

The Concept of Sport Sampling Versus Sport Specialization: Preventing Youth Athlete Injury: A Systematic Review and Meta-analysis

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Review by Jeffrey Pentek, DPM

This article looks at the incidence of injury of youth in sports, comparing those that specialize in one sport versus those that are involved in multiple (sample). A systematic review was conducted of the literature looking at studies that reported injury rates on athletes between 7-18 years of age and specifying whether the athletes were sport specialists or samplers. 6 studies met the inclusion criteria. Involved studies used either a self-classification scale (comparing single to multisport athletes) or a 3-point specialization scale (comparing sport samplers, sport specialists, and “others” that were not able to be classified as true samplers or specialists). Total number of participants was 5736, of which 42.7% were sport samplers, 28.4% were sport specialists, and 28.9% were considered “others.” Average age of the athletes was 14.6 years. Sport specialists had a significantly higher injury risk than samplers (RR, 1.37; 95% CI, 1.19-1.57; $P < .0001$). There also was a higher risk of injury in the “others” group compared to samplers (RR, 1.21; 95% CI, 1.14-1.29; $P < .005$), as well as specialists over “others” (RR, 1.09; 95% CI, 1.04-1.14; $P < .005$).

This article is a good reinforcement of what we already assumed to be true, asserting that it is beneficial to have young athletes involved in multiple sports as they continue to develop. Sport sampling is known to have a 2-fold effect on decreasing injury. By engaging in multiple sports, multiple muscle groups are being worked, which leads to increased whole-body strength, speed, and endurance that can be protective to injury. It also lends more time for recovery when time is divided between sports, allowing less single-action repetitive motions that may lead to overuse. The article also cites a decrease rate of sport burnouts, enhanced leadership skills, and improved social skills as other known benefits of sport sampling. While this may make sense logically, it can sometimes be a difficult thing to follow for those athletes that have a specific interest in a single sport, especially if they may be looking down the line for a potential collegiate scholarship or endorsement deal. Managing parent/coach influences can also host its own difficulties. Articles like this can be used as a starting point in the conversation.

For my athletes, I try to make a point to educate. It is important to treat them for their current issues but it is also equally important to look at methods to prevent injury in the future. Get to know your athletes. What are their interests? What are their goals? If you can find ways to diversify their repertoire, it may help them grow as an athlete (and person)!