

# Dynamic Stretching

## *Physiological reasons for a warmup*

The main physiological reasons for a warmup include:

- To increase the core temperature at least by one or two degrees Celsius
- To increase heart rate and blood flow to skeletal tissues which improves the efficiency of oxygen uptake and transport, carbon dioxide removal and removal/breakdown of anaerobic byproducts
- To increase the activation of the Central Nervous System which increases coordination, skill accuracy and reaction time for complete body movement
- To increase the rate and force of muscle contraction and contractile mechanical efficiency (through increased muscle temperature)
- To increase the suppleness of connective tissue which reduces musculotendinous injuries

These physiological benefits lead to an athlete's increased ability to perform physical work and enables them to perform at a higher intensity level.

## *Dynamic flexible warmup*

It is commonly accepted that warmup activities before physical exercises are essential for minimizing injuries and improving performance, such as, an initial jog, followed by 10 to 15 minutes of static stretching before engaging in the actual exercise. However, these stretches are not ideal for achieving an athlete's goals because they appear to have major physiological limitations.

Adding dynamic stretches to a warmup routine prior to exercise helps to prepare joints for movement and muscles for optimal activation. See reverse side for dynamic stretches.



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### Butt-Kicks



While standing tall, walk forward with an exaggerated back-swing so that your heels come up to your glutes. When this is easy, try it while jogging. Do 10 repetitions on each side.

### Side Lunge



Side step your bent knee over second toe, while keeping knee on opposite leg straight. Alternate side-to-side for several repetitions.

### Forward/Backward Walking Lunges

Step forward using a long stride, keeping the front knee over or just behind your toes. Lower your body by dropping your back knee toward the ground. Maintain upright posture and keep abdominal muscles tight. Repeat on opposite leg.



### High Knees

Bring one knee to chest, grab the front with your hands and pull towards your chest. Hold for three seconds. Complete several repetitions.



### Hacky-Sack



Lift your right leg up, bending the knee so it points out. Try to tap the inside of your right foot with your left hand without bending forward. Repeat 10 times on each side.

### Toy Soldier

Keeping your back and knees straight, walk forward, lifting your legs straight out in front and flexing your toes. Advance this by adding a skipping motion. Do 10 repetitions on each side.



### Inchworm



Bend down and touch your fingers to the floor while keeping your legs straight. Walk your arms out in front of you until your body is in the push-up position. Next, walk your feet back up towards your hands using tiny shuffle steps. You should not stand up in between repetitions. Go right into the next one until you have gone a specific distance or completed at least six repetitions.

### One Leg Bird Stretch



Start with an upright posture, chest up, shoulders down and relaxed. Lift your straight leg behind you as you slowly bend forward at the hips and try to touch your toes. Your body will create a "T" shape. Hold this position for two or three seconds. Repeat on each side.



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