

## How Young is *Too Young*?

Many young enthusiasts are itching to get on court as early as possible, but establishing the correct age to begin a formal coaching program can be a dilemma for both parents and coaches. **By Dr. Sarah Morante**

“**A**t what age do you start coaching children?” It’s a question that is constantly asked of tennis coaches, and at times one that even coaches themselves will ponder.

The answer varies widely depending on the coach – some are happy to take on any client whilst others prefer to wait for the child to start school or to reach a certain age. One area that shows little variation is the starting ages of the world’s top players. Most of today’s professional players began tennis at a very young age – Rafael Nadal started playing at age four, Roger Federer as a six-year-old and Serena Williams contested her first tournament when she was just four-years-old.

Many Australian coaches are reluctant to take on young students for fear of burnout – but is this one of the multitude of reasons behind our lack of players on the professional tour?

So what age is best to start having formal tennis lessons?

### Foundations of movement skills

In order to perform a more specialized movement skill like a forehand, a child must first possess the required physical, physiological and psychological maturity (*foundations of movement skills*). These foundations of movement skills are not necessarily linked to chronological age, a fact that is particularly evident among physical factors such as height and weight, which may be significantly different between two children of the same age. Therefore, coaches should use the foundations of movement skills, or biological age, as a measure of a child’s readiness to participate in tennis rather than chronological age.

Stature is the most obvious and easily measured foundation skill, and also tends to have the greatest impact on a child’s motor success. Stature consists of height, weight, body proportions and body composition. Larger children often demonstrate more successful motor skills simply due to their size advantage – longer legs improves running, jumping and kicking performances whilst longer arms improves throwing and striking skills.

The increase in limb lengths that occurs during a child’s growth produces dramatic changes in their overall body proportions. The child changes from a chubby, “top heavy” toddler shape that is characterized by a relatively large head and trunk to become more elongated and lean. This transformation improves the previously mentioned skills in addition to increasing balance, stability and posture.

The change in body composition that is associated with a child’s growth and maturation is characterized by a reduction in body fat (“puppy fat”) and an increase in muscle mass to approximately 30 percent of body weight. This facilitates motor performance by adding strength and endurance. Therefore, it is important to consider the physical appearance and thus, biological age, of a child when assessing their ability to start tennis coaching.



Physiological foundations of movement skills may be less obvious, yet still play an important role in a child’s sports performance. Cardio respiratory function is directly associated with the size of the heart and lungs, which themselves are proportional to overall body size. A larger heart would in turn reduce heart rate during physical activity, which serves to make a given exercise intensity easier and enables the child to work at a higher maximum intensity.

Similarly, respiratory function improves as the lungs become larger and the number of alveoli (the area in the lungs where air is transferred into the bloodstream) markedly increases (from 20 million at birth to 300 million by 8 years of age).

Finally, body size also influences a child’s visual function. Before approximately seven years of age, children are long-sighted due to the small size of their eyeballs, which prevents the fusion of each eye’s image. Clearly, this is important for performance in tennis where the ability to track the tennis ball is paramount.

The psychological foundations of movement are also a critical variable in the ability of a child to undertake tennis lessons. A

