You jog around the soccer field, jump rope a little or step on the treadmill or elliptical for a few minutes. Stretch afterwards for 8 to 10 minutes. Begin the first 30 seconds or few minutes of a soccer match, baseball practice or trail run, and bang! Rehab for a pulled hamstring? Four to eight weeks.

Does this scenario sound familiar? Have you ever biked, skied, hiked, worked out or ran without the proper warm-up? Or any warm-up at all? Most of us can say yes, including myself. However, did you ever see a dog stretch before she chased a tennis ball or have you ever seen an elk "warm up" when you shoot him? Not likely.

Training to be balanced

Augie Hernandez

Warm-up is taken for granted, skipped or forgotten in many participants' workout routines or sport activities. It is like skipping the most important meal of the day – breakfast. And we all know how important our Wheaties are, don't we? When I ask individuals why they warm up, I receive responses like, "to stretch," "to loosen up" or "to get ready to work out." These responses are true but as generic as saying "I want to lose weight" or "get into shape." Most everyone wants that.

In short, the purpose of a warm-up is to prepare the muscles, nerves, joints and mind to perform any and all activity.

An alternative approach to warming up can be activation or "turning on" the nerves and muscles. Activation is a strategy that enhances the excitability of the neuromuscular and muscle sequencing. Sequencing is synomous with synergy in that muscles and nerves work in a kinetic chain to produce the maximal amount of force or movement pattern. Proper activation increases range of motion and prepares the body to handle acceleration and deceleration forces.

Otherstrategies include mobilizing and integration for action and movement of the body. What are we activating, mobilizing and integrating?

∞ Activating glutes, adductors (inside of the thigh and arms), abductors (outside of the thigh and arms), hip flexors (bending at the waist), upper thoracic spine (upper and mid back muscles).

∞ Mobilizing the joints (ankles, knees, hips, core, shoulders) to accelerate and decelerate.

∞ Integrating the activation and mobilization movement patterns into exercises for maximum potential.

How does one "turn on" muscles, nerves and joints in a warm-up? Choose movement patterns that move many body parts at once or movements that stabilize one area of the body while others move. For example, side lunges can be an awesome warm-up. During a side lunge, try keeping the core absolutely still while the legs are the only thing moving. This creates more work for the legs while the core is stable, thus "turning on" more.

Another example is the cross-side-step lunge that is similar to the side lunge. In addition, a runner's push movement prep exercise, where a participant is positioned leaning into the wall with his/her hands, core stable and driving up through the ball of one foot (Figure 2). This mobilizes the calf, glutes and hamstring muscle to integrate for running, hiking or pedaling.

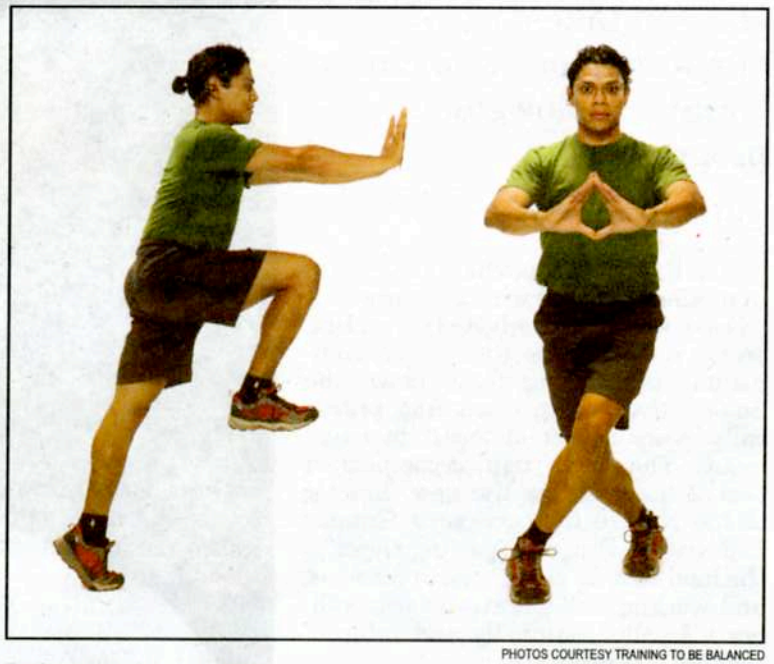
Pick movements that can be done anywhere and at anytime. A few big movement prep exercises at the beginning of bike ride, a run, climbing or skiing make a whole world of difference.

The movement prep exercises previous mentioned are active and do not contain static stretching. I often see static stretching as the basis for warm-up. Static stretching has been the preferred approach to movement preparation, flexibility training and injury prevention. The method involves the relaxation and elongation of the stretched muscle without movement. Recent research has suggested that, although static stretching may be an effective way to improve range of motion by influencing long-term soft tissue adaptations, it might not be an ideal activity to include in the warm-up because it may not prevent injury and may ultimately have a negative impact on force production during explosive activities.

John R. Swanson, who holds two master's degrees and is nationally certified in weight lifting, writes the following: "An effective warm-up is an increase in the athlete's internal temperature, which in turn brings about performance-enhancing physiological changes. In order to accomplish this, the warm-up should consist of a dynamic, movement-centered activity lasting 4–15 minutes. Also, the warm-up must be functional. The warm-up should be considered an integral part of the training session and therefore should contribute to the development of balance, core strength, body control, running mechanics, agility, and efficient sport-specific movement. Using movement to prepare for exercise or sport activity is the essence of functional training."

Don't get me wrong; it is proven that static stretching is a more effective method of enhancing long-term soft tissue adaptations when performed after vigorous physical activity. Also, static stretching after workouts or competitions improves recovery and may even shorten rehabilitation time for those with injuries by positively influencing blood flow to damaged tissue.

The approach made to warm-up should be to prepare the body for movement, not just stretch it out. I have eliminated the word "warm-up" completely and replaced it with movement prep in my training. I ask all my athletes that I train to perform movements that activate – "turn on" – the muscles and mobilize the major joints in the body. Then, we integrate those movements into the routine or sport activity performed.



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Left: For the runner's push movement, lean into a wall with your hands, core stable, and drive up through the ball of one foot. Right: For the cross-side-step lunge, cross one leg two to three feet in front of the other, squat with 60 percent weight on front foot. Push off the rear leg and return to standing.

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