

# McCaw on Core

## Tennis Performance training

**Dramatically improve your performance on the court by strengthening your core!!**

**In this edition performance specialist Allistair Mc Caw of Athletes' Conditioning talks about the importance and advantages of having core strength. No matter what our level, ability or age may be, he outlines that you can improve your performance on the court by doing exercises on a swiss ball to strengthen our core.**

For the last few years, the fitness buzz has been about **core training**. Simply understood core training is the **strengthening of the muscle groups that stabilize your skeletal structure**. Every movement you do originates from the core, the area of your body consisting of the abdominals and lower-back muscles.

We all know of someone (possibly even yourself) who has experienced lower back pain or had an injury caused from playing a sport or taking part in an activity that involves some sort of movement.

Top ten players who have been set back by back or core related injuries this year include Britain's very own **Andy Murray**, Nadia Petrova and Martina Hingis. According to a recent study lower back injuries make up more than 37% of all injuries that occur in tennis and golf. The 2 main things these sports have in common is that they require the athlete to have a strong core due to the multiple planes of motions it takes to perform in swinging a racquet or golf club. Both sports involve the fundamentals of mobility and stability.

When mentioning the word core, most people straight away think about having a 6 pack (abdominals). However, for the tennis player the main goal should be injury prevention, improved stability, mobility and better movement skills.

To optimise your performance in tennis you not only need a strong core, but also strong hips and shoulders. Movement doesn't come just from your arms and legs, it also comes from what they're attached to. Another study done on tennis player's in the United states showed that those who did core exercises at least 3 times a week for 15 minutes had 40% better chance of not having shoulder problems than those who didn't. Simply explained, when you are able to rotate efficiently and generate power from your core you take added stress and overload away from the shoulder/rotator area.

### **The core is the body's centre of power**

Proper tennis performance training requires power, stability, mobility, balance and agility in 3 planes of movement. Multidirectional training requires movements passing through multiple planes of motion or using numerous joints and groups of muscle. In tennis, mobility and stability form the fundamentals of good movement and by exercising on a tool such as the swiss ball, it really challenges the body in 3 dimensions and strengthens the core muscles.

When designing programs for my athletes, I like to include core training at least 3 times a week into their routines. At **Athletes' Conditioning** we call it "Prehab", taking care of possible breakdown areas or injuries before they happen. In combination with

the swiss ball, core exercises are also performed with medicine balls, dumbbells, the "Bosu ball" and mat work.

In tennis, I cannot emphasize the importance of having good **core rotational power**. Core rotational power is the ability to rotate (turn) or transfer weight explosively in a transversal pattern with the help of the hips and torso.

When I started working with top 10 player Dinara Safina, I analysed the way she hit the ball and decided to include more core rotational exercises into her training program. Dinara felt the difference instantly and loves to work out on the ball to her favourite music!

She experienced more power in her strokes and felt less strain on her shoulder/rotators. Also with Dinara being a tall (1m83) and well built athlete, her stronger core muscles enable her to expend less energy by moving more efficiently.

### **The outer appearance of a person's body does not necessarily reflect the inner strength of their core**

The thing I love about having my athletes work on the swiss ball is that it involves their full focus and concentration. I have seen some very impressive muscular athletes look like drunk sailors trying to balance on the ball doing a simple exercise. Keeping one's balance and stability on the ball requires recruiting multiple muscles and full concentration. It's a very thoughtful, awareness centered activity and helps develop a **mind-body connection**.

Other advantages of having a stronger core is that it helps correct postural imbalances, prevents injuries and develops efficient functional movement patterns. A well trained core holds the body stable and balanced, whether it is stationary or in dynamic motion.

Exercises can be made more challenging with adding things like balance discs to really test an individual's true core stability.

All movement originates from the centre and with this in mind I like to remind my athletes that they need to work their bodies from the inside out!

### **Mc Caw says: "Work your body from the inside out"**

Not only do tennis players benefit from increased functional strength of all of the muscles of the core, it is for anyone who simply wants to improve their lifestyle by having a more healthier and stronger body. I have a client who is 67 years of age who had back problems until he discovered the benefits of working out on a swiss ball and now swears by it!

I can promise you that by just doing 15-20 minutes of core exercises on a swiss ball 3 times a week will dramatically improve the way you feel and enhance your game. The best news is that a swiss ball is versatile, practical and affordable. You can do your exercises in front of the tv, at the office or at the gym.

### **Benefits of a stronger core**

- improved posture
- improved muscle strength and endurance
- improved direction change
- improved joint and muscle position sense
- improved movement efficiency

- improved dynamic balance

### **Swiss Ball Precautions**

- Clean ball from sweat to avoid slipping off
- Avoid sharp objects and a rough under surface (floor)
- Start gradually and get a feel for the ball before progressing
- physical check-up for individuals new to exercise

### **Before You Start**

Choosing the proper ball size is important. When you sit on the ball, knees should be bent to 90 degrees with your feet flat on the floor.

### **Sizing**

<b>Ball size:</b>	<b>Individual Height:</b>
55cm	155cm - 172cm
65cm	172cm - 183cm
75cm	183cm - 200cm