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Ascension

ATHLETES & ADHD

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Attention Deficit Hyperactivity Disorder (ADHD) is one of the most studied childhood disorders. Descriptions of ADHD date back to the 1790s with early versions of diagnosis since 1902[1]. And despite its increased visibility in today's media, there are still plenty of misunderstandings about how ADHD can impact children, adolescents, and adults in their day to day lives. Sports are a common outlet for youth with ADHD and it is important for coaches and parents to learn how to best support these athletes.

What is ADHD?

The official terminology around ADHD has changed over time. According to the most recent DSM-5[2] there are 3 official types of ADHD: Hyperactive/Impulsive, Inattentive, and Combined. The ADHD -Inattentive type was previously referred to as ADD (Attention Deficit Disorder) and you may still hear that term. However, most youth with ADHD have symptoms in both the inattentive and hyperactive/impulsive categories.

The most common hyperactive/impulsive symptoms include moving or talking excessively, difficulty waiting or taking turns, interrupting others/blurting out, fidgeting, and trouble remaining seated. Inattentive symptoms include difficulty focusing for long periods of time, easily distracted, forgetful and loses things, avoids tasks with sustained mental effort, and 'careless' mistakes. Any child can have moments of impulsivity or inattention – what distinguishes a diagnosis of ADHD is that these symptoms are persistent and negatively affect the child's daily functioning at home and school.

ADHD is diagnosed in about 11% of children in the United States. We also know that ADHD runs in families, where a parent with ADHD has about a 50% chance of passing it to their child. Those diagnosed with ADHD are at higher risk for other difficulties, with up to 45% having learning disorders (i.e., dyslexia/reading or math). Children with ADHD are also at higher risk for anxiety or depression (15-20%) and conduct issues. For more in-depth summaries of research and common myths surrounding ADHD, I recommend visiting CHADD.org[3]

ADHD and the Brain

ADHD has been extensively researched with thousands of studies[4] including the brain-based differences that underly these symptoms[5]. In working with families and schools, I have found two principles that can help parents and coaches better understand ADHD. 1) Attention is typically an automatic process in the brain and 2) Executive Functioning becomes more noticeable over time.

What do I mean by attention being 'automatic'? Your brain is constantly filtering all the visual, auditory, and sensation data you are receiving and most of this occurs below your awareness. That is why you don't feel your clothes, hear the ticking of the clock, or the whir of the fan (until I bring it to your attention). It all becomes background that your brain ignores when you are concentrating. Except, children with ADHD have a harder time blocking out these distractions. They may hear every paper rustle, pen drop, etc. in the classroom. A common scenario is youth with ADHD say they need

the TV or music on to study. I find they are using the TV/music as a white noise 'blanket' to cover over the other environmental stimuli that would otherwise grab their attention.

The other part of attention is directing it towards a specific activity. Think of your attention like a spotlight that you can shine. You can purposely hold that spotlight in one direction and then move it towards something else once finished. But now imagine that your spotlight flickers, the beam is less bright, jumps all over, or even gets stuck. For youth with ADHD, just holding attention steady can take extra 'brain power' because, for them, the cognitive processes that underly focused attention are not automatic. What does help their spotlight? Interest and novelty! This is the classic complaint of "they can pay attention if they are interested". Yes, they can! We all pay better attention when we are interested or engaged in a topic. However, most of us can still focus our spotlight on things we find boring…this is much harder and not 'automatic' for those with ADHD.

Executive Functioning is perhaps the most important concept to understand how ADHD affects daily life. Executive functioning is not about 'how smart' you are, but rather 'how you get things done'. It is the day-to-day planning, organization, starting, and finishing of tasks. Executive functioning difficulties, such as time management, become more noticeable in teens because we expect more organizational independence as kids grow. Instead of a single teacher, they have 7 teachers in middle and high school all with different expectations, ways of posting assignments, grades, etc. Developing executive functioning skills is the primary brain developmental goal of adolescence. And when these skills lag behind, as is common in ADHD, there can be significant frustration for the teen, parent, and teachers/coaches. These are the kids who need a planner the most, but either forget to write assignments down or forget to check it. Learning explicit executive functioning strategies are key for teens and adults with ADHD.

Role of Sports in ADHD

Sports and physical activity are often essential parts of treating ADHD. Previous studies have shown that moderate to vigorous exercise has shown positive effects on symptoms, particularly motor coordination.[6] Youth with ADHD are often drawn towards 'hands on' activities and sports can capture their attention. Although exercise will not cure the underlying ADHD, it can lessen symptoms. In addition to helping 'burn energy' for those with hyperactive symptoms, cardiovascular exercise improves blood flow to the brain for overall brain health.

Sports can also have an important role in teaching self-discipline, teamwork, and emotional regulation. Youth with ADHD may react quickly (impulsively) to emotions. Their frustration tolerance for themselves or teammates may be low, and learning to manage emotions and sportsmanship is an important opportunity. Youth with ADHD often struggle with classroom demands and sports can be an essential area where their creativity and enthusiasm can be rewarded.

ADHD on the Field

1. **Getting to the field is half the battle.** The real-world effects of short-term memory/forgetfulness associated with ADHD is that remembering their water bottle, equipment, the right jersey and showing up on time can be the hardest part.
    - Teach teens to have spares in their locker or bag. Start each season with 'bag checks' to make checking and double-checking equipment a standard routine.
    - Utilize checklists and alarms on phones – there are lots of ways for technology to help!
    - Bonus points (or fewer wind sprints) for those who show up early. Those with ADHD need a concrete, immediate incentive to boost their engagement. Long-term rewards (e.g. ice cream party at end of season) don't have the immediacy to change daily behaviors.
    - Focus on rewarding and building strategies for time management and preparedness for those with ADHD. Avoid using sports as a penalty and support athletes with time for study halls to maintain grades and eligibility.
2. **Keep it short and sweet.** Younger athletes in particular will struggle to focus on long explanations or instructions during the huddle. They may rush to be first in line, but then have forgotten the drill instructions.
    - Keep the overall structure of practice the same, while changing out drills. For example, check-in, drill, break, drill, scrimmage.
    - Give immediate feedback (within 1 to 2 minutes). If you wait until the end of the session, they will have likely forgotten what you are talking about.
    - Create key phrases or slogans to reinforce skills. Quick reminders that can be issued in the middle of practice or games (e.g., eye on the ball).
    - Repetition is needed; these athletes often remember the beginning/end and miss the middle. Younger kids need 1-2 pieces of

information at a time. Older kids stick with 2-3.

- Rotate stations to help build repetition while reducing boredom.
- Give younger kids a 'job' such as getting water bottles, collecting cones, your clipboard, etc. This gives them a quick break and you an opportunity to praise.

3. **Competition and games are key.** One of the stereotypes of ADHD (particularly boys) is these kids are sensation seeking. They love going loud and fast. But once we understand that their hyperactivity is due to *under*-stimulation of neurotransmitters, then their drive to seek out novelty and adrenaline inducing activities makes more sense.
   - The kid who struggles to be on time and remember instructions may suddenly 'lock in' attention during the competition/intensity of a game. This is their time to shine!
   - Long stretches of sitting on the bench will lose younger kids. Give them a job, stretching, something to keep hands busy and mentally engaged.
   - Ignore minor fidgeting if they are otherwise on task. They may also talk, hum, sing, or bounce their leg/knee when sitting without realizing it. Pockets can be great for keeping a small fidget object they can touch during downtimes to help focus.
   - Avoid long lines for drills – if you don't give them something to do, they will find it!
   - Create low-stakes games/competition during practice. A short term, immediate goal will boost interest and engagement to help them move through the boring parts.
4. **Monitor mood and social skills.** Children with ADHD can also miss social cues from peers. At times they may come on 'too strong' or go 'too far' with jokes.
   - Frustration tolerance may be low. Teach athletes when to take a break and cool off.
   - Create a key word or special signal they are taking something 'too far'.
   - Deep breathing and mindfulness activities can help all athletes with focus, but particularly those with ADHD.
   - Redirect to positive activities. Ask 'what is our goal right now?' if they get off task or distracted.
   - The phrase 'right thing, wrong time' can also help them refocus. For example, "I think it is great you want to help your teammate, but right now I need everyone quiet and listening to instructions".

Given the rates of ADHD in childhood, chances are that almost every team of 20 kids will have 1 or 2 athletes with ADHD. Not so long ago, people thought that kids would 'outgrow' ADHD into adulthood. Now we know that the hyperactive symptoms typically decrease with maturity, but executive functioning weaknesses often persist. Adults working with youth need the understanding that ADHD goes beyond the stereotypical childhood impulsivity/hyperactivity. ADHD can affect mood, behavior, learning, and social skills. These youth also bring important strengths typically as enthusiastic, humorous, creative, 'out of the box' thinkers. As a coach or parent, I encourage you to explore additional resources and tools to help support these athletes who benefit so much from sports participation.

Resources:

- https://www.cdc.gov/ncbddd/adhd/index.html
- https://chadd.org/ - Kids and Adults
- Taking Charge of ADHD by Barkley
- Smart but Scattered by Dawson and Guare (Book series, YouTube, and Website on Executive Skills)
- Late, Lost, and Unprepared by Cooper-Kahn & Dietzel

References:

[1]Lange, K. W., Reichl, S., Lange, K. M., Tucha, L., & Tucha, O. (2010). The history of attention deficit hyperactivity disorder. *Attention deficit and hyperactivity disorders, 2(4),* 241–255. https://doi.org/10.1007/s12402-010-0045-8

[2]*Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) 2013, 5th ed; American Psychiatric Association

[3]Children and Adults with Attention Deficit/Hyperactivity Disorder (CHADD): https://chadd.org/about-adhd/myths-and-misunderstandings/

[4]Barkley, Russell A. (2015). History of ADHD. In R. A. Barkley (Ed.), *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment, 4th ed.* (pp. 356–390). New York, NY: Guilford Press.

[5]Matthews, Marguerite et al. (2013). Attention Deficit Hyperactivity Disorder. *Current Topics in Behavioral Neurosciences* 16:235–266.

[6]Vysniake R, Verburgh L, Oosterlaan J, Molendijk ML (2016). The effects of physical exercise on functional outcomes in the treatment of ADHD: A meta-analysis. *Journal of Attention Disorders*. DOI: 10.1177/1087054715627489