



# The benefits of multi-sport participation for youth tennis players

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## ABSTRACT

Over the past decade, there has been a lot of debate about the topic of early sport specialization. In this article we review some of the current research as it relates to tennis and provide recommendations for multi-sport participation to help reduce injuries, improve overall sport skills and allow for the enjoyment of lifetime physical participation. In addition, we share our goals for young tennis players of all levels and provide specific coaching tips.

**Key words:** multi-sport participation, sport sampling, early sport specialization.

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## INTRODUCTION

Over the past several decades we have had the opportunity to travel the world in a variety of different capacities related to the tennis business. This includes participating in the fields of coaching, coaching education, sport science and medicine as well as serving in several administrative roles. In these roles we have come to love and understand the sport from different perspectives and enjoy its many benefits, and we wish to share that passion around the globe. Coaches have this same opportunity, particularly as it relates to introducing young kids to the sport of tennis and teaching them the skills necessary to enjoy the game for a lifetime. Together, and hopefully with the help and support of the ITF, we are interested in achieving the following six goals:

- Attract kids to sports and in our case, specifically tennis.
- Retain kids in tennis as long as possible.
- Maximize their talent development to the highest level they seek and show the ability to achieve.
- Lay the foundation for a lifetime of physical activity by promoting and guiding kids towards a physically literate lifestyle.
- Provide for an injury free training and competition environment.

- Introduce kids to a variety of sports and physical activities starting at a young age.

Coaches certainly can play a significant role in achieving these goals by providing a healthy, positive and educational environment conducive to proper skill development while coach educators and tennis researchers should support this effort by: 1.) continuing to provide a greater body of knowledge in the fields related to coaching education; 2.) sharing practical applications in a userfriendly manner based on solid research as well as best practices; and, 3.) developing an age-appropriate body of knowledge to coach educators of all levels (Roetert & Bales, 2014).

One area of concern that each of these groups (coaches, coach educators and tennis researchers/scientists) have been addressing, particularly over the past decade, is the trend toward "single sport specialization" at young ages often based on guidance from coaches or parents who want to maximize the potential of kids to become elite athletes. Unfortunately, the results of this approach can potentially lead to a shortened career in sports and perhaps any physical activity due to physical overuse injuries or psychological burnout. Gould and colleagues (1996, 1997) studied burnout in youth tennis players and concluded that burnout is caused by the combination and interaction of four factors; physical injury or fatigue, logistical concerns and time demands, social



demands of family and peers, and psychological concerns such as pressure from competitive results and rankings. Often, a lot of money, time and effort is spent achieving success even if athletic talent or skills to reach the highest levels are not present, which potentially leaves the players with limited possibilities for other lifetime physical activities.

The extent to which youth athletes need to specialize at a young age is one of the most thought-provoking and relevant debates in youth sport today, and researchers from around the world have contested the question for decades (Horton, 2012). However, based on recent research, we believe that the strategy of “sport sampling” has many advantages, particularly (but not exclusively) as it relates to younger age-groups. In fact, early sports sampling and diversification does not seem to hinder success in sports where peak performance is reached after full maturity. Furthermore, sports diversification at younger ages appears to be positively linked to a longer sports career, a lifetime of physical activity and better overall health and wellness. (LaPrade et al, 2016, Coté et al. 2009). At the same time, there are certain sports including women’s gymnastics, figure skating, diving and dance that may require earlier sports specialization (before age 12) by younger athletes because peak performance usually occurs in the middle and late teens before full maturation. Early specialization in these sports has been found to be a strong predictor of success at the elite levels. (Coté et al. 2009).

## REDUCING INJURIES

In reviewing the literature, we are seeing that athletes in individual sports like tennis are more likely to specialize in a single sport than team sport athletes. There is also clear evidence that there is an increased risk of overuse injuries among young athletes who participate in single-sport specialized training (LaPrade et al, 2016, Jayanthi et al, 2015, Goodway & Robinson, 2015). Likely, one of the main reasons is that single-sport specialized athletes 25th Year, Issue 75, August 2018 15 have higher training volumes (Pasulka, 2017), although several other studies already referenced did adjust for age and training volume. Therefore, there might still be an independent risk for sport specialization. Even though early specialized training in individual sports such as tennis has

shown evidence of leading to risks of both overuse injuries and burnout in adolescent players, most of that research to date has focused on young male athletes. A recent study by Jayanthi & Dugas (2017) however highlights emerging evidence of similar patterns based on early sport specialization in adolescent female athletes as well.

As a tennis coach, you and the parents of players need to be mindful of the total volume of tennis by keeping accurate records of a player’s training time, intensity (match play vs. practice) and frequency daily, weekly and monthly. At the same time, while there is no perfect magic formula for optimal tennis training, you should be aware of the player’s level of intrinsic motivation, energy level expended and apparent enjoyment. Determine these factors through your observation, elicited comments from players and parental evaluation. Set aside at least an hour monthly to review this data together with the player and parents and agree together on a training plan for the upcoming weeks. In addition, you should monitor players who participate in more hours per week than their age, for more than 16 hours per week in intense training, and who specialize in just tennis for indicators of burnout, overuse injury, or potential decrements in performance due to overtraining. (Jayanthi et al, 2011 and 2015). Based on research by Jayanthi et al. (2011 and 2015), tennis training each week should be guided by the chronological age versus the training hours. This general rule will reduce the chance of the occurrence of overuse injuries and subsequent time off from training.

### Coaching tip 1

Young players should follow the age versus hours rule. Train no more hours per week than actual age. For example, a 12 year old player should be limited to a maximum of 12 hours of tennis training per week.

### Coaching tip 2

In addition to adjusting and moderating frequency, volume and intensity of training based on players’ age and time of season, emphasize sound stroke and movement technique to help mitigate injury risk. An example of limiting intensity of training is to limit the number of competitive tournaments/matches within a year and within each month to allow sufficient “recovery time” not only physically, but also emotionally and psychologically. Another key factor is to deliberately schedule several weeks of no tennis training periodically each year.

## IMPROVING SPORT SKILLS

The term “fundamental motor skills” has been used for many years particularly as it relates to teaching young people key physical skills to be successful for a lifetime. A recent study suggests expanding that term to “foundational movement skills” to better recognize physical activities across the lifespan, potential cultural and geographic variations as well as the synergism between physical and psychological factors. Hulteen et al. (2018) propose that this change to help advance the application of motor development principles within the public

health domain. Examples include resistance training movements, swimming strokes, and riding a bicycle. This idea appears to be very much in line with the concept of “Physical Literacy” which was discussed in the August 2016 issue of the ITF Coaching and Sport Science Review (Roetert et al., 2016). Physical Literacy is defined by the International Physical Literacy Association as the motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life (IPLA, 2016; Roetert, et al, 2018). Both concepts highlight a holistic approach to physical activity (physical and psychological), recognizing the benefits of multi-sport participation (sport sampling) and an overall focus on providing health benefits of participation across the lifespan.

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#### Top 10 Benefits of multi-sport participation

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- Greater overall athleticism
  - Improved foundational motor skills and transferable skills
  - Lower chance of drop-out
  - Increased fun and enjoyment
  - Wider circle of social relationships
  - Reduced chance of overuse injuries
  - Longer sport career and involvement
  - Promotion of life long physical activity skills
  - Greater intrinsic motivation
  - Opportunity to learn new sports
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Table 1. Top 10 benefits of multi-sport participation

At the elite level of performance, the current recommended model is a specialized sampling model, at least as recommended for football (soccer in the U.S.). This model, as described by Sieghartsleitner et al, 2018), allows for a specialized sampling model with a high degree of domain specificity within early sport participation (specialization), which is enriched by a sport-specific diversity resulting from a broad range of settings within the sport (sampling). We certainly hope and recommend that this type of study can be replicated focused on tennis players. Realizing that not every junior player is going to be a world-class competitor, these are important concepts to recognize for all tennis coaches. The term “sport sampling” is appropriate as it allows the athlete to focus on their main sport while enjoying participation in other sports and activities as well. Young athletes introduced to sport sampling are more likely to continue to participate in physical activities as they get older (Gallant et al, 2017).

At some point, elite athletes will have to decide to choose their best sport and devote their energy and effort through a deliberate practice and playing routine along with increased challenges in competitive tournament play. Other sports and

physical activities can still play a role at a more recreational level during days or periods of recovery and rest from tennis training. The optimal time for sport specialization seem to be during the ages of 12- 15 with individual variation based on overall maturity physically, emotionally, mentally and socially. Females generally mature a bit earlier than males but by about age 16, serious athletes typically immerse themselves in their sport of choice.

#### Coaching tip 3

Consider recommending other sport activities to your players that will help develop foundational athletic skills especially those that might transfer to tennis skills. For example, soccer, basketball, hockey, volleyball, baseball/softball movement, throwing, catching skills.

#### Coaching tip 4

Recommend varying experiences so that kids sample a team sport. This approach broadens and supports overall athleticism, physical skills, game sense and application of strategy and tactics.



#### ENJOYING LIFETIME PARTICIPATION

The benefit of participating in physical activity as players get older should not be underestimated. Tennis is a fantastic sport for a lifetime and competitions are available for many different age groups. In fact, research indicates that the more favorable the sports experience is for young athletes, the greater the chance that these athletes will participate in physical activity as an adult (Miller & Siegel, 2017). In addition, these authors highlight that coaches and parents should focus on the experience of youth sports above and beyond wins and losses. A positive experience with youth sports can last a lifetime. Again, this is very much in line with the concept of “physical

literacy”, which focuses on physical activity as a lifetime journey (Roetert et al, 2018) as well as “foundational movement skills”, which touts how various movement forms support and maintain a lifetime of physical activity (Hulteen, 2018).

### Coaching tip 5

Consider at least an introduction to other sports and skills that are likely to be accessible and prepare for lifetime activities such as: swimming, cycling, tennis, golf, yoga, martial arts, and various fitness activities for strength, flexibility and aerobic endurance.

### Coaching tip 6

Allow your players to seek out opportunities to widen social network, meet new coaches, form new friendships with kids in other sport activities. This can assist in avoiding emotional-social burnout due to immature self-concept and confidence, social cliques and friendships just within the tennis community.

### Coaching tip 7

Avoid mental burnout due to the same routines, lack of variety in practices, and natural learning and performance plateaus which may cause staleness. Allow time for healthy recovery and rest from sports and competition.

## SUMMARY COMMENTS

Sports specialization has been defined as intensive, year-round training in a single sport at the exclusion of other sports (Jayanthi et al, 2013). Sports medicine/science experts have found that there has been an increase in sports specialization over the years which in turn likely increases the risk of injury and burnout in young athletes. In addition, significant financial resources and time may be allocated by families to support these specialized training patterns (Jayanthi et al, 2018). These concerns certainly affect the sport of tennis and we believe the readership of this publication (tennis researchers, coaching educators and coaching experts from many different countries) can help make a difference with organizations as well as players they reach throughout the world. Much work must still be accomplished in order to maximize the positive tennis experience for young players. This certainly includes conducting, promoting and sharing research related to early childhood sport specialization. We hope to be able to provide you with an update on future findings in the upcoming years. In the meantime, consider the six goals that we addressed as well as the recommended coaching tips for your players.

## REFERENCES

Coté, J., Lidor, R., & Hackfort, D. 2009. ISSP Position Stand: To Sample or to Specialize? Seven Postulates About Youth Sport Activities that Lead to Continued Participation and

Elite Performance. *International Society of Sports Psychology*. (ISSP).  
<https://doi.org/10.1080/1612197X.2009.9671889>

Ericsson, K.A., Krampe, R.T. & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*. 100:363-406.  
<https://doi.org/10.1037/0033-295X.100.3.363>

Gallant, F., O’Loughlin, J.L., Brunet, J., et al. (2017). Childhood Sports Participation and Adolescent Sport Profile. *Pediatrics*. 140(6):e20171449.  
<https://doi.org/10.1542/peds.2017-1449>

Goodway, J.D. & Robinson, L.E. (2015). Developmental Trajectories in Early Sport Specialization: A Case for Early Sampling from a Physical Growth and Motor Development Perspective. *Kinesiology Review*. 4, 267 - 278. <http://dx.doi.org/10.1123/kr.2015-0028>  
<https://doi.org/10.1123/kr.2015-0028>

Gould, D., Tuffey, S., Udry, E., & Loehr, J. 1996. Burnout in competitive junior tennis players: Qualitative content analysis and case studies. *The Sport Psychologist*, 10, 341-366. <https://doi.org/10.1123/tsp.10.4.341>

Gould, D., Tuffey, S., Udry, E., & Loehr, J. 1997. Burnout in competitive junior tennis players; Individual Differences in the burnout experience. *The Sport Psychologist*, 11, 257-276. <https://doi.org/10.1123/tsp.11.3.257>

Horton, S. (2012). Environmental influences on early development in sport experts. In Baker, J., Cobley, S. S. & Schorer, J. (Eds). *Talent Identification and Development in Sport: International Perspectives*: New York: Routledge.

Hulteen, R.M., Morgan, P., Barnett, L.M., Stodden, D.F. & Lubans, D.R. (2018). Development of Foundational Movement Skills: A Conceptual Model for Physical Activity Across the Lifespan. *Sports Medicine*.  
<https://doi.org/10.1007/s40279-018-0892-6>

International Physical Literacy Association (2016). Definition of Physical Literacy. <https://www.physical-literacy.org.uk/>.

Jayanthi, N., Dechert, A., Durazo, R., Luke, A. (2011). Training and specialization risks in junior elite tennis players. *Journal of Medicine and Science in Tennis*. 16:14-20.

Jayanthi, N., Pinkham, C., Dugas, L., Patrick, B. & Labella, C. (2013). Sports specialization in young athletes: evidencebased recommendations. *Sports Health*. 5:251-257. <https://doi.org/10.1177/1941738112464626>



- Jayanthi, N.A., LaBella, C.R., Fischer, D., Pasulka, J. & Dugas, L.R. (2015). Sports-specialized intensive training and the risk of injury in young athletes: a clinical case-control study. *American Journal of Sports Medicine*. 43:794-801. <https://doi.org/10.1177/0363546514567298>
- Jayanthi, N.A. & Dugas, L.R. (2017). The Risks of Sports Specialization in the Adolescent Female Athlete. *Strength and Conditioning Journal*. 39(2) 20-26. <https://doi.org/10.1519/SSC.0000000000000293>
- Jayanthi, N.A., Holt, D.B., LaBella, C.R. & Dugas, L.R. (2018). Socioeconomic Factors for Sports Specialization and Injury in Youth Athletes. *Sports Health*. (In Press). <https://doi.org/10.1177/1941738118778510>
- LaPrade, R.F., Agel, J., Baker, J., Brenner, J.S., Cordasco, F.A., Coté, J., Engebretsen, L., Feeley, B.T., Gould, D., Hainline, B., Hewett, T., Jayanthi, N., Kocher, M.S., Myer, G.D., Nissen, C.W., Philippon, M.J. & Provencher M.T. (2016). AOSSM early sport 25th Year, Issue 75, August 2018 17 specialization consensus statement. *Orthopaedic Journal of Sports Medicine*. 4(4): 2325967116644241. <https://doi.org/10.1177/2325967116644241>
- Miller, S.M. & Siegel, J.T. (2017). Youth sports and physical activity: The relationship between perceptions of childhood sport experience and adult exercise behavior. *Psychology of Sport and Exercise*. 33, 85-92. <https://doi.org/10.1016/j.psychsport.2017.08.009>
- Pasulka, J., Jayanthi, N., McCann, A., Dugas, L.R. & LaBella, C. (2017). Specialization patterns across various youth sports and relationship to injury risk. *The Physician and Sportsmedicine*. <https://doi.org/10.1080/00913847.2017.1313077>
- Roetert, E.P. & Bales, J. (2014). A Global Approach to Advancing the Profession of Coaching. *International Sport Coaching Journal*. <https://doi.org/10.1123/iscj.2013-0026>
- Roetert, E.P., Kovacs, M., Crespo, M. & Miley, D. (2016). The role of tennis in developing physical literacy. *ITF Coaching and Sport Science Review*. 69 (24): 3 – 5.
- Roetert E.P., Ellenbecker, T.S. & Kriellaars, D. (2018). Physical Literacy: why should we embrace this construct? *British Journal of Sports Medicine*. Epub ahead of print: April 13. <https://doi.org/10.1136/bjsports-2017-098465>
- Sieghartsleitner, R., Zuber, C., Zibung, M. & Conzelmann, A. (2018). "The Early Specialised Bird Catches the Worm!" – A Specialised Sampling Model in the Development of Football Talents. *Frontiers in Psychology*. 9, 1-12. <https://doi.org/10.3389/fpsyg.2018.00188>

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