

**Prevent injuries and increase your performance on court. Prepare your body ahead of time!**

# PREPARE FOR SURFACE CHANGES

As a player, you've felt the different demands on your body when you switch court surfaces from hard court to clay or from clay to grass, and onto other surfaces. So it's not surprising to learn that there is a certain trend in the injuries that the Primary Health Care Providers (PHCPs) and Massage Therapists (MTs) see every year related to changing court surfaces.

## Rubberized Courts, E.G. "Rebound Ace"

### Surface Characteristics

These courts get sticky when the weather heats up. They are primarily located in Australia, New Zealand, and parts of Asia, and are played during the start of the season - when it's hot outside!

### Common Injuries

- Blisters
- Overuse muscle injuries in the lower limb from eccentric loading, e.g. shin soreness, Achilles tendon, and patella (knee cap)
- Sprained ankles or knees
- Twisting/torquing injuries to the low back and sacroiliac (SI) joints



### Preventative Solutions

- **Shoes** - Break in several pairs of new shoes BEFORE playing on this surface, new soles will stick more. Manually scuff the soles of your new shoes; don't wear old worn out shoes!
- **Prevent Blisters** - Wear two pairs of socks with wicking material; change wet socks during a match; use petroleum jelly, padding, or "Second Skin" for known problem areas; shave down calluses; make sure your orthotics fit correctly and remove them from shoes to dry after each match and training session.
- **Specific Footwork** - Footwork drills in your training should mimic the type of footwork you will need on the court.
- **Strengthen** - Strengthen the muscles in your lower leg and foot (especially the peroneals, and arch) and work on your balance to help prevent ankle sprains and shin soreness. Practice your exercises to increase your core stability.
- **Extra Stretching** - For all lower limb and back muscles. Focus on calf muscles, iliotibial band (ITB), gluteals, piriformis, and the muscles along the side of your trunk (lats and quadratus lumborum).
- **Active Recovery** - Regular massage helps your body adapt to playing on the rubberized hardcourts. Hydrotherapies, such as hot and cold showers or baths with Epsom salt also help to reduce post-match muscle soreness.

## Clay Courts

### Surface Characteristics

Clay courts are slow, and the ball bounces higher. Balls tend to be heavier due to the clay. Rallies tend to be longer on the clay with more lateral (side-to-side) movement across the baseline.



### Common Injuries

- Repetitive overuse injuries in the upper limb, due to longer rallies and heavier balls.
- Groin injuries due to overstretching when sliding/ sudden stopping/ change of direction.
- Shoulder, wrist, and elbow injuries from lack of endurance and strength of scapular stabilizers.
- Mid and low back problems for the above reasons.

### Preventative Solutions

- **Strengthening Exercises** - Light weight/ high repetition exercises through the entire range of motion to build muscle.
- **Extra Stretching** - For the forearm, wrist, specific shoulder muscles & adductor (groin) muscles.
- **Specific Foot Work Drills** - To mimic what occurs on court.
- **Cardiovascular Training** - i.e. running, cycling, swimming, etc. for 20 minutes or longer, "interval training" (running between specific training drills) to mimic clay court movements and duration or rallies.
- **Balls** - Change balls frequently during practice sessions.

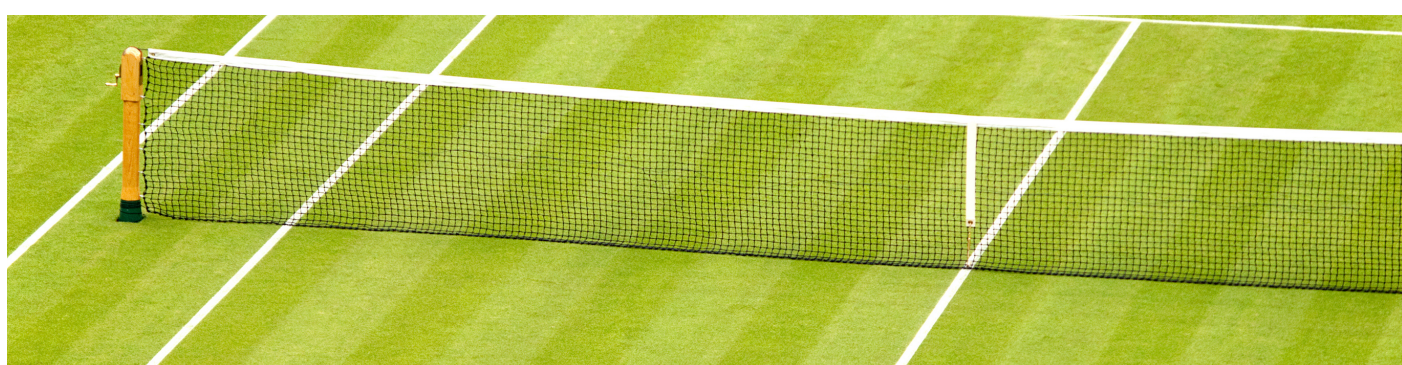
## Grass Courts

### Surface Characteristics

Grass courts are particularly fast and the ball bounces low. The lower bounce demands greater bending in the legs. Increased speed and explosive power are also needed to get to the ball faster.

### Common Injuries

- Painful gluteal (buttock) muscles and hamstrings due to the low bounce.
- Low back injuries due to reaching for the ball rather than bending the knees.
- Knee pain, especially in the patella, due to sudden stopping and the low bounce.
- Wrist pain due to increased amount of volleying.
- Strained muscles due to overstretching from slipping on the grass.
- Achilles tendon/ posterior ankle injuries due to sliding and sudden stopping along the baseline.



## Preventative Solutions

- **Drills:**
  - Legs - Incorporate low lunges (ball rolling routine); add explosive action and sudden stopping with low bending as if picking up a low volley.
  - Wrist - Extra volley drills using a racquet cover to add weight and help strengthen wrist and forearm muscles.
- **Strengthening & Stretching:**
  - Knees & Legs - Strengthen the quadriceps (VMO) and gluteus medius, add extra stretching for the IT Band, quadriceps, calves, and hamstrings to prevent knee pain.
  - Core Stability - Focus on your core stability exercises for the trunk, glutes, and shoulders.
  - Shoulder - Work with Therabands through a mid and full range of motion to prepare for the shorter strokes on grass.
- **Active Recovery:** Use hydrotherapy such as hot and cold showers/baths and Epsom salt baths to help prevent post-match muscle soreness. For the first week on grass, use these methods daily.
- **Massage:** Have regular massage throughout the grass court season. At least every other day.

## Hard Courts

### Surface Characteristics

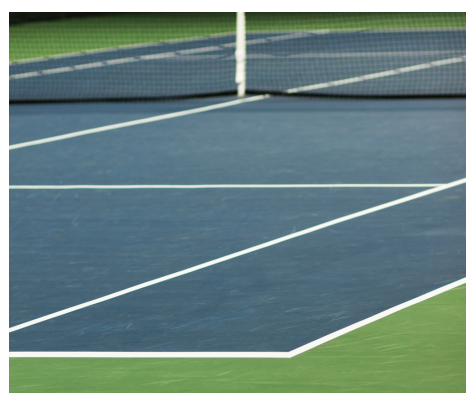
Hard courts are just that - HARD! All the pounding is tough on your joints and muscles.

### Common Injuries

- Low back aches and pains
- Shin soreness and arch pain
- Knee pain, especially in the patellar region
- Blisters

### Preventative Solutions

- **Crosstrain** - Add variety to your cardiovascular training. More running just adds to the pounding. Try biking or swimming instead.
- **Strengthening** - For low back & pelvis stabilizing muscles (deep abdominals and back extensor muscles).
- **Active Recovery** - Use hydrotherapies, hot and cold showers, and baths to help prevent post-match soreness.
- **Massage & Stretching** - These are important when you're playing on hard courts. Have a massage every other day.



## Indoor Courts

### Surface Characteristics

Indoor courts are hard and fast. Preparation should be a combination of your preparation for grass and hard courts.



## Specificity

**There is one common training factor for all of these surfaces: SPECIFICITY.**

- Your training drills should be tailored to mirror what actually occurs on the court.
- Different surfaces will place different physical demands on your body. The PHCPs can give you specific exercises to make your transition from one surface to another smooth and injury-free.
- If you have a recurring problem each year on a particular surface, then you especially need to prepare for the change.
- See the PHCP a few weeks BEFORE you change surfaces to begin your specific preparation program and at the end of the year to prepare for your off-season training.
- Other factors need to be taken into account when preparing for court surface changes, e.g. time of year, climate, tournament schedule, current injury or illness, and your baseline core stability level. The PHCP will discuss these with you and incorporate specific factors relevant to you and your body as part of a specific preparation program.