



# Resistance Training

Diane Lee introduces the perfect 20min warm-down workout that increases circulation, improves performance and reduces recovery time



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**W**hat if we were to say to you, by simply tweaking your warm-down, you could increase stride length and increase pedal power? Excellent, we thought that'd get your attention. Right, let's talk that most neglected of training skills – stretching..

When thinking about traditional stretching, try to imagine the muscles as stretching like a rubber band. Over time, while using normal static stretches, the band weakens and strands become continuously overstretched, which can lead to unnecessary

time-off in order to heal. With resistance stretching the pain and effort can be removed. But what is it...?

Simply put, all the exercises that follow involve stretching against resistance. For each, begin with your target muscle group in its shortest position. You then contract as much as you can to increase the range of motion of that muscle group. If the muscles start shaking, stop – overstretching can lead to injury. To enjoy the greatest benefits, stretch in balancing groups. For example, hamstrings and quads.

## Time well spent

The following stretches should be incorporated into your normal exercise regime warm-down.

I recommend doing five reps of 8-15secs on each leg (if the exercise demands a change of

## Jargon Buster

**Quads** A large muscle group boasting the four prevailing muscles on the front of the thigh.

**Hamstring** One of the tendons that make up the borders of the space behind the knee.

**Muscle contraction** When under tension, the muscle can shorten, lengthen or remain the same.

**Hip flexors** A group of skeletal muscles that act to pull the knee upward.

**Yoga strap** A resistance band that increases the strengthening and relaxation benefits of yoga.

leg) or stretch. The total workout takes 20mins to complete and should be done three times a week. If by increasing the length of the quads and hamstrings you can gain stride length and speed off the bike, then just 20mins will be time very well spent in reaching your 2009 personal bests! **220**



### Outside leg

This stretch will focus on the outside of the legs (abductors, piriformis, iliotibial band and tensor fascia lata).

**Description** Lie on your back and cross your left foot over your right knee. Clasp hands around the uncrossed (right) leg (pic 1). Push out with left leg. As you contract left leg into right thigh, use right leg and your arms to pull knee to chest until you can no longer resist (pic 2).



### Inside leg

This stretch will focus on the inside of the legs (abductors).

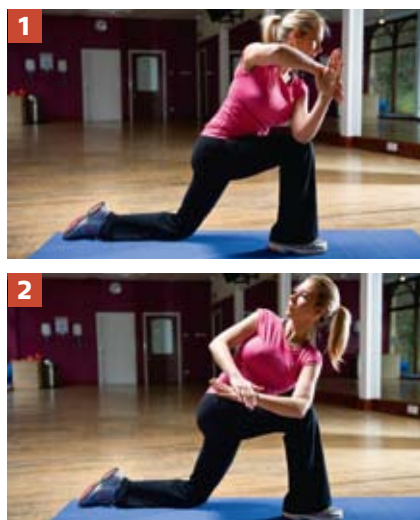
**Description** Lie on your back with your legs up in the air. Place your hands on the inside of the knees (pic 1) and turn feet and thighs outwards. Squeeze heels together to contract the inside of legs. As you're squeezing your heels together, use your arms to beat the force of your legs and open them up as far as they can go until they can't resist any longer (pic 2).



### Chest

This stretch will focus on your chest (pectoralis major and minor).

**Description** Start with your feet shoulder-width apart and your forearm resting on the inside of a door frame. Your arm should be approximately 90° to your shoulder (pic 1). As you step the same foot forward (left), your forearm rests into the door frame and your hips remain facing forwards (pic 2). You can try different arm heights but, if you're carrying any shoulder impingements, keep the arm lower.



### Back and shoulders

This stretch will focus on your back and shoulders (trapezius, deltoids).

**Description** Start in a lunge position with your legs a comfortable distance apart. Make sure your right knee is in line with your right ankle. Cross left arm over right knee so left elbow is against right side of knee. Push back with left arm bent at 90°. Make a backhand motion with right arm, pushing the back of the left hand away from body (pic 1). To stretch back the shoulder muscles, place right hand on left wrist and pull left hand toward the hips, while resisting the right hand (pic 2).



### Thighs

This stretch will focus on the front of the thighs (quadriceps and hip flexors).

**Description** Start on your hands and knees with feet facing the wall. Lift up one leg (left), point toes to ceiling and drop left knee 4in from the wall. The closer the knee is to the wall, the more intense the stretch. Slowly bring right leg into a lunge, with knee in line with ankle (pic 1). Push left foot to wall and contract the muscles on front of left leg (quads). Use right leg to push you back (pic 2). Tuck your bottom under and don't take shoulders back too far to avoid arching the back.



## Hamstrings

This stretch will focus on the three hamstrings: 1 medial, back and inside hamstring; 2 central hamstring; 3 lateral/outer hamstring.

**Description 1** Lie on your back with both knees bent. Bend left knee up to chest and drop to side so knee is in line with shoulder. Once in position, cross left arm in front of knee and grab heel (pic 1a). If you can't reach your heel, grab your calf or use a yoga strap. Kick left heel down to glutes, contracting the medial hamstring. As you kick heel to buttocks, use left arm to pull up on heel and

lengthen leg out toward the shoulder (pic 1b). Only lengthen the leg as far as it can resist and never lock out the knee.

2 Stretch central hamstring by bringing knee (left) into chest so it's in line with hip (pic 2a), grab heel or calf and contract central hamstring (pic 2b).

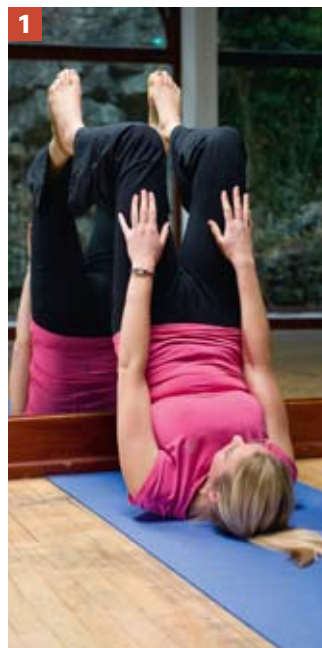
3 Stretch lateral hamstring by bending knee (left) up to chest and cross it over so it's pointing towards the opposite (right) shoulder. Now use right hand to reach across the calf and grab left heel (pic 3a). Use left arm to push on the outside of left knee to keep it across the body (pic 3b). Keep back flat to the floor.



## Legs

This stretch will focus on the inside of your legs (abductors).

**Description** Sit with your back up against the wall so that you're supported with legs bent (feet together) and heels comfortably to your buttocks. Place hands on the inside of knees (pic 1). As you squeeze (resist) knees together, use hands to open legs up out to the side. Try to take them out at a 45° angle with traction in order to create the best stretch (pic 2).



## Back and shoulders

This stretch will focus on the whole of the back and shoulders (trapezius).

**Description** Push your bottom up against a wall so that you're resting on your shoulders. Knees should be bent and in line with ankles. In order to maximise the stretch, make sure your upper body is close to the wall. Once in position, push feet to wall, creating resistance (pic 1). Slowly lower yourself down the vertebrae (pic 2). Once at bottom, raise yourself back up to the starting position. The hands can be placed on the legs or down at your sides.