

# BODY OF WORK

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BBC RADIO 5 LIVE



**When Novak Djokovic and Rafael Nadal battled for almost six hours in the final of the Australian Open earlier this year, it was the perfect illustration of how important the physical side of tennis has become. We delve into the unseen side of training for up-and-coming tennis stars.**

**When you admire the tennis played on these famous courts today, consider for a moment how such elite athleticism is possible. What do you see when you watch a top player? The obvious qualities are skill, accuracy, footwork, balance and speed – requirements of all successful tennis players since the beginning of tennis-time – but don't stop there. We need to add attributes not so obvious to the flitting eye; core strength, muscle flexibility, aerobic power, stamina and endurance plus, vital yet disguised, the power of recovery. These are the modern-day fitness essentials, which the 2012 tennis specimen simply cannot be without.**

"We talk a lot about developing the athlete before the tennis player," says Dr Karl Cooke, Sports Science Manager at the Lawn Tennis Association. "If you're not able to physically get into extreme positions and control the racket, you're not going to be able to execute the shot."

"Tennis becomes more physically demanding when you're more technically competent. With two top players who are so well matched, 30-shot rallies are not uncommon. The players are finding ways of playing shots they didn't think were possible

in the past. Young players see what is happening at elite level and think 'wow, that's changed the way I think about playing the game'."

Of course this is not a revelation. Ivan Lendl, it is generally considered, ushered in the modern-day fitness obsession with his rigorous training and attention to detail in the 1980s, Pat Cash used biometric training alongside his skill work, while Andre Agassi pounded up mountains and through deserts to emphasise the need to stay strides ahead of rivals. Yet as technology advances and knowledge grows, meticulous planning by federations such as the LTA means as much emphasis is being placed on sports science as traditional tennis coaching. Not a fad or luxury, just an essential part of player development.

The staff at Roehampton, all working for the benefit of British players, includes seven full-time strength and conditioning coaches,

four physios, three doctors, plus a nutritionist and psychologist. All under the watchful eye of Cooke who, with a strong tennis background, joined the LTA four-and-a-half years ago from the Singapore Sports Institute.

"The off-court work keeps your career going because lack of attention to conditioning often results in injuries," says Cooke. "We've had the odd player who hasn't reached their potential because their physical conditioning wasn't up to the rigours of the modern game. That's a missed

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opportunity. You put in the hard work on and off the court and you'll get results."

So what, for Cooke, is the key advice? And which are the key areas of work for the Sports Science team at the National Tennis Centre? ➤

### SCHEDULE AND TRAINING BLOCKS

"If you're playing futures and challengers you're playing most weeks of the year. You need some sort of plan. What's my favourite surface? What are my favourite tournaments? Where do I want to give myself the best chance? Taking a balanced approach is key. Look at periods of the year to take time out to rest but also take time out to develop yourself. It's not easy but I think the smart ones find a way and it is critical."

### BALANCING TRAINING AND RECOVERY

"By the time juniors are 14 they are going to have fitness blocks. Because everyone has a slightly different tolerance, we measure heart rate and saliva to see if we're getting the balance right. Saliva tests give a reading for IgA [Immunoglobulin, an antibody] which indicates their readiness to train and their relative recovery. Over a number of days, we'll see if the body has fully recovered from the previous day's training. If it's moderately high, your immune system is fully functional. If it goes very high, it's indicative that you might be fighting an infection while if it goes very low you may be stressed and need further time for recovery."

### BODY MANAGEMENT AND MUSCULAR SCREENING

"Minimising time lost to injuries is critical and the physios will be routinely screening players to see if they have a major risk to injury. Obviously the shoulder is heavily loaded when you're serving a lot. We will look for range of motion, flexibility and strength to make sure that it's not deteriorating over time. We'll be checking for a host of other common risk factors, screening them for the health of their bones and various blood tests. We measure their muscular fatigue as well, so we'll do some jump tests. That shows us if the muscles have recovered from strength training or endurance intervals. When you're a junior, you're growing, so the balance between the stress of training and your recovery time is pretty key."

### GENERAL STRENGTH AND CONDITIONING

"A lot of thought and work goes into individualising the programme of the specific player. All the information will be distilled down into trying to find exactly the right drills and exercises to help that individual develop. We'll go as far as using technology to assess speed of acceleration and position on the court. We might want to stimulate fatigue and overload during drills so we may use heart rate monitors or GPS devices. Sometimes there will be times we say: "just go and play" or "go for a run". It's great we have these tools and they help us to be specific but we want players to enjoy their training." Cooke knows he is in a fortunate position. Not every national federation can afford the facilities and staff he talks about. But he is proud of the work that's happening in British tennis. "I do think the scope of service we've put in place is leading the way in tennis," he suggests. "We know a bit about the guys at Tennis Australia, the French Federation and USTA. Most people would agree that we're going at things in a bit more detail. But that was the vision Roger Draper [LTA Chief Executive] had. It came from looking at other areas of British sport and when I compare what we're doing, which is excellent, to the work of my peers in rugby or cricket or cycling we've probably got room for improvement still." 🏆

