



**CATALYST
PERFORMANCE**

**ARE YOUTH SPORT
ORGANIZATIONS REALLY
HELPING BUILD BETTER
ATHLETES?**



THE TOP 3 CHANGES EVERY YOUTH ATHLETE COULD BENEFIT FROM

Sports participation is on the rise with an all-time high of an estimated 45 million participants in youth programs in 2019 [1]. This increase in participants has led to the formation of more and more leagues, and additional pressure on athletes to compete more frequently. Lets face it, youth leagues are making good money and there's very few central organizations controlling how they roll out their schedules and coordinate with neighboring groups. Year-round competition has quickly become the new normal for sports, and kids are being pressured at earlier ages to keep up. With no down time and poor skill development forced into the diet of these youth athletes, there is bound to be a higher injury rate and early burnout [2].

It's staggering that roughly 8 million of the youth athletes will be seen by their physicians, or report to emergency rooms annually with sports-related injuries [3]. The incidence of ACL injuries has increased over the last 20 years with peak occurrence taking place in high school female athletes [4]. With the overuse injuries on the rise and sport specialization trending at a younger age, we must pay close attention to our kids' developing bodies and minds. Not only has early sports specialization (playing one sport for an entire year) shown a direct link to overuse injuries, but it's also leading to an early burnout and eventual drop from participating in organized sports.

This is scary considering a large number of parents are quick to add more to the training regimen for their children in the hopes of forming the next superstar the second they show an ounce of talent or affinity for a specific sport. Don't get me wrong, I completely understand how exciting it is to see your child naturally excel at riding a bike, kicking/throwing/hitting a ball or climbing a wall. If your child shows a natural talent for hitting a ball and wants to be the next tennis legend at age 10. It's natural to think you should enroll them into the elite organizations offering year-round competition training 3+ hrs/day. But at what price? Would you still do that if I told you they were much more likely to suffer from a shoulder or elbow injury at the age of 14 or 15 that could put their career in jeopardy?

There's no arguing that children need to be protected from early damage to their bodies during their formative years and puberty. The wrong dose of running, jumping, cutting, hitting, throwing can injure your child for the season, and threaten their long-term development. Being on the front lines of the physical therapy field now for over a decade, I've seen ACL sprains, growth plate injuries, and strains/sprains showing up in younger and younger athletes. This has me nervous because according to research, this likely won't be the last time the majority of these kids are seen in a clinic setting. Getting injured early in life has also been shown to cause a myriad of other problems, like decreased bone mineral density, skeletal deformities, higher reinjury rates, and even increased likelihood of chronic pain in adulthood [5].



**RESEARCH
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BY THE
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70%

**OF CHILDREN
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AGE OF 13.**



Repetitive movement patterns with faulty mechanics will lead to overloading (too much stress) in the growth plates, ligaments, tendons, cartilage, bones, and muscles comprising our skeletal system. It's the simple fact that when you tell 10 kids to kick a ball, they're going to do it 10 different ways. No coach can conjure perfect form for all of their athletes, but they must be able to recognize when poor mechanics need correcting to prevent irreversible damage to their athletes' bodies. For example, take a 10-year-old, tall girl that has excessive shoulder mobility but poor core stability and tight hips from growing too fast. If you ask her to go up in the air and deflect a ball over the goal, or block a shot, there is good chance she's going to drive her knees excessively inward upon preparing to jump, arch her back to ensure her hand gets in front of the ball, and fail to slot her shoulder correctly when blocking the shot. This may not always be the case, but if not corrected, it will undoubtedly lead to increased stress across the ligaments or growth plates in her knees, excessive force across her lumbar spine, and possible rotator cuff or labral injuries in her shoulder down the road.

So, are coaches to blame? Absolutely not! It's the system that needs revamping. Each organized league must be held accountable to take the child's development seriously. That can't happen without pressure from the parents and health care field. We all must strive to pick out ways to assist the kids with movement training and coordination development.

SO HOW DO WE FIX THE BROKEN SYSTEM?

Here are three of the most important ways I've found to develop youth athletes.

1

GET SCREENED BY PROFESSIONALS TO ASSIST WITH PROPER PHYSICAL DEVELOPMENT.

2

INCREASED TIME WITH CROSS-TRAINING TO OVERCOME THEIR WEAKNESSES.

3

INSERT "DOWN TIME" INTO THE ANNUAL SCHEDULE TO RECOVER PROPERLY, AND REBUILD.



ATHLETE PERFORMANCE SCREENING

Athletic performance screening can help identify the individual challenges each athlete faces throughout the different stages of development. Why is it that we see the dentist every 6 months to assess our oral health, but physical health takes a backseat? Truth is, we should be giving our body the same focus and attention that we give our mouths. Annual physicals are not designed to thoroughly look at a child's physical development. Rather than waiting for a child to report pain, we can get ahead of injuries by performing detailed assessments or screenings more regularly to ensure the movements they routinely perform are done correctly. This screening must mimic the common actions in the sport they play, and assess the areas of the body that research shows are often injured.

The screening can be performed for each athlete individually in a controlled setting, like a gym or clinic, or out on the fields. The goal of these screenings should be to identify the body's weak spots and determine a corrective exercise program to promote proper athletic development. When completed on the team level, athletes can be categorized into different groups based on their physical abilities and given corrective exercises, drill work, and appropriate sports performance guidelines to allow coaches and trainers to better prepare the teams for the rigors of competition.

CROSS TRAINING

Cross training is often thought of as choosing a lower impact activity to insert in place of your main sport. For example, a soccer player might choose cycling or swimming instead of running to keep up their endurance levels between their heavy periods of competition. While this is one form of cross-training, it's also important to consider the benefits of what a solid gym or weight program can do for a developing body. Resistance training is commonly thought of as bad for youth athletes. This simply isn't true. While I don't condone spending 5 days a week in the gym following a strict strength regime, I do know believe the right corrective exercises inserted into a routine for kids can make all the difference when it comes to preventing injury. The trick is to make these exercises challenging, well-rounded, and fun. This will allow our youth athletes to form health movement habits and develop coordination and efficiency that will protect the commonly overused areas of their bodies.

PROPER RECOVERY

Recovery is all too often an afterthought for developing athletes. While I'll forgo the detailed description of how recovery affects our bodies both mechanically and metabolically, I will say that stress across muscles and joints must be monitored and controlled to avoid developing overuse injuries. Most professional organizations are aware of this theory now and utilize different ways to monitor and alter training loads for their athletes based on the demands of the position they play and the competitive match/practice schedule. These organizations are taking note of how each athlete's recovery for their body differs and charting ways to assist them in balancing their training bouts to allow for ample performance. Basically, they're not just asking how the athlete feels anymore, but are now monitoring how their heart rates and body movement (ie. range of motion, strength, blood chemistry) are adapting to the physiological stressors. This allows them to tailor the weekly workouts and guidelines for recovery for each athlete individually. This isn't to say your 10 year old athlete is also in need of this, but a simple rating of perceived exertion (RPE) and awareness of down time each year or directly after large amounts of competition is warranted to ensure your child is not damaging their vulnerable areas and in risk of long-term injury.





In closing, I hope you understand that not all athletes move the same and the demands of each sport differ. It is not the coaches job to identify the movement inadequacies and implement a corrective exercise program. Rather, it's the organization and parents job to promote the health at all times of the youth athletes. This comes through education and strategic alliances with organizations that can help deliver proper warm ups, exercise guidelines, and physical screenings. By paying more attention to the quality of the movement early on in our kids' development and creating healthy habits we're giving them the gift of longevity in becoming a life-long participant. Whether they go to the big leagues or not, having a young athlete learn the principles of healthy movement and balanced training loads will prove it's worth over time and cut down on the early drop out rates that are trending in our current era.

Make opportunities

Take the next step.

If you're interested in learning more about ways to get our professionals involved with your athlete or organization, please fill out our questionnaire or check out the athlete performance section of our website by scanning the QR code below.

Brian Wilson, MPT

References

- [1] State of Play 2019: Trends and Developments in Youth Sports. The Aspen Institute/Utah State 2019 National Youth Sport Survey. 2019 Sept; 3: 1-32.
- [2] Difiori JP, Benjamin HJ, Brenner JS, Gregory A, Jayanthi N, Landry GL, Luke A. Overuse Injuries and Burnout in Youth Sports: A Position Statement from the American Medical Society for Sports Medicine. British journal of sports medicine. 2014 Feb 1;48(4):287-8.
- [3] Pinyao R, M.P.H., Ashman JJ, Ph.D., and Akintunde A, M.S.P.H. Emergency Department Visits for Injuries Sustained During Sports and Recreational Activities by Patients Aged 5–24 Years. National Health Statistics Report. 2019 Nov 15; (133) 1-15.
- [4] Beck NA, Lawrence TR, Nordin JD, DeFor TA, Tompkins M. ACL Tears in School-Aged Children and Adolescents Over 20 Years. American Academy of Pediatrics. 2017 Mar; 139 (3).
- [5] Fulton J, Wright K, Kelly M, Zebrosky B, Zanis M, Drvol C, Butler R. Injury Risk is Altered by Previous Injury: A Systematic Review of the Literature and Presentation of Causative Neuromuscular Factors. International Journal of Sports Physical Therapy. 2014 Oct; 583–595 (9).

