

Players like Nadal, Safin and the Williams sisters are naturally powerful while others have to work at it. Top British trainer **Paul Gold** explains how complex training is the simple way to develop power

# Maximum Power



## YOUR COACH



Known as the 'Power King', Paul Gold is a former international cricketer and karate brown belt who has a Masters degree in sports science.

He is an LTA CCA licensed tennis coach and fitness trainer to

the GB Tennis Girls, an Essex-based squad that provides support for world-ranked WTA Tour players as well as juniors and aspiring pros.

For further information visit [www.powerstennis.com](http://www.powerstennis.com)

Power is the most talked about feature of modern tennis. It is the one single component that has shaped the game we know today.

When we talk about power tennis (think Rafael Nadal, Marat Safin, Roger Federer, the Williams sisters and Maria Sharapova) it is the ability to accelerate and coordinate not only the racket, but also the movement of the relevant body parts that is crucial.

Power is determined by your ability to exert forces quickly. Genetics determines your potential for speed of movement and therefore your power. However, it is now known that even if you are not blessed with an initial abundance of fast-twitch fibres (type 2b) – the muscle type best suited to quick explosive movements – appropriate training can improve your situation.

It is possible to train in such a way that not only increases the number of fast-twitch fibres you have but also increases the speed at which they fire (work) and the rate at which you can access them during performance.

As power is a product of force

(strength) and speed, any increase in either of these components, especially speed, will improve your power. While training both components individually will lead to gains in power, training them together – a process called complex training – will give you the biggest increases.

Complex training is when a traditional resistance exercise is performed and immediately followed by a matched plyometrics (high-speed) exercise.

Following are some complex training exercises I use with the Tennis GB Girls squad players. Before attempting this kind of training it's crucial to perform a thorough warm-up routine first to prevent doing yourself serious damage.

To gain the most from these workouts it's important to be physically fresh (as well as highly motivated), so if possible avoid training hard for at least 48 hours before a complex session. Fast-twitch fibres are not magically recruited, you need to be focused and perform the exercises as explosively as possible.



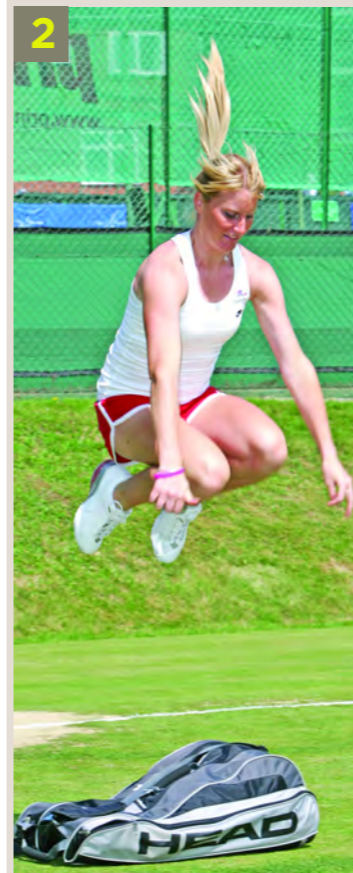
## 1 ABDOMINAL CRUNCH FOLLOWED BY MEDICINE BALL SIT-UP AND THROW

This sequence trains the abdominal muscles for core power. Start by lying on your back with your legs and feet up at 90 degrees with your feet crossed. With your hands on your temples (not behind the head) and abdominal muscles drawn in towards the spine, crunch up by raising



the shoulders off the floor, keeping the head still. Perform 15 repetitions.

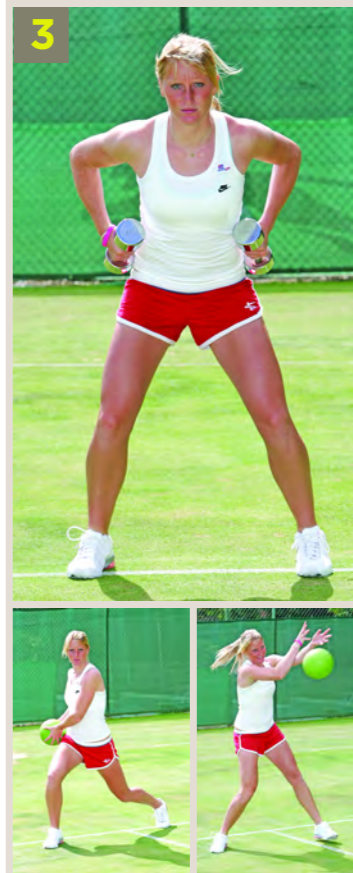
Immediately afterwards go to the same start position but with a medicine ball held in both hands behind your head. Sit up using your abs and throw the medicine ball powerfully towards a partner or against a wall. Do six throws, have two minutes rest and perform the sequence again.



## 2 LUNGES FOLLOWED BY BAG JUMPS

This sequence trains leg explosion and overall power. Start by standing up straight with hands on hips and lunge forwards until your front leg is at 90 degrees. Come straight back up to the start position, alternating legs for 12 reps.

Immediately afterwards stand with your feet together and knees slightly bent in front of a large racket bag and explode up, bringing your knees towards the chest and landing softly on the other side of the bag. Turn round and repeat for six jumps. Rest for two minutes and do the sequence again.



## 3 BENT OVER DUMBBELL ROWS FOLLOWED BY MEDICINE BALL FOREHANDS AND BACKHANDS

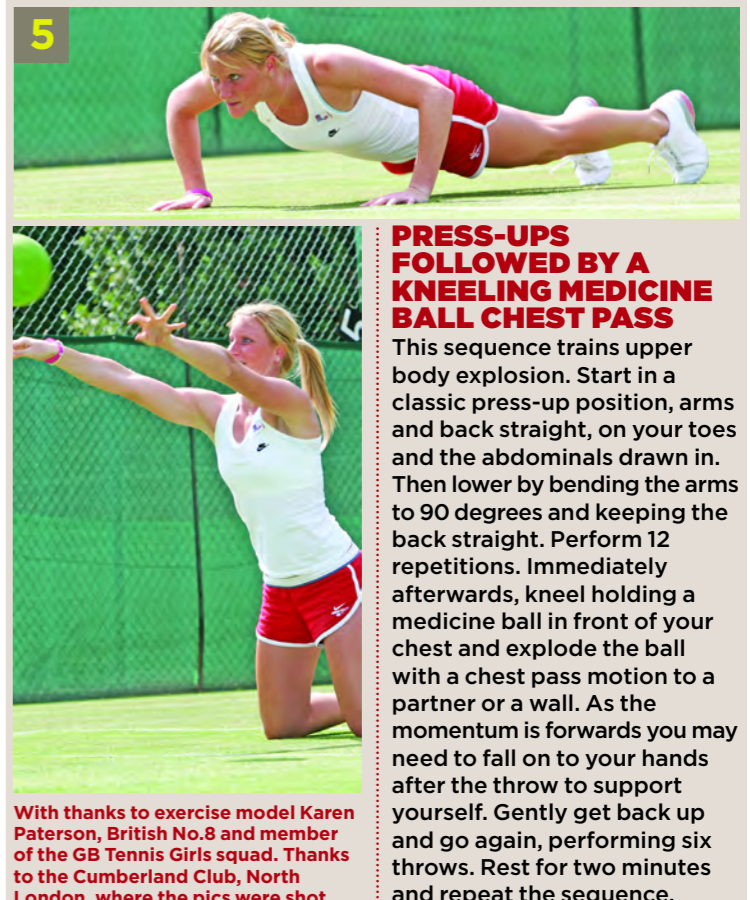
This is an upper body sequence, training the back muscles in order to provide power on groundstrokes. Start with your feet slightly wider than shoulder width apart with a slight bend in the knees. Bend over, keeping a straight back. Hold the dumbbells at full arms' length (see main pic opposite) then draw them up in rowing motions, keeping the arms close to your body, drawing your shoulder blades in together. Use a weight suitable for you to do 12 repetitions.

With no rest this is followed by a forehand throw with a medicine ball. Throw the ball against a wall or to a partner. Do six forehand throws followed by six backhands. Perform the whole sequence twice with two minutes of rest in between.



## 4 TRICEP DIPS FOLLOWED BY OVERHEAD MEDICINE BALL THROWS

This sequence trains overhead power. Using a bench or a step as we did, with your legs bent or outstretched and your weight supported on your hands (facing forwards not backwards) behind you, lower yourself until your elbows are at 90 degrees then come back up again. Perform 12 reps. Immediately afterwards, start in a standing position with a medicine ball behind your head and throw the ball to a partner or a wall as if you were doing a football throw-in. Do six throws, rest for two minutes and repeat the sequence.



## 5 PRESS-UPS FOLLOWED BY A KNEELING MEDICINE BALL CHEST PASS

This sequence trains upper body explosion. Start in a classic press-up position, arms and back straight, on your toes and the abdominals drawn in. Then lower by bending the arms to 90 degrees and keeping the back straight. Perform 12 repetitions. Immediately afterwards, kneel holding a medicine ball in front of your chest and explode the ball with a chest pass motion to a partner or a wall. As the momentum is forwards you may need to fall on to your hands after the throw to support yourself. Gently get back up and go again, performing six throws. Rest for two minutes and repeat the sequence.

With thanks to exercise model Karen Paterson, British No.8 and member of the GB Tennis Girls squad. Thanks to the Cumberland Club, North London, where the pics were shot.