



Physiological screening is increasingly regarded as crucial in safeguarding a junior performance player's tennis health. Heather Purchase reports

Looking out for junior

They say it takes at least 10,000 hours to become a world-class tennis player.

That means a child has to subject their body to an inordinate amount of stresses and strains from an early age if they're to stand half a chance of making the grade.

What kind of impact can all this twisting, turning, leaping, running, stopping, starting and stretching –

often hour after hour, day after day – have on a young person's body?

That's what physiotherapists Gillian Morgan and Rachel Sammes determine when young performance players come to them for 'screening' at The Abbey Clinic in the grounds of Bisham Abbey National Sports Centre, in Buckinghamshire.

Gillian, founder and Clinical Director of the privately owned

clinic, has been involved in the screening of thousands of young players at Bisham. She explains:

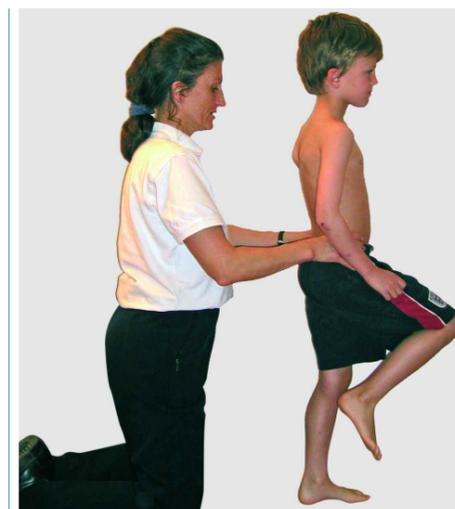
"Screening", or 'musculo-skeletal profiling', to use the official term, involves carrying out a number of tests on a player's body to determine issues such as alignment, muscle imbalances, motor control (patterns of movement) and, in the case of

young children, possible growth-related problems too.

"The reason we do so is to identify if there are any major movement dysfunctions that might need immediate referral. Referral can mean a specific exercise plan, physiotherapy or a recommendation that they seek other medical advice/treatment from an expert like a doctor or podiatrist."

Gillian adds: "The ultimate aim of screening is to make the player as mechanically efficient as they can be to improve their speed and agility around the court, thus maximising performance and preventing injury occurring."

"If, for example, a child has a muscle imbalance – a common problem in young tennis players – they'll also be more likely to have a poor movement pattern in one direction. This then heightens their risk of overloading a particular



joint or muscle, resulting in less efficient movement, reduced level of performance and possible injury.

"Screening will spot the risk of that area becoming a problem and then through a carefully devised training programme help correct the imbalance."

"Training" in the case of children doesn't mean lifting heavy weights in the gym, stresses Gillian. The exercises recommended are usually very 'low load' and will involve a lot of stretching, core stability (i.e. abdominal/trunk) training, and mobility and movement techniques – many of which can be performed at home.

"The exercises are designed to be interesting, relevant and fun, and progressed appropriately," adds Gillian.

A screening session takes about an hour with a physiotherapist who starts by discussing the child's past and any current injuries. The tests carried out determine posture, joint mobility, muscle flexibility, motor control and core stability. The physiotherapist will also look at how the player's joints are aligned while performing 'functional tennis movements' such as a forehand or serve.

The tests involve the child in various situations including standing still, standing on one leg, hopping, lunging, performing arm movements, running and walking.

Over the past five years the clinic has screened around 1,000 young performance tennis players – boys and girls aged 9 to 13, sent by the LTA, performance clubs and coaches from around the country.

Senior Physiotherapist Rachel Sammes suggests that children playing 10 or more hours a week



should be screened a minimum of once a year. It also helps if the player's coach is made aware of the findings and is available to talk on the phone regarding the player's style and movement on court.

"A yearly screening will highlight a problem or potential problem and the areas they need to work on," says Rachel. "It's the training that's carried out after the screening that's most important. A half-hour review session, whereby we measure the progress they've made some months down the line is also recommended."

"For those performing at the highest level of junior sport we recommend screening at least twice a year with reviews in between."

Rachel adds: "Working as a team with the child, parent and coach is the ideal situation and produces the best results."

Last year Rachel analysed a sample of 30 performance tennis

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players aged 10 to 13 who play 10 or more hours a week with physical training on top. Here are some of the key results:

- 56.7 per cent arrived with a problem with core stability compared to 98 per cent in 2002. Rachel puts the significant improvement over the four years down to the fact that there has been more awareness about the need to develop core stability in tennis players in recent years.
- 53.3 per cent had a problem with stability of their scapula, i.e. shoulder blade, which Rachel explains is a normal phenomenon in most kids. However, she stresses

Screening in action: Gillian Morgan puts a young boy through his musculo-skeletal paces; and left, Gillian and Rachel Sammes with one of the tools of the trade

that for a high-level young tennis player good scapula stability is vital to withstand the demands of the sport. Players start by performing simple low-load exercises before progressing onto other types of stability training.

● A significant number of children arrived at the clinic with tight leg muscles. These were found to be most common during a growth spurt. Rachel explains that if a child combines this kind of tension in their lower limbs with poor core stability then they have a high risk of incurring lower back problems and knee injuries.

● Half the children reported that they had been injured at some stage during their playing career – the most significant areas being lower back (20 per cent), knee (16 per cent), ankle (10 per cent) and shoulder (10 per cent).

● Of the children who had reported an injury on their arrival at the clinic, 73 per cent reported the problem had been resolved at the time of their review appointment.

The Abbey Clinic is a multi-disciplinary clinic for athletes and the wider community. Services include physiotherapy, osteopathy, sports massage, podiatry, nutrition advice, clinical pilates, tai chi, acupuncture and cranio-sacral therapy. A screening session costs approximately £75 and £41 for a review. Tel: 01628 481866, email: enquiries@theabbeyclinic.co.uk, web: www.theabbeyclinic.co.uk