

## LOWER CORE AND HIPS

### PART 2



# FIT TO PLAY

# "Warm-Up"

By Carl Petersen B.P.E., B.Sc.(PT)

Warming up the lower core and hips is important to allow good court mobility and minimize the chance of injury. Dynamic warm up is the activity of choice before playing as it allows you to gradually warm up the bodies tissues in preparation for on court activities.

Whether you're training hard or just out for some fun doubles, following the advice below will help you stay Fit to Play. This is Part 2 of this 3 part series. Part 1 outlined Upper Core and Shoulder warm-up and part 3 will outline on court warm-up

***"Always Warm-Up to play or practice, don't play to Warm-Up."***



strategies and post play stretching tips.

Tennis is characterized by quick stops, starts, lateral movements and fast changes of direction. Warming the body up before stepping on court

ensures the muscles are prepared for action and can adequately accelerate and decelerate your limbs while playing.

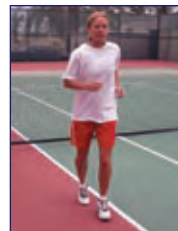
Intense exercise done without a sport specific dynamic warm-up does not allow for optimal performance and may contribute to injury.

***Do a specific dynamic warm-up before every training or practice session to prepare yourself both mentally and physically.***

- Start slowly and increase the intensity and complexity of the warm-up.
- Proper warm-up prepares the muscles you will use in training and prepares the joints for movement and dynamic stability throughout a full range of motion.
- Use tennis specific movements to help improve the relaxation-contraction coordination of the joints' prime movers and stabilizers leading to more efficient movement and performance.
- It is commonly believed that a two degree increase of muscle temperature can give an increase in elastic properties of the muscle by as much as 15-20% helping to improve performance and prevent muscle strains.
- Warm-up until you achieve a light glow helps achieve this.

If you have time and access to a gym get on the treadmill, elliptical trainer, exercise bike, stair-climber or rowing machine for 5-15 minutes. If that is not an option, do some easy jogging around the court or take a skipping rope with you and use it for several minutes.

### Lower Core (Low Back, Hip & Leg) Warm-Up:



As you jog around the court add in some high knees, high heels, skipping, crossovers and side shuffle steps to improve coordination and add to the warm-up. Stand tall and keep abdominals tight while doing these exercises. Try doing 2-4 repetitions x 5-10 meters of each.

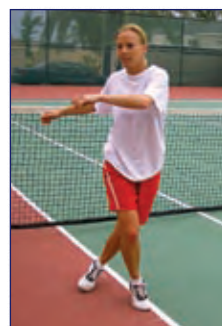
### Balance (Ankle, Knee & Hip) Warm-Up:



WARM UP HIPS WITH THESE HIGH KNEES DRILLS.



HEELS SHOULD CONTACT BUTTOCKS.

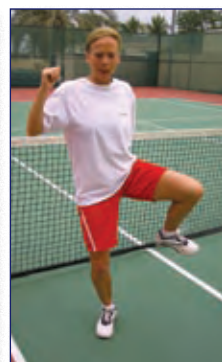


ATHLETIC POSTURE, HANDS FORWARD.

Stop and hang onto the fence or net and further warm-up the lower core with leg swings front and back, side to side and figure of 8's. Try some hurdlers high knees challenging your balance and warming up the hip by doing inside, straight and outside. Try 5-10 repetitions of each.

### Speed Warm-Up:

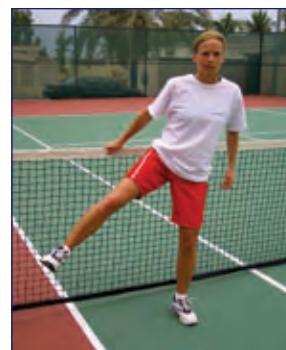
Here is a speed warm up that will help trigger your central nervous system



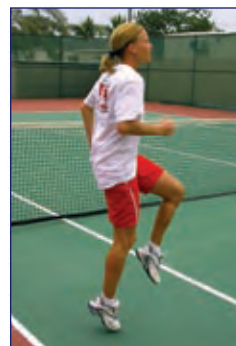
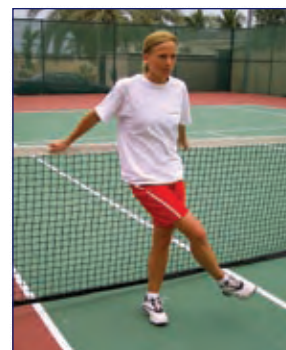
BRING YOUR KNEE UP TO HIP HEIGHT, FIRST INSIDE, THEN STRAIGHT IN FRONT AND THEN OUTSIDE.



STAND TALL AND KEEP YOUR LOWER ABDOMINALS FIRED WHILE SWINGING LEGS.



STAND TALL AND KEEP YOUR LOWER ABDOMINALS FIRED WHILE SWINGING LEGS.



START SLOWLY AND GRADUALLY ACCELERATE UP TO 80% OF YOUR FULL SPEED AT THE 6-8 SECOND MARK.

(CNS). Do running on the spot "sewing machines" for 3 x 6-8 seconds at a medium tempo (60 % of full speed). Follow these with 2-3 x "sewing machine accelerations",

### Muscle Tendon Warm-Up:

You need to warm up the muscles and tendons as well. One of the best ways of doing this is to combine ricochet jumps and alternating lunges.

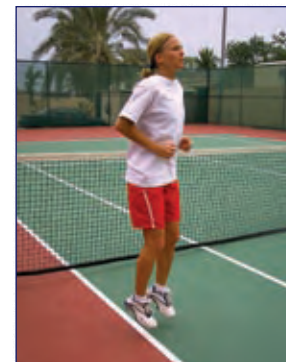
Ricochet jumps are done in place as follows:

- 2 x 20 jumps at personal rhythm
- 2 x 20 as fast as possible (short ground contact).

Alternating Lunges are done in place. Gradually increase depth of lunge (don't go past 90 degrees), keep knee lined up over toes. Try 2-3 sets of 10 reps.

### Pre-Hit Conform Stretching:

Dynamic warm-up is your best activity before playing. However once you are warmed up you can do some gentle conform stretches to maintain muscle length or stretch out muscles



STAND TALL & HAVE SHORT GROUND CONTACT.



HOLD THE STRETCHES FOR 15 - 20 SECONDS ONLY AT THE POINT OF TENSION ONLY (NEVER PAIN).



that still feel tight. These types of stretches are gentle moving stretches that are not aggressive enough to tear and weaken muscle fibers.

***Now you're ready to step on the court!***



Carl Petersen P.T. is a Partner and the Director of High Performance Training at City Sports & Physiotherapy Clinics. He and coach/exercise model Nina Nittinger have a new book coming out in Spring 2006. ***Fit to Play-Tennis High Performance Training Tips.*** For info visit [www.fittoplay.com](http://www.fittoplay.com) or call (604) 606-1420.

