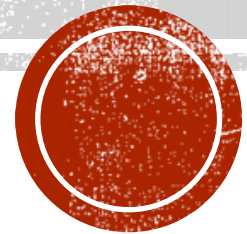


UNDERSTANDING THE MIND OF THE 21ST CENTURY ATHLETE

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DISCLOSURES

- None



OVERVIEW

- The Current State of Youth Sports
- Benefits of Youth Sports
- Barriers to live sports participation and associated risks
- Aspen Institute Youth Sports “Playbook”
- Common “*invisible*” injuries in sport and what to do about them



WHY ARE COACHES IMPORTANT?

- Coaches are the backbone of youth sports, serving as mentors, role models and inspirations for generations of young athletes.
- “High school coaches are among the most important adults in the lives of students. They often spend more time with them than any teacher and can *shape students’ ideas about health, education, ethics, personal responsibility and initiative to succeed in society.* In our national survey, **one in three** students said they play sports because of “a coach who cares about me.”

– Aspen Institute

“You can’t fire the kids...you’re the coach, YOU have to reach them...”

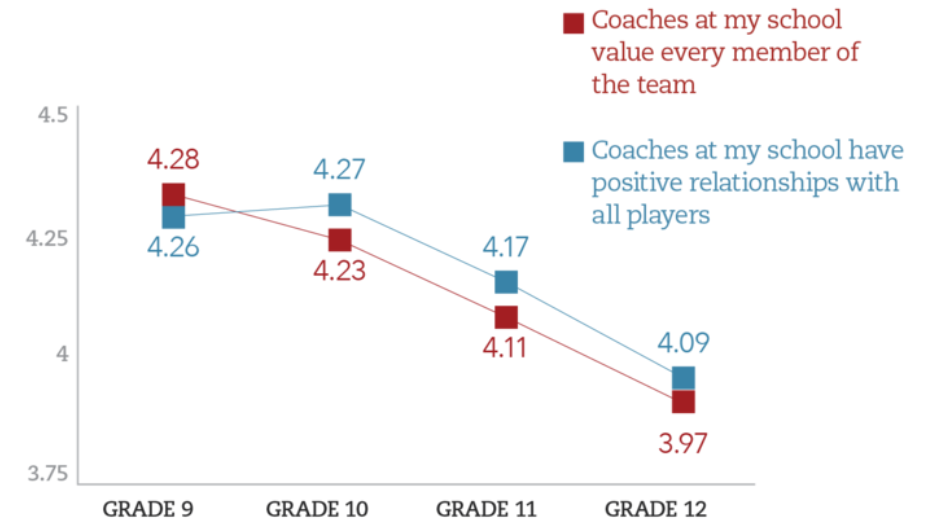
- Dan O’Connell, Athletic Director, John Bapst HS, Maine

Unfortunately...

STUDENT PERCEPTIONS OF COACHES BY GRADE

(1-5 scale with 5 being most favorable)

High school students lose respect for coaches as they move through high school



20TH CENTURY (CURRENT) MINDSET → JUST WIN, BABY!

- Measure of success in school sports = Scoreboard.
- Beat your rival, your community buzzes.
- Win a league or state title → Hanging banners.
- These KPI's have been around since the start of the 20th century, when school-based interscholastic sports were promoted by captains of industry who sought to **encourage competition** and a **winner-take-all ethos** in American society.



ENTER GEN Z/ALPHA ATHLETES

- Do you agree with any of these stereotypes??
- “Kids these days...”
 - Require coddling
 - Need more positive reinforcement
 - Are glued to their phones
 - Don't listen to real music
 - Love TikTok and watching other kids play video games
 - Prone to move on to another team/coach when the going gets tough
 - Simply not as interested in sports



ENTER MILLENNIAL PARENTS

- How about these stereotypes??
- “Their parents...”
 - Are disengaged
 - Easily bored
 - Are also glued to their phone...hmm...
 - Helicopter-ish
 - Emphasize winning rather than fun
 - View sports practices as convenient babysitting
 - Have a rising awareness of college athletic scholarship/NIL money, and seem to think that THEIR kid is gonna make it to the pros
 - Seem to have forgotten the value of athletics as a component of a healthy lifestyle



ENTER COVID-19

- Cancelled seasons
- Shuttering/merger of leagues
- Extension of scholarships/eligibility
- Constriction of rosters
- Covid has redefined the purpose of sports participation for youth/high school/college athletes
 - Playing to no/minimal crowds but rather for themselves/for the true love of the game
 - Up to this point, many youth have been playing to get attention/validation/recognition from their parents
- The only sports-related item that improved? Bike-riding!
 - Bicycle sales soared
 - 12% of parents said their child tried riding a bicycle for the first time



21ST CENTURY MINDSET → SPORTS AS A VEHICLE FOR GROWTH AND CHANGE

- The 21st century presents new opportunities and challenges.
- Corporations, foundations, philanthropists, and government all recognize the need to address the major problems of our time:
 - Rising obesity rates
 - Economic divides
 - Immigrant assimilation
 - Political polarization
- SPORTS can be part of the solution



WHAT IS THE GOAL OF (TRADITIONAL) SPORTS PARTICIPATION?

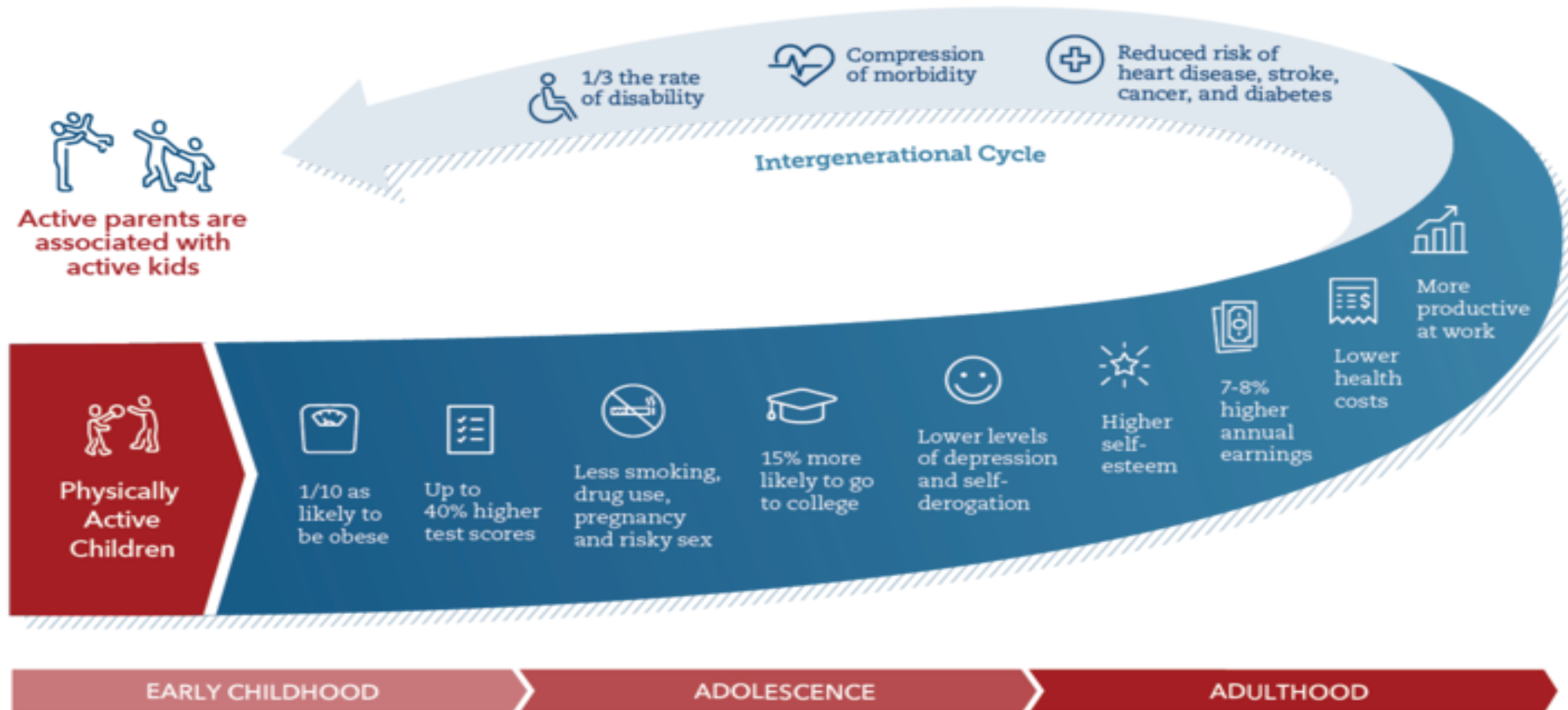
- To be the best?
- To learn from overcoming adversity?
- To be a good teammate?
- Or...to become the best, and if the best is impossible, then quit and move on to something else?
- To have fun?
- To provide social camaraderie?
- **To get a good workout?**
 - *Unfortunately, all of these goals except one can be achieved by playing VIDEO games.*



BENEFITS OF YOUTH SPORTS

ACTIVE YOUTH DO BETTER IN LIFE

What Research Shows on the Lifetime Benefits



PHYSICAL BENEFITS

- **Regular physical activity benefits health in many ways**
 - Healthy bones, muscles, and joints
 - Weight control, reduction of fat, delayed development of high blood pressure (GAO, 2012)
 - Exercise is one of the least expensive ways to stay healthy
 - Can prevent chronic diseases as effectively as medication (BJM, 2013)
 - Reduced cancer risk (NIH, 2016)
- **Sports participation as a kid is a significant predictor of young adults' participation** in sports and physical fitness → reinforces a healthy lifestyle
 - Adolescents who play sports are EIGHT TIMES as likely to be active at age 24 as adolescents who do not play sports (Perkins, 2004)
 - Three in four (77%) of adults aged 30+ who play sports today played sports as school-aged children. (RWJF/Harvard/NPR, 2015)



MORE PHYSICAL BENEFITS

- **Active children are less obese.**

- Afterschool physical activity programs reduce obesity **TWO TIMES MORE** than bans on child-directed fast-food advertising (American Journal of Preventive Medicine, 2014)
- **Getting people active could save the global economy nearly \$68 billion annually** in medical costs and productivity.

- **But the obesity epidemic continues. Thanks, Covid.**

- 22% of children and teens are classified as obese vs. 19% pre-pandemic (CDC, 2019)
- Racial and ethnic disparities → White and Asian children showed significantly lower rates of obesity than Hispanic and Black children.
- Youth who have disabilities are *4.5 times less active* and have 38% higher rate of obesity

- **Not enough children are active**

- Only 5% of youth ages 5-18 reported meeting the federally recommended amount of exercise — 60 minutes per day. (Nationwide Children's Hospital, 2015)
- Researchers recommended that pediatricians should treat exercise like a **VITAL SIGN**, similar to height and weight, and engage patients in conversations about how to be more physically active



EDUCATIONAL BENEFITS

- **Sports activity helps children develop and improve cognitive skills**, according to a study that tracked kids from kindergarten through fourth grade (Piche, 2014).
 - Improved academic achievement, including grades and standardized test scores
 - Enhanced concentration, attention, and improved classroom behavior (GAO, 2012).
- **High school athletes are more likely than non-athletes to attend college and earn better grades**
 - Team captains and MVPs achieve in school at even higher rates (U.S. Dept. of Education, 2005).
 - HS athletes are more likely to expect to graduate from a four-year college (73% girls, 59% boys) compared to non-athletes (67% girls, 53% boys), ([Healthy Sport Index](#) (Women's Sports Foundation, 2018).
- **The benefits extend to the workplace.**
 - A survey of 400 female corporate executives found 94% played a sport and that 61% say sports contributed to their career success (EY Women Athletes Business Network/espnW, 2014).



MENTAL, SOCIAL, AND EMOTIONAL BENEFITS

- **A correlation has been found between regular exercise and mental health** among students in general as they move into the teenage years (JAACAP, 2015).
 - Exercisers (6-7 days/week):
 - 25.1% felt sad for two weeks or more in the past 12 months
 - 15% reported suicidal ideation
 - 6.4% reported a suicide attempt in the past year
 - Non-exercisers (0-1 day/week):
 - 35.7% felt sad for two weeks or more in the past 12 months
 - 24.6% reported suicidal ideation
 - 10.3% reported a suicide attempt in the past year
- **The loss of sports during COVID-19 hurt the mental health of many children** (Project Play 2021 survey).
 - 1 in 4 youth sports parents said their child's mental health suffered
 - Since restrictions have been lifted on sports, almost half (49%) said their child's mental health has improved.
- Physical activity, and **sports** in particular, **can positively affect** aspects of personal development among young people, such as **self-esteem, goal-setting, and leadership**.
 - *However, evidence indicates that the **quality of coaching** is a key factor in maximizing positive effects (GAO, 2012).*



BUT... “LIVE” SPORTS PARTICIPATION IS IN DECLINE...

- Per the National Federation of High School Sports website, from 1989 to 2018, participation in high school sports climbed from 5.2 million to 7.9 million participants
- **Then, in the 2018-19 school year – the final full year before the pandemic – the NFHS reported a drop in sports participation for the first time in 30 years.**
- **In fact, the average child today spends less than three years playing a sport, quitting by age 11** (Project Play, 2019)
 - Of note, Little League baseball has 3% fewer kids sign up every year since it peaked in late 1990’s
- The total number of sports that each child plays annually has **declined**, from an average of **2.23 sports in 2008 to 1.79 in 2019**, although the number had rebounded slightly (Sports & Fitness Industry Association/Project Play, 2020). In 2020, during the pandemic, the number of sports played declined to **1.62**.
- The decline bears implications for sports leagues and media companies, as research shows people who participated in an organized sport are **three times more likely** to become an **avid fan** of that sport (researcher Rich Luker, 2017).



BARRIERS TO “LIVE” SPORTS PARTICIPATION

- Technology/alternatives/E-Gaming
- Loss of casual play
- Trend Toward Sports Specialization
- Cost/Travel
- Lack of equity
- Lack of access to recreation spaces
- Untrained coaches
- Risk of injury



WHAT KIDS SAY IS MOST FUN ABOUT PLAYING SPORTS

- They want social bonds and access to the action.

MORE FUN

1. TRYING YOUR BEST
2. WHEN COACH TREATS PLAYER WITH RESPECT
3. GETTING PLAYING TIME
4. PLAYING WELL TOGETHER AS A TEAM
5. GETTING ALONG WITH YOUR TEAMMATES
6. EXERCISING AND BEING ACTIVE

LESS FUN

48. WINNING
63. PLAYING IN TOURNAMENTS
66. PRACTICING WITH SPECIALTY TRAINERS AND COACHES
67. EARNING MEDALS OR TROPHIES
73. TRAVELING TO NEW PLACES TO PLAY
81. GETTING PICTURES TAKEN

Much less of a priority than simply having a chance to play.



TECHNOLOGY / ALTERNATIVES / E-GAMING

- **Children today often spend many hours in front of screens** (mobile phones, computers, video games, TV), with products that have gotten better at getting and keeping their attention.
- **Kids have short attention spans and desire immediate gratification** – many perceive that pace of play in live sports is too slow (especially in baseball)
- Even for those who are playing sports, these sedentary hobbies are competing interests in getting kids active through sports, according to parents.
- More than **one in three** parents say it is a challenge to make sure their children get enough exercise (RWJF/Harvard School of Public Health, 2016)
- A Gallup poll found children ages 2 to 10 spend significantly **less time engaged in free play than they do in front of screens** (18 to 21 hours a week). Nearly all of the kids had more screen time than the number of hours per day recommended by the American Academy of Pediatrics.

Online Activity

Spent 3+ hours per day on video games, social media or computer use for non-school work

	2009	2019
All students	25%	46%
Boys	28%	48%
Girls	21%	45%

Source: Youth Risk Behavior Surveillance System, Centers for Disease Control and Prevention



SAY HELLO TO E-SPORTS

- **College scholarships now exist for esports.** The National Association of Collegiate eSports has climbed to more than 30 member colleges, whose average scholarship payout is about \$7,600 (Inside Higher Education, 2017).
- In 2018, the National Federation of State High School Associations began sponsoring esports, and five member state associations now stage esports state championships.
- There are now efforts by gaming leagues to identify video game players before middle school in order to compete with other countries (The Associated Press, 2018).
- During the pandemic, half of youth sports parents said their child often or sometimes participated in esports or other organized video gaming during the past month
 - That rate was even higher (66%) among parents who said their child had been inactive for a month.
 - Meanwhile, 82% of parents said their child's screen time "increased greatly" since the pandemic started, while organized sports (69%) and free play (59%) "decreased greatly" since March 2020 (TeamSnap/Utah State University, 2021).



LOSS OF CASUAL PLAY

- **Fading is the era of sandlot or pickup ball**, a form of play that organically promoted innovation and fitness among generations of Americans.
 - More than 40% of parents whose child plays an organized sport say their child does so year-round (RWJF/Harvard/NPR, 2015).
 - *Yet free play has been shown to produce higher levels of physical activity than organized sports.*
 - One study found that 43% of youth sports practice was spent being INACTIVE (Physical Activity During Youth Sport Practices, 2011).
 - Free play is all but a thing of the past in some areas (AI/RCWF survey 2017)
 - In a study of kids in Western New York and Southeast Michigan, fewer than 1 in 5 youth play football near their home, 1 in 10 for basketball, and less than 1 in 20 for baseball and soccer
- Other responsibilities are keeping kids from free play including school work and family responsibilities (like taking care of younger siblings)
- **Lack of mainstream options for the moderately interested athlete**
 - About 23% of middle schools and 40% of high schools do not offer intramural sports (Bridging the Gap, RWJF, 2012).
 - The lower and middle tier of athletes are the ones quitting sports early



FOUR SOCIAL BARRIERS TO INFORMAL PLAY

(GINSBURG, PEDIATRICS, 2007)

1

More single parents, dual-working parents

Without supervision, it's easy to tell kids to stay at home after school.

2

Professionalization of parenthood

Cultural pressures on parents to create super-achieving kids.

3

Impact of standardized testing mandates

Federal law promoting academic skills led to cuts to P.E., recess.

4

Competition for college admissions

Pickup hoops doesn't build a student's resume, so why invest time, resources?



TREND TOWARD SPORTS SPECIALIZATION

- **More and more kids are focusing early on playing only one sport vs. playing multiple sports and focusing on well-rounded athleticism**
- Per the Aspen Institute's Univ. of Texas survey, HS athletes, on average, began specializing in their primary sport as young as age 10 (soccer, baseball, basketball and softball)
 - Girls waited about two more years to start specializing in basketball than boys.
- **Specializing in sports early carry risks of higher injury rates, increased psychological stress, and quitting sports at a young age.**
- For most sports, there is *no evidence* that intense training and specialization before puberty are necessary to achieve elite status, and specialization should be delayed until late adolescence. (*Sports Specialization in Young Athletes: Evidence-Based Recommendations*, 2013).
- More options for travel teams that didn't exist in the late '90s = more pressure to keep playing one sport due to opportunities for 'off-season' seasons
 - The rise of travel teams is hurting local leagues as the best players perceive it is a waste of time to play in their towns and look for better competition → thus, many traditional leagues in small(er) towns are folding
- Never want sports to become an obligation or where the kid is sticking with it only to not disappoint the parents
 - ...if the kid is not chomping at the bit to get their gear and go to practice, then find something else to do...need to expose them to LOTS of sports



BENEFITS OF SAMPLING A VARIETY OF SPORTS

1. More options mean more kids will find a sport they like
2. Reach elite status with fewer hours of focused training
3. Increased transfer of motor, psychological skills to other sports
4. Increased motivation, confidence, self-direction
5. Better pattern recognition and decision-making
6. Play sports longer throughout life

More athletes, better athletes.

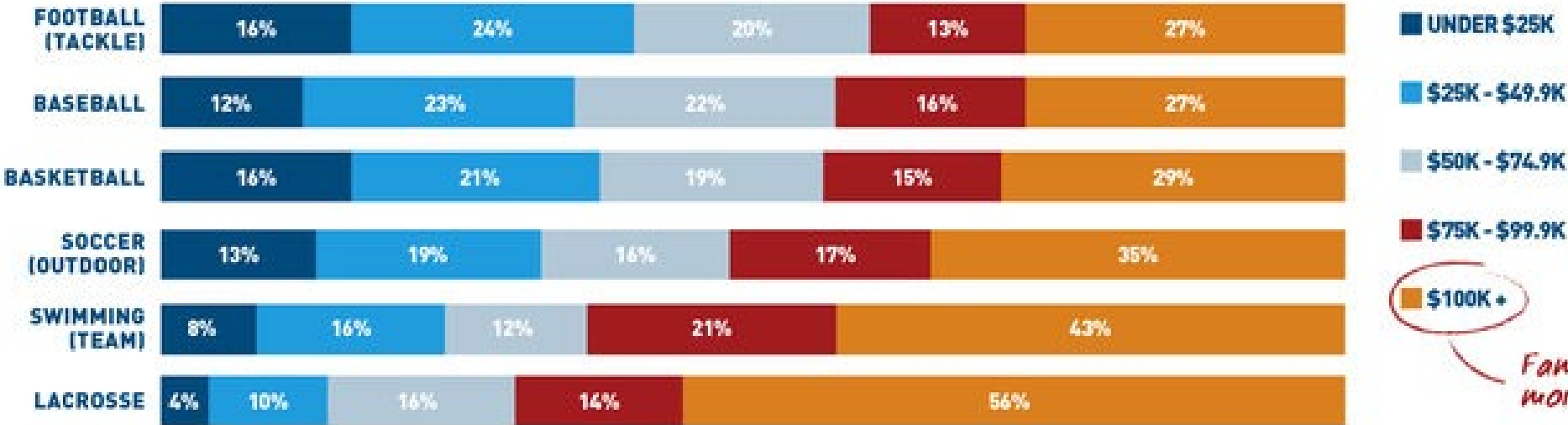


YOUTH SPORTS ARE EXPENSIVE

- Sports families spent an average of **\$693 per child, per sport annually**, according to our nationally representative [survey](#) with Utah State University's Families in Sport Lab in 2019.
 - Research from the Sports & Fitness Industry (SFIA) suggests that there are 20 million regular, or "core," participants in sports, and that the average child plays just shy of two team sports.
 - Do the math and that's estimated **minimum of \$28 billion** that families spend on each child's regular sports activity. Not included is spending on casual participation, the kid who picks up a tennis racket or golf club few times a year.
 - In all, 36 million youth ages 6 to 17 played a team or individual sport in some form during the year, pre-COVID, according to SFIA.
- **\$30 billion a year on youth sports is** more than the annual revenues of the NFL, NBA or any professional league and does not include public or private sector support, which subsidizes the industry through investments in facilities, tax breaks and other vehicles.
- **Travel is now the costliest feature in youth sports.**
 - On average across all sports, parents spent more annually on travel (\$196 per sport, per child) than equipment (\$144), private lessons (\$134), registration fees (\$125), and camps (\$81).
 - That average includes all kids playing sports, not just those on travel teams, which often start in grade school and can cost families **far more** than a couple hundred dollars a year.



INCOME IMPACTS OF SPORTS PARTICIPATION



Families that can afford more, play more.



LACK OF EQUITY IN YOUTH SPORTS ACCESSIBILITY

- **Relative lack of access for minority children.**
 - Sport participation rates for White children exceed that of Black, Hispanic and Asian kids.
 - Data on Native-American children are not even reported in government-funded studies that track physical activity in youth (University of Florida's SPARC, 2014).
- **Many children of color were left behind during the pandemic.**
 - Nearly half of Hispanic youth (47%) resumed sports at a lower level than they were playing before the pandemic ([Project Play/Utah State University, 2021](#)).
 - For Black youth, it's 42%. The trend lines improved for Black children compared to earlier in the pandemic but remained worse than youth who are White (31% of whom resumed sports at a lower level).
 - Black and Hispanic parents expressed the most fear of themselves or their child getting sick through sports during the pandemic.
 - Asian high school students reported resuming sports during COVID-19 at lower rates than those of other races and ethnicities (Project Play/Resonant Education, 2021).



LACK OF EQUITY IN ACCESSIBILITY, CONTINUED

- **Youth with disabilities still struggle for access, despite growth in sport options driven in part due to anti-discrimination laws.**
 - Often, the biggest barrier is simply a lack of awareness about how to engage children with special needs.
 - Children who have disabilities are **4.5 times less active and have obesity rates that are 38% higher than other youth** (*Physical Literacy in the United States: A Model, Strategic Plan, and Call to Action*, 2015).
 - These challenges increased during the pandemic since **kids with disabilities typically returned to sports more cautiously.**
- **Access is also shaped by gender.**
 - Despite major gains among girls over the past four decades delivered by Title IX legislation and enforcement, in 2012, the participation rates for girls remained **2-5% lower** than for boys (Bridging the Gap, RWJF, 2012).
 - A 2015 study suggests that gap may be closer to **6%** (RWJF/Harvard/NPR, 2015).
 - As adults, the gender gap is more pronounced: **35%** of men say they play sports, while only **16%** of women say the same thing (RWJF/Harvard/NPR, 2015).
 - In Washington, D.C., the percentage of athletic opportunities provided to public high school students has been as low as **15%** for boys and **6%** for girls (Women's Sports Foundation, 2011).



LACK OF ACCESS TO RECREATION SPACES

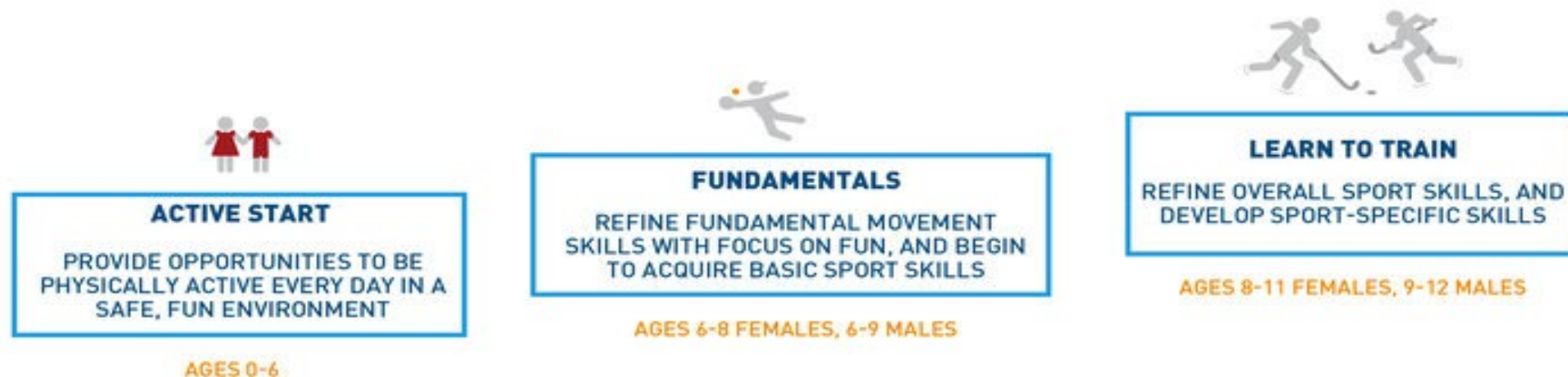
- **Half of all vigorous exercise engaged in by Americans occurs in parks.**
- *People who live closer to parks report better mental health.*
- Time spent in green outdoor spaces has been shown to boost focus and concentration, and kids with attention deficit hyperactivity disorder (ADHD) experience milder symptoms when they play outside in a natural setting.
- But in some cities as many as **two-thirds of children are without access to a nearby park** (The Trust for Public Land). The deficits are greatest in predominantly African American and Hispanic neighborhoods.

How to engage an entire P.E. class with one tennis court: the U.S. Tennis Association's youth tennis initiative divides a 78-foot court into four playing spaces and uses the surrounding area for tennis-related games. Smaller racquets and lower-bouncing balls make it all possible and help kids find success.



USOPC'S AMERICAN DEVELOPMENT MODEL (ADM)

- In 2014, the leadership of the U.S. Olympic and Paralympic Committee (USOPC) embraced the American Development Model (ADM), a potentially game-changing initiative to “unify national governing bodies and community programs in keeping Americans active in sport longer.”
- The model combines sport, play, education, and health through a five-stage pathway based on a child’s growing capacities.
- **The first principle is a commitment to fun, as kids define it at each age level.**
- The philosophy holds the prospect of making room for the late bloomer, given the *early emphasis on individual development over team achievement*.



COACHES NEED MORE TRAINING

- Unlike other educators, youth sports coaches are often unpaid or underpaid volunteers, with little training or time to complete it beyond the mandated certifications in critical topics like CPR, concussions and SafeSport.
- Research has consistently shown that kids who play for trained coaches have a better experience.
- One study found that only 5 percent of kids who played for trained coaches quit the sport the next year; the attrition rate was 26 percent otherwise (*Barnett, Smoll & Smith, 1992*).
- **Most youth coaches do not receive any training in key competencies in working with children.**
 - Less than 1/2 of youth sports coaches were trained to deliver CPR/first aid
 - Only 1/3 received training in injury prevention or physical conditioning
 - Only 1/4 were trained to manage concussions
 - Fewer than 1/5 are trained in effective motivational techniques — how to communicate well with kids
 - Only 1/3 say they have been trained in sport skills or tactics
- **Women remain an untapped area to develop more coaches.** Only 25% of adults who said in 2020 they had coached kids 14 and under were female (Sports & Fitness Industry Association).



WHAT KIDS WANT FROM A COACH

1. RESPECT AND ENCOURAGEMENT
2. POSITIVE ROLE MODEL
3. CLEAR, CONSISTENT COMMUNICATION
4. KNOWLEDGE OF SPORT
5. SOMEONE WHO LISTENS

Adults who work with kids should know these fundamentals.

Be transparent with kids of their role and that the goal is team/unity



RISK OF INJURY AS A BARRIER TO PLAY

- **Nearly nine out of 10 parents have concerns about risk of injury (87.9%),** according to an **espnW/Aspen Institute Project Play Survey of Parents on youth sports issues** in 2014.
 - Parents were more concerned about injuries than any other issue, including the quality or behavior of coaches (81.5%), cost (70.3%), the time commitment required (67.9%), and the emphasis on winning over having fun (66.1%).
- In a **2018 survey** by the Hospital for Special Surgery and Aspen Institute, **concussions ranked as the No. 1 injury concern for all parents.**
- More than 3.5 million children under age 14 receive medical treatment for sports injuries annually. According to the CDC, **more than half of all sports injuries are preventable.**
 - Overuse injuries are responsible for nearly half of all sports injuries to middle and high school students (Sports Trauma and Overuse Prevention, STOP Sports Injuries).



YOUTH SPORTS PLAYBOOK IDEAS FOR EDUCATORS / COACHES

▪ 1. ASK KIDS WHAT THEY WANT

- Create tools to evaluate program success based on factors such as fun, diversity, participation and retention rates, and the development of skills that foster physical literacy.
- Wins and losses shouldn't be the prevailing metric.

▪ 2. REINTRODUCE FREE PLAY

- Commit to providing **recess**; kids can accumulate up to 40 percent of their total daily physical activity during recess (*Robert Wood Johnson Foundation, 2012*).
- As is, one-third of third graders do not get the recommended 20 minutes of daily recess, with students in communities of color getting less than others.

▪ 3. ENCOURAGE SPORTS SAMPLING

- Offer daily physical education, an obvious venue for promoting physical literacy.
- Bring back intramurals.
- Add alternative sports that tap into cultural interests.

▪ 4. REVITALIZE IN-TOWN LEAGUES

- Hire diversity officers to develop efforts to engage underserved kids.
- Share club revenues from wealthier programs with those that serve families who need subsidies.



YOUTH SPORTS PLAYBOOK, CONTINUED

■ 5. THINK SMALL

- Support the occasional closing of downtown streets for cycling, 3-on-3 basketball tournaments, and other community sports and physical activities.
- Help solve sport transportation barriers by utilizing networks/resources from faith-based groups that may also have indoor/outdoor spaces for activities.

■ 6. DESIGN FOR DEVELOPMENT

- Commit to annual goals based on participation growth.
- Add a pediatrician or health professional *COUGH* ME! *COUGH* to the board to sync policies with medical recommendations.
- Don't cut kids — add teams where possible by shrinking rosters. Grow practice-to- game ratios. Dedicate time to developing fundamental movement skills. Provide quality, individualized feedback based on progress made in those skills.

■ 7. TRAIN ALL COACHES

- Connect your athletes with youth programs and get them qualified to serve as assistant coaches. Kids respond to teens, who can bridge age and cultural gaps.

■ 8. EMPHASIZE PREVENTION

- Recommend non-collision forms of play for 12-and-under kids.
- Don't just drop sports considered dangerous; provide options and add low-injury (and low-cost) sports, like ultimate frisbee.



WHY IS THE DIFFERENCE BETWEEN A SPORTS PSYCHOLOGIST AND A SPORTS PSYCHIATRIST?

- A **sports psychologist** primarily focuses on performance enhancement using mental skills and motivational training.
- A **sports psychiatrist** has a clinical role and is focused on the prevention, diagnosis, and treatment of mental health concerns confronting the athlete.
- Sports psychiatry utilizes a biopsychosocial (and lifestyle) perspective to address problems such as:
 - Recovery from injury
 - Healthy and unhealthy aspects of competition
 - Relationships between psychological functioning and athletic performance
 - Effects of athletic activity on neuroendocrine function
- *Note: There is a lot less stigma associated with talking about **performance** than there is about talking about **stressful life events and disorders**...*



COMMON “INVISIBLE INJURIES”

- Depression
- Anxiety & the “Yips”
- ADHD
- Substance Abuse
- Sports-Related Concussions
- Eating Disorders



PREVALENCE RATES OF COMMON MENTAL HEALTH CONDITIONS IN ELITE ATHLETES VS. THE GENERAL PUBLIC

- *Sleep disorders and sleep concerns: **HIGHER***
- *Major depressive disorder and depressive symptoms: **EQUAL***
- *Suicide: **LOWER***
- *Anxiety and related disorders: **EQUAL***
- *Post-traumatic stress disorder and other trauma-related disorders: **EQUAL***
- *Eating disorders: **HIGHER***
- *Attention-deficit/hyperactivity disorder: **HIGHER***
- *Bipolar and psychotic disorders: **EQUAL***
- *Substance use and substance use disorders: **LOWER** (but there are sport-specific factors)*
- *Gambling disorder: **HIGHER***



DEPRESSION IN ATHLETES

- Warning Signs: SIGECAPS
 - Sleep disturbance
 - Loss of Interest/anhedonia
 - Unfounded Guilt or feelings of worthlessness
 - Loss of Energy
 - Loss of Concentration
 - Loss of Appetite
 - Psychomotor slowing
 - Suicidal ideation
- Athletes in individual sports tend to be more prone to depressive symptoms than athletes competing in team sports
- Theory is that team cohesion is protective, and that individual athletes would be more prone to internalize failure and become depressed
- Theory that diffusion of responsibility in team sports would decrease the negative effect of perfectionistic expectations (that might weigh down the individual)
- What NCAA sport has the highest rates of depression? (Wolanin, et al, 2016)
 - **Women's Track & Field**
 - Personality type (perfectionistic, obsessive-compulsive re: time/interval counting), introverted/internalizing style, increased injury rate, team culture/decreased support as often an individual training venture



ANXIETY, THE “YIPS”, AND SUPERSTITIONS

- Warning Signs of Anxiety = Flight or flight gone wrong
 - Increased heart rate
 - Increased rate of breathing
 - Sweating
 - Feeling faint/lightheaded
 - Sense of impending doom
 - Narrowed/tunnel vision
 - Derealization/depersonalization
- Why would panic disorder sufferers experience a worsening of symptoms during acute exercise?
 - *The physical sensations of exercise, such as shortness of breath/chest pain, may mimic those of panic, and thus a panic disorder-suffering exerciser worries he or she indeed is going to have a panic attack, which exacerbates further symptoms of panic.*
- What are the “Yips”?
 - When an unconscious, reflexive complex motor movement is impeded by conscious thought (likely anxiety), and thus there is a sudden loss of ability
 - “If you think, you stink” or “Analysis paralysis”
 - Think: Chuck Knoblauch or Steve Sax
 - The idea is to prevent conscious interruption and to allow athletic instinct to take over
 - “Total concentration is the ability to think about nothing” (Ray Knight, Mets) → “Clear the mechanism”
- Why did Wade Boggs eat chicken before every game? Or why did Jason Terry wear the shorts of his opponent’s team the night before he played them?
 - To feel more in control and thus more confident in their ability to perform



ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) IN ATHLETES

- Ways ADHD may negatively affect sport performance:
 - *Lack of focus and concentration – may cause academic difficulties, threatening academic eligibility*
 - *Oppositional behavior*
 - *Argumentative attitude*
 - *Frustration*
 - *Lowered self-esteem and labile mood*
 - *Increased risk of substance use*
- Ways ADHD may positively affect sport performance:
 - *Some children with ADHD are reported to be able to ‘hyperfocus’ (highly focus) on their own enjoyable activities without being distracted by regular life activities – this may block out distractions during practice and competition*
 - *More likely to be novelty-seeking and exhilarated/excited in response to novel stimuli or cues for potential rewards*
- Medication treatment options:
 - *Atomoxetine*
 - *Alpha-agonists (blood pressure meds): guanfacine, clonidine*
 - *Stimulants → may require a therapeutic use exemption (TUE)*



SUBSTANCE ABUSE IN SPORTS

- Elite athletes use substances at LOWER rates than the general population
- 5 most commonly used and misused substances by elite athletes:
 - *Alcohol*
 - *Caffeine*
 - *Nicotine*
 - **Cannabis** (most common illicit substance but still use less than the general population)
 - *Stimulants*
- Why athletes as a population may use substances:
 - *Experimentation*
 - *Socialization*
 - *Pleasure*
 - *Self-treatment strategies*
 - *Stress relief*
 - *To reduce pain and negative emotions*
 - *Increase alertness and energy*
 - *Improve social self-confidence*
 - *Performance enhancement*
 - *To improve power, endurance, speed, aggression, agility, alertness and focus*
 - *To reduce fatigue, injury healing time, percentage body fat*



SPORTS-RELATED CONCUSSIONS (SRC)

- The Numbers:
 - 1.6-3.8 million SRC per year
 - 38 million youths in organized sports
 - 1.1-1.9 million recreational and SRC in 18 and under population
 - SRC accounts for approx. 9% of High school sport injuries
 - Increased ER visits by 57-200% in 8-19 y/o range in the 2000s
 - High school athlete SRC rate
 - 1997-1998: 0.12 in 1000
 - 2011-2012: 0.51 in 1000
 - Generally higher rate in competition than practice, except in cheerleading
 - Highest rates: boys' tackle football, boys' ice hockey, girls' soccer, and boys' lacrosse
 - 40.5% of boys who play football have an SRC and consider it a status symbol – it means you are “tough and play hard”
 - Girls may have a higher rate of SRC in sex-comparable sports
 - Different bone structure/musculature
 - Estrogen
 - Better reporting
- We are much better at recognizing SRC, but we are also experiencing an **increased true incidence** via more participation, bigger/faster/stronger athletes, and aggressive style of play



SPORTS-RELATED CONCUSSIONS, CONTINUED

- Athletes are still hiding their injury – only 40-45% of HS athletes reporting, and 66% of HS athletes would play through the SRC
 - Not wanting to leave play
 - Fear of approaching coach
 - Lack of concussion knowledge
 - Fear of SRC and consequences
 - Stigmatization
 - Lack of recognition by coaches, teammates, parents
- **“Sunburn” metaphor**
- Typical recovery and return to play: 80% recover over days to weeks, inverse relationship between recovery time and age
- **“Let your brain reboot” metaphor** – when your brain is using energy to get everything back to normal, it does not have available energy to run other “programs” – why you might experience headache, dizziness, cognitive fatigue
 - After it “reboots”, you run one program at a time to make sure there are no glitches → Graded Return to Play protocol
- Rural and inner-city schools need to be more careful -- almost 8 in 10 of these schools have low athletic trainer availability, and athletes in those communities are 50% more likely to have a concussion that goes unidentified or mismanaged.
- Research shows that telemedicine can work to diagnose concussions at sports events, though someone on the ground must still act/respond to the diagnosis.
- Multiple school districts could have one concussion specialist on standby for all of their games, checking in when needed through a robot or less expensive interface. This could especially help in rural areas.



EATING DISORDERS ARE DANGEROUS, BLAMELESS, AND TREATABLE

- Affect every age, sex, gender, race, ethnicity, and socioeconomic group
- Biological, psychological and sociocultural factors come together, but focusing on the “why” is irrelevant and can create guilt in the most helpful tools in recovery, the parents/guardians
- It’s not about food, but rather about **control**
- Over 50% of eating disorder diagnoses are **missed** during a health care system encounter
- Most medical complications are **reversible** and **treatable** if identified early in the illness; however, a few are associated with permanent harm
- Successful treatment of eating disorders is **inversely related to the duration** of the untreated illness
- Anorexia Nervosa has the **highest** mortality rate of any psychiatric disorder, 12x higher than age-matched controls

Warning Signs for Anorexia Nervosa:

- Excessive or compulsive exercise (especially at odd hours)
- Sudden interest in “healthy eating, vegetarianism, veganism”
- Weight less than minimally normal or less than minimally expected
- Significant decrease in normal growth chart curve for weight
- Bradycardia, orthostatic vital sign changes, syncope, or chest pain
- Absence of, delayed onset or sporadic menses in females
- Fatigue, cold intolerance, or dizziness
- Odd food rituals and mealtime avoidance
- Hair loss/thinning or lanugo on face/arms/torso
- Dry or yellowish skin
- Upper and/or lower gastrointestinal dysfunction
- Early satiety and bloating
- Dehydration



EATING DISORDERS AND SPORTS

- Sports do NOT cause ED, but aspects of the environment can increase risk and can complicate identification of symptoms
- There is more emphasis on weight in weight-class and appearance/aesthetic sports
 - This may create unhealthy body consciousness, discomfort, or dissatisfaction
- Sports associated with highest risk for development of eating disorders:
 - Rowing (weight classes)
 - Gymnastics (aesthetic)
 - Figure skating (aesthetic)
 - Cross-country (low body mass advantageous)
 - Cycling (low body mass advantageous)
- Regardless of sport, most coaches (and athletes) believe that a “leaner” athlete will perform better, despite the research being open to interpretation
- Athletes can sometimes perform well despite having a serious eating disorder but eventually it will have a negative effect on the athlete’s health and performance



WHEN TO RETURN TO PLAY FROM AN EATING DISORDER

- Clearance occurs in stages
- Need proper weight restoration and stabilization of medical symptoms
- Athlete must be willing to fuel their body for output
- Ability to self-regulate excessive movement and/or standing
- Utilizes a variety of additional coping behaviors
- Decreased perseveration related to exercise
- Engages in treatment and agrees to comply with treatment targets

An athlete who is medically unstable should not practice or compete!

- Adapted from Tierney, 2019



SUMMARY AND TIPS

- Sports and athletics are a vital component to well-rounded youth development and the promotion of a healthy lifestyle.
 - PE/sports should be viewed as part of the school day, not an add-on to academics
- Childhood and adolescence in the 21st century is much more complex, and there are many more competing interests and priorities
- We need to bring the fun back into the game and get back to the basics of sport.
 - Follow the Play Book
 - Process-focus (journey), not results-focus (destination)
 - “You signed up to PLAY...enjoy it”
- Disengaged parents lead to disengaged and easily bored kids, so be proactive and model an athletic lifestyle
 - Parents should educate themselves about the sport their kid is playing and volunteer their time to the team
 - But, the drive to play sports has to come from within the child, not the parents.
- Helicopter parents bugging you? Give them the 24-hour rule...parents must wait 24 hours before contacting the coach after a game, or their kid loses playing time
- Coaches matter.
 - Get to know your athletes and know the warning signs of “invisible injuries”
 - Provide sincere eye contact, a pat on the back, and genuine feedback/support...most kids know deep down that athletics won’t be a career, but they still deserve the enriching benefits of being on a team

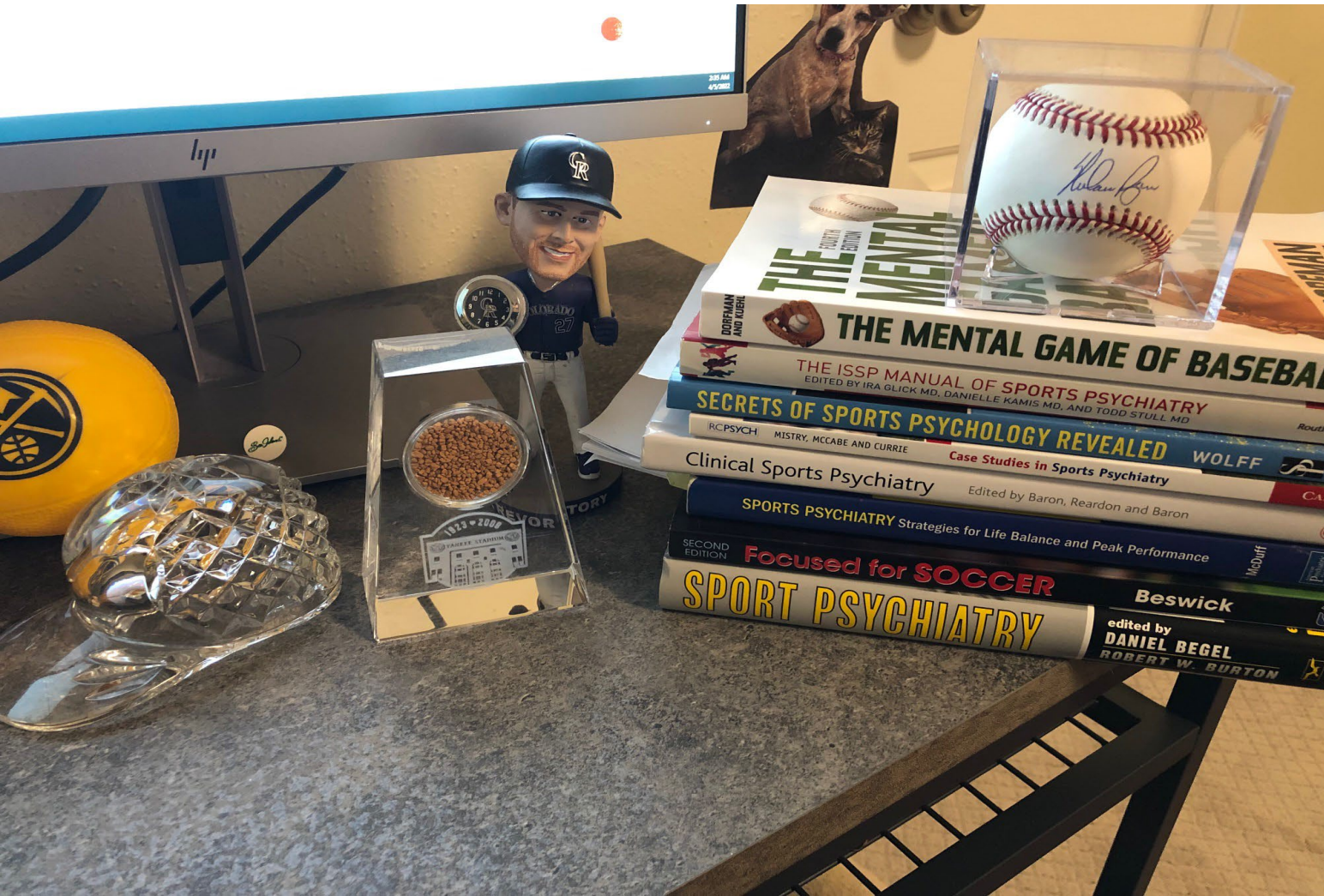


RECOMMENDATIONS

- Reading:
 - The Mental Game of Baseball by Harvey Dorfman and Karl Kuehl
 - Skill by Christopher S. Ahmad, MD
 - Pee Wees: Confessions of a Hockey Parent by Rich Cohen
 - Let Them Lead: Unexpected Lessons in Leadership from America's Worst High School Hockey Team by John U. Bacon
 - The Aspen Institute Project Play (aspenprojectplay.org)
 - Healthy Sport Index powered by Hospital for Special Surgery (<https://healthysportindex.com/sports/>)
 - How to Coach Kids website (<https://www.howtocoachkids.org>)
 - <https://askcoachwolff.com>
- Listening:
 - Rick Wolff's The Sports Edge on WFAN "The Fan"
 - "Youth Inc" with Greg Olsen
 - Audacy's "I'm Listening" podcast



THANK YOU!



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