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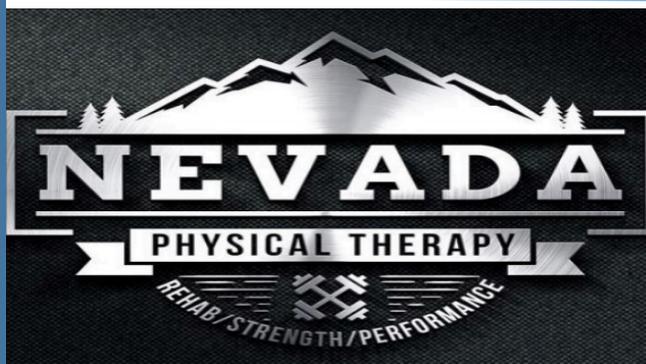
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Ever wonder how we can help keep our youth athletes healthy and enjoying the sport/s he/she loves? In this newsletter, we will discuss the risk of overuse injury and burnout associated with early specialization as well as recommendations we can provide the athletes, parents, and coaches to help keep these young superstars healthy. At this date youth specialization is at an all time high; ~72% of school aged youth participate on at least one organized sport team or club (Myer et al. 2015). We look at this number and say, “Great, almost 3/4 of our youth are participat-

ing in sports and being active!” But, is there a point sport participation is too much?

Youth specialization is defined by Myer et al. 2015 as, “Intensive year-round training in a single sport at the exclusion of other sports.” There is three criteria to the definition: 1) The athlete chooses a main sport, 2) The athlete participates >8months per year, and 3) The athlete quit all other sports to focus on one sport. Interesting statistic, if the athlete fell under all three criteria, he/she was at a 2.25x greater risk of an overuse injury.

Unmonitored training volumes and year round sport participation may be the greatest risk of an overuse injury. Research has shown, youth athletes who did not take at least one season off per year were at increased risk of injury. Also, it has been correlated with increased exposure there is a linear relationship to a higher injury risk. >16 hours of organized sport per week seemed to carry the greatest risk, but many authors would argue the youth athlete should not participate in organized sport more hours per week than their age. For example 11 year old Johnny should not participate in organized sport more than 11 hours per week. Other recommendations include a 2:1 ratio of organized sport to free play. Youth athletes who exceeded this ratio were more likely to sustain an injury.



Many think youth specialization will provide the athlete with early development of the necessary skills to progress to higher level play, however, research is showing us, elite athletes actually specialized later in their adoles-

cent years compared to non elite athletes. Unfortunately many athletes, parents, and coaches have it engrained that playing baseball only and year round will help them achieve higher level of skill, but we see in the research the contrary. Diversified athletic activity which includes strength training, neuromuscular training, and playing different sports actually help facilitate long term athletic development. Which we would argue is much more important than making it to the little league world series.

With early youth specialization we are also seeing a trend in increased burnout rates. Youth athletes should enjoy sport participation and should not have unnecessary performance pressures as this may increase the likelihood of burnout. An interesting study by women’s tennis association implemented a rule that youth athletes could participate in a certain number of tournaments based on age. Each year the athlete could increase the number of tournaments by a set amount. These tennis players demonstrated a decrease in overuse injury rates! So we ask, are these athletes old enough to cope with the stressors and workload of their respective sports? Research also suggests professional adult-like practices are likely not optimal for fostering talent development.

Summary of Recommendations

- * Train less than 8 months of a sport/year
 - * Possibly the greatest risk factor
- * Hours of sport participation per week is recommended to not exceed the athletes age
 - * >16 hours of organized sport participation carried the greatest risk
- * Point of youth specialization occurred later in elite vs. non elite athletes
- * Organized sport participation to free play ratio is recommended to not exceed a 2:1 ratio
- * Organized sport should be fun with minimal performance pressures
- * Encourage the athletes to be apart of their sport participation decisions
- * Based on the evidence, specialization should not occur before sophomore to junior year of high school
 - * There are exceptions to this rule: Gymnastics, diving, figure skating.
 - * Why? Post pubertal size and strength gains are not as important (or are detrimental), but there is not clear evidence for this in the available literature. These athletes tend to peak earlier. We would argue workload management still needs to be monitored.

Strength Training?

We are often asked, “Is strength training safe at an early age?” First, there is no evidence to support the common myths of youth resistance training; inhibit growth, harm bones, overload, not safe, etc. Per a 2014 international consensus position statement, weight lifting is safe, effective and enjoyable. The training program should be tailored to the individual, training age, technical skill, and maturity. The American Academy of Pediatrics also supports resistance training, and those who do not resistance train are at an increased risk of negative health effects. Early and regular training positively correlates with training later in life.



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