. The website will be launched this May 2007).**

### **References:**

1. Pope et al (2000). A randomized trial of pre-exercise...*Med Sci Sports Exerc.* 32(2), 271 – 277.
2. Young, W. & Behm, D. 2002. Should static stretching be used during a warm-up... *Strength and Conditioning Journal*, 24(6), December, 33 - 36.
3. Prentice, William. 2003. *Athletic Training: A competency-based approach.* 87.

### **About the Authors:**

#### **Chad Benson MSc, BSc, BPE, CSCS:**

Chad earned his education at the University of Victoria, BC. Benson is the President and Owner of ARC Performance Training Systems Inc., based in White Rock, BC. His company is a performance training company. Benson is the author of the "Great Balance and the Stability Ball". Chad is also the co-owner and creator of MFA alongside Rachel Seay.

In 2006, Benson developed on-line training programs for Nike Jordan ([www.jumpman23.com](http://www.jumpman23.com)). You can visit this site to see Chad teaching his skills to athletes. During the 2002-2003 seasons, He was sub-contracted as the assistant conditioning coach for the Vancouver Canucks. Coach Benson has conditioned hundreds of elite amateur and professional level athletes in hockey, figure skating, football, lacrosse, rugby, soccer, tennis, basketball, motor cross, volleyball, & rowing. Benson continues as a sponsored sport conditioning and fitness lecturer. He has presented for numerous highly accredited organizations; AOSSM, BCRPA, CATA, CFP, CSEP, BCRPA, Fit Rendez-Vous, IDEA, Info-fit, MFC & the NSCA. Benson is an active writing contributor to a number of educational publications. Benson continues to be a sport conditioning author and lecturer for numerous organizations and educational publications.

In addition to athletic conditioning, Chad has a blend of expertise in integrated muscle & functional movement testing, & rehabilitation.

Chad brings to MFA Inc, a unique knowledge in performance conditioning that all athletes can benefit from. His expertise keeps him in demand as a presenter in the Professional Fitness Industry and as an athletic trainer and coach.

**Rachel Seay, BCRPA, Diploma of Ex. Science, Can-Fit Pro Certified**

Rachel is 27 years old and has been actively involved in the fitness industry for the past 12 years. She is highly qualified, energetic and loves fitness. Rachel is the CEO and President of Guava Fitness, Co-Creator of MFA Inc and owns Inner-Fit Studio, a personal training and group fitness studio in Richmond, BC. Rachel is also the author of two educational resource books and her company Guava Fitness provides educational credits to professionals in the fitness industry through the BCRPA.

Rachel's educational background in exercise science includes her Langara College Human Performance Diploma and continuation of her studies as a 4th year at UBC in Human Kinetics/Exercise Science Program, specializing in health and fitness.

Rachel is a BCRPA & Can-Fit Pro Certified Group Fitness Leader/Instructor, Indoor Cycling Instructor, Personal Trainer, Fitness Programmer and Consultant, Coach/Trainer to Figure and Bodybuilding Competitors. She teaches a variety of classes from Spinning and Step to Cardio Salsa. As hobbies Rachel loves running marathons, being active in the great outdoors, being near the water for any kind of activity, training for shows, participating in fun events with her friends, being with her fitness crew and one day plans to take up tennis with her dad.