

Movement and Mental Health

Alex Altenburger, PT, DPT

SPORTS MEDICINE CENTER



Children's Hospital Colorado

CDC Recommendations

- Ages 3-5
 - 3 hours/day
- Ages 6-17
 - 60 min of moderate-to-vigorous activity/day
 - Aerobic 3 days/week
 - Resistance training 3 days/week



Physical Activity Guidelines for Americans

2nd edition



CDC Recommendations

- Ages 3-5
 - 3 hours/day
- Ages 6-17
 - 60 min of moderate-to-vigorous activity/day
 - Aerobic 3 days/week
 - Resistance training 3 days/week
- Adults
 - 150 – 300 minutes of moderate-intensity aerobic activity **per week**
 - Resistance training 2 days/week



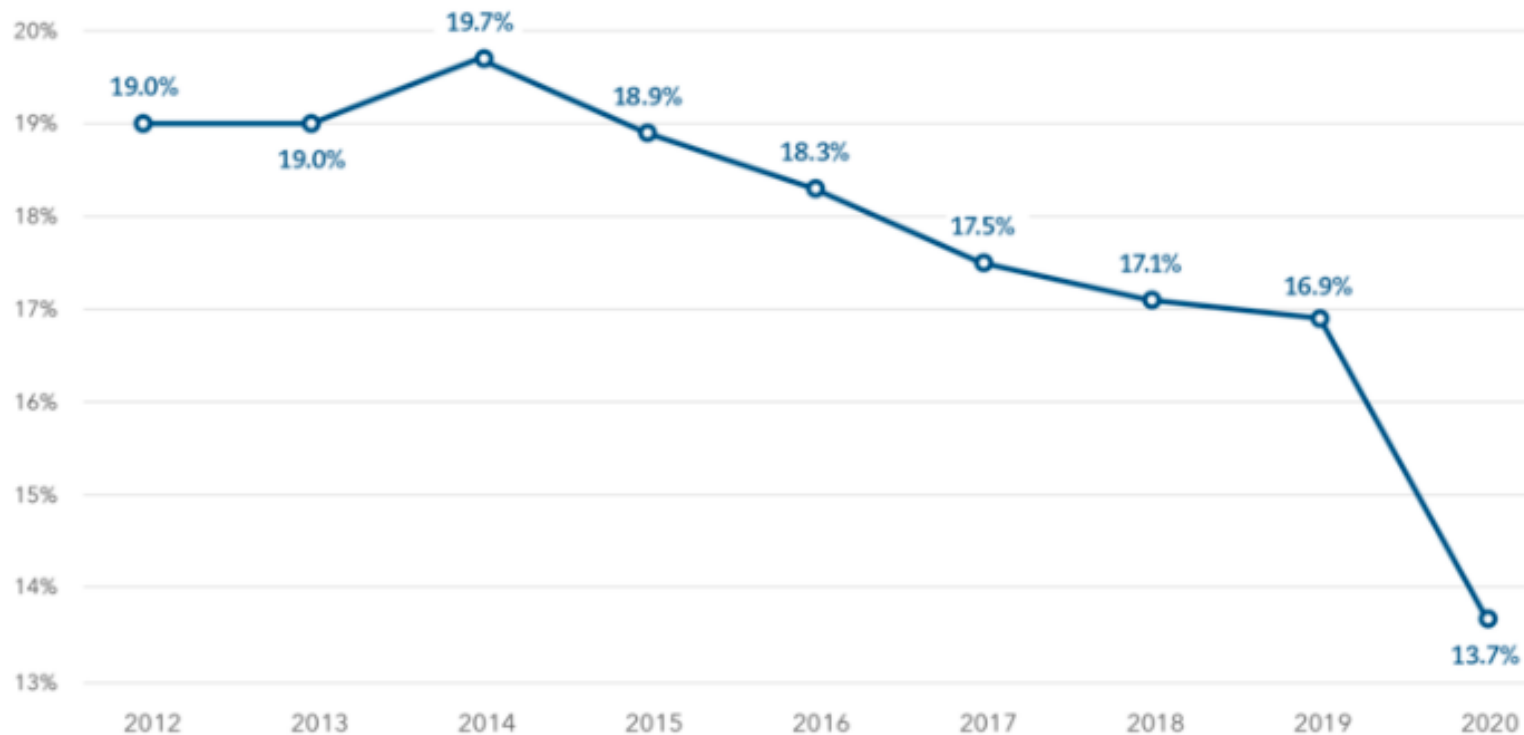
Overall Decline in Physical Activity in Recent Years

- From 2008 to 2020, regular sports participation has dropped from 45% to 41%
- 24% of children aged 6-17 engaged in at least 60 minutes of physical activity per day
 - 30% in 2008
- 13% engaged in **NO** sport activity



Physically Inactive Children

Percentage of kids ages 6-12 who engaged in no sport activity during the year



Physically Inactive Youth Are...

- More likely to:
 - Gain unhealthy amounts of weight
 - 2x as likely to be obese as adults
 - Have a worse quality of life
 - Miss school
 - Perform worse academically
- Less likely to:
 - Go to college
- Have a higher risk of developing:
 - Diabetes
 - Cancer
 - Heart disease
 - Stroke
 - Joint and bone disease
 - Depression



Highest Risk Populations

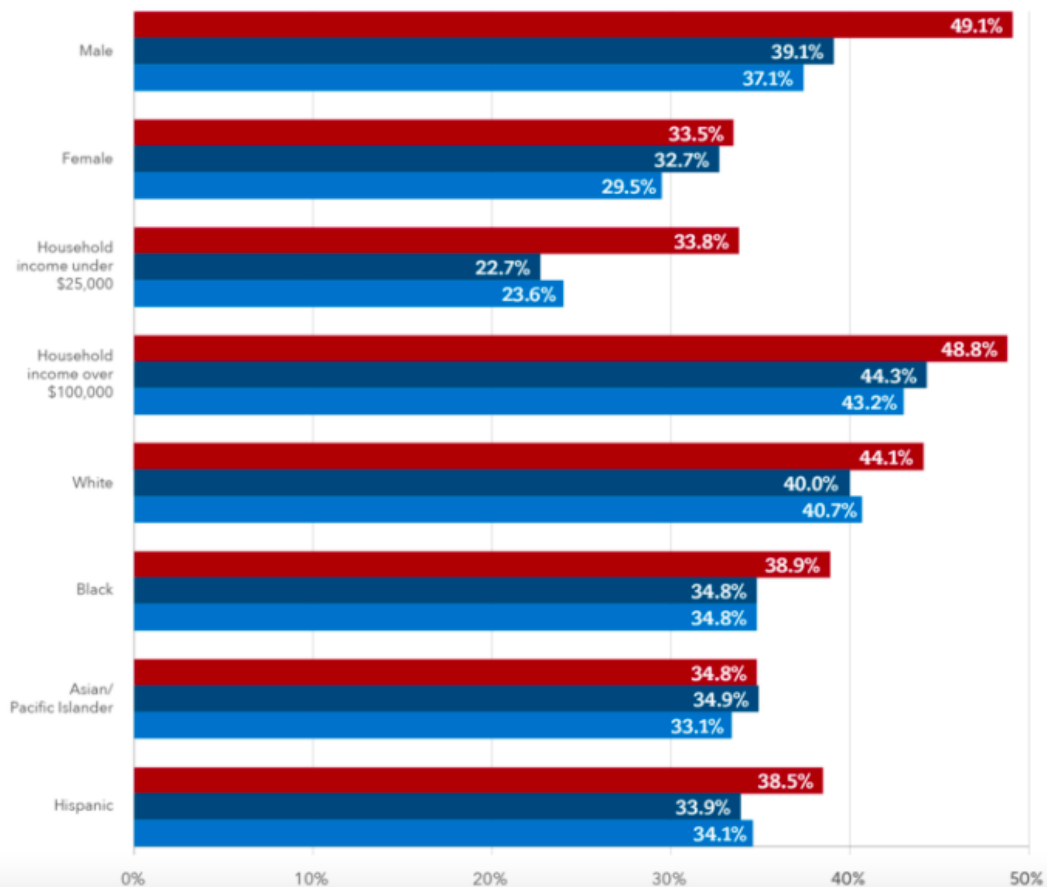
- Children from low-income families
- Youth who are racial and ethnic minorities
- Girls
- Children with physical or developmental disabilities
- Youth in the South



Core Sport Participation by Demographic

Percentage of children ages 6-12 who played a sport on a regular basis

2012 2019 2020



Core Sport Participation by Demographic

Percentage of children ages 6-12 who played a sport on a regular basis

2012 2019 2020



Amplified Disparities During COVID

- Household Income
 - Time spent in sport
- Race
 - Time spent in sport
 - Return to sport faster
- Age
 - Time spent in sport



Pre/Post Covid Trends

- >40% of community-based and travel sports organizations closed, merged, or opened with limited capacity
- Pick-up and outdoor sports increased
- 28% of parents say their child is not interested in playing sports
 - 19% in June 2020
- 22% of kids classified as obese in 2021
 - 19% pre-Covid
- Annual weight gain changes

Youth Who Have Lost Interest in Sports

Percentage of parents whose child played organized sports before COVID-19 who say their child has since lost interest

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Race/Ethnicity



Household Income



Age



Sport



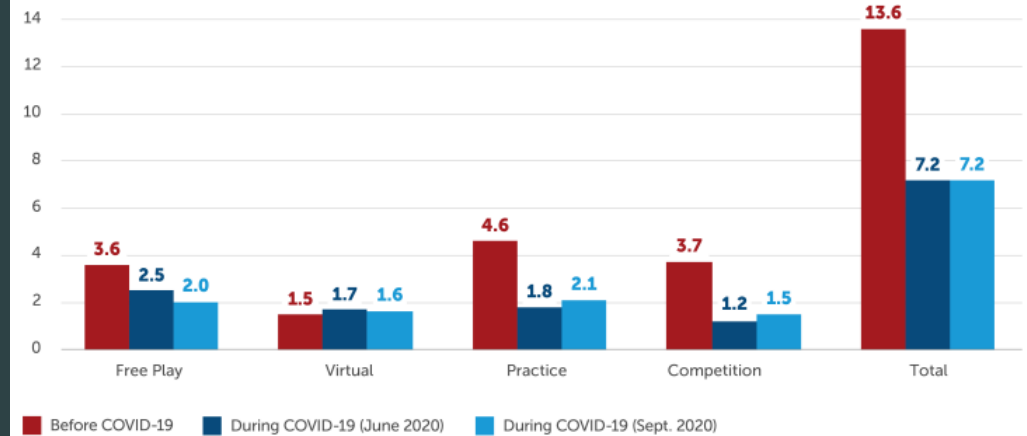
State



Pre/Post Covid Trends

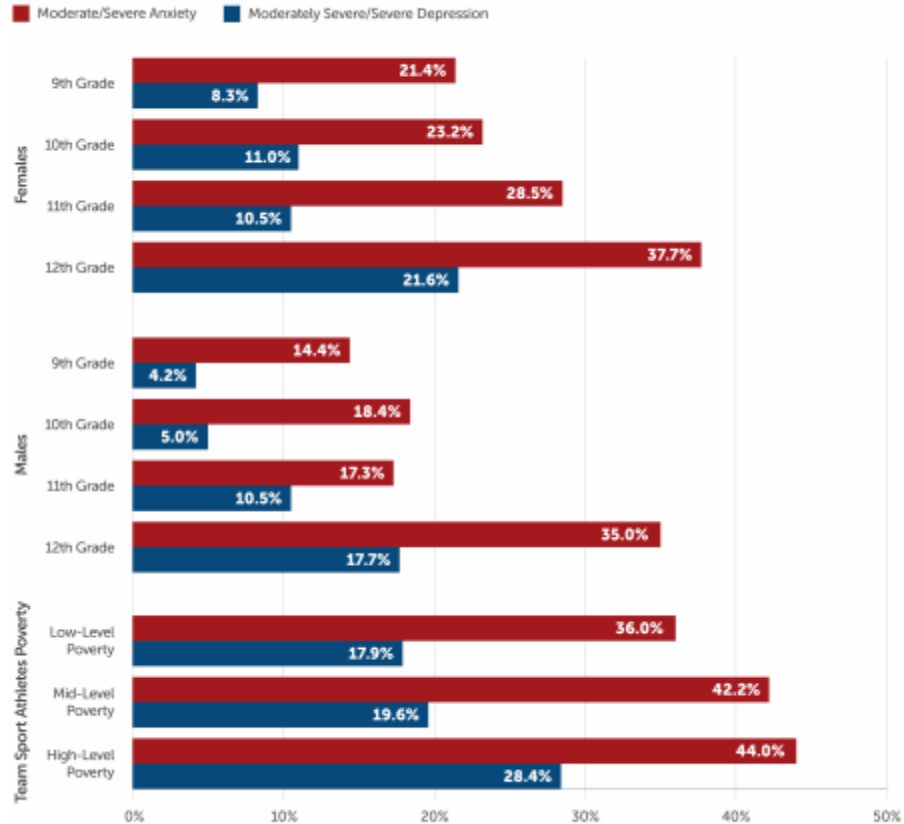
- 3 in 10 kids will not return to their pre-pandemic sport
- 6.5 hours less per week on sports
- Physical activity decreased by >50%
 - Bigger decrease than post-injury
- Increased reports of anxiety and depression symptoms

Hours Spent Playing Sport per Week by Youth Ages 6–18



Source: Aspen Institute/Utah State University surveys, June and September 2020

Anxiety and Depression Symptoms by Adolescent Athletes During COVID-19

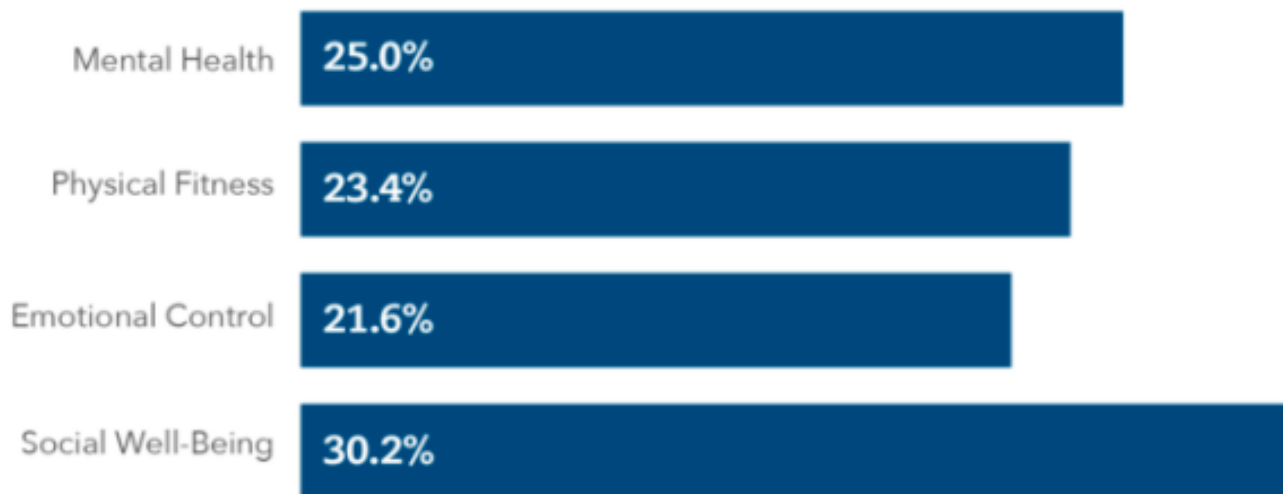


Source: "COVID-19 Related School and Sport Cancellations in the U.S.: A Report on the Health of Adolescent," University of Wisconsin School of Medicine, May 2020



Children's Health Status Since Start of Pandemic

Parents who say their child's health has decreased greatly or decreased slightly

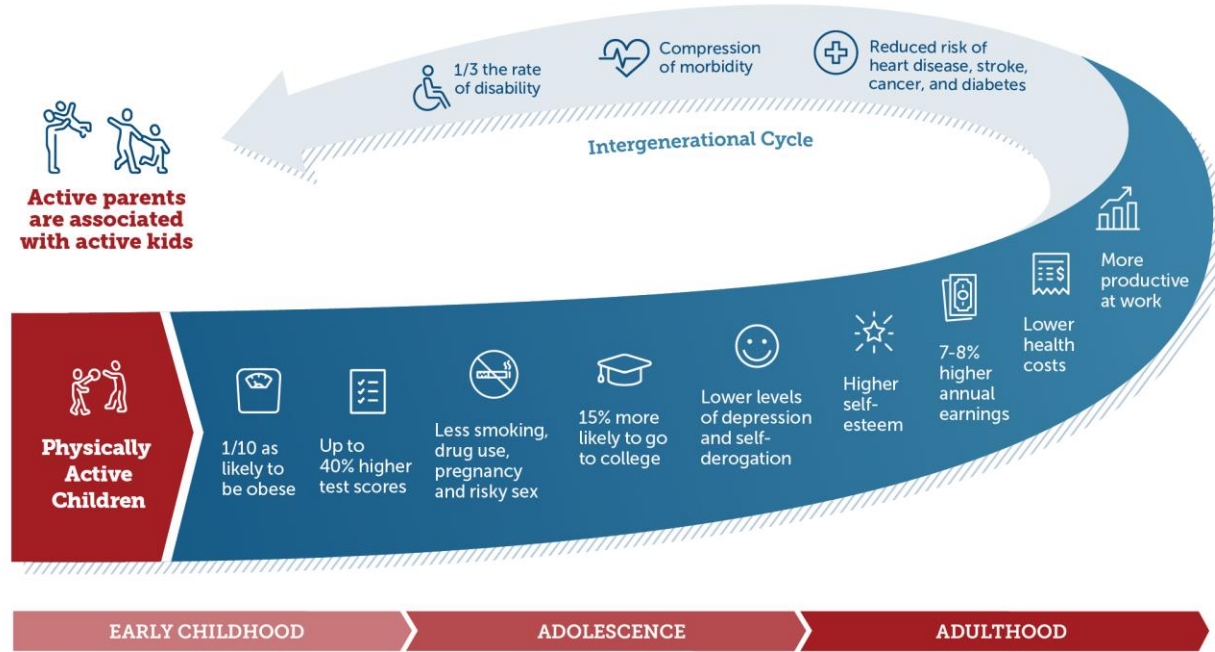


Benefits of Physical Activity



ACTIVE KIDS DO BETTER IN LIFE

What Research Shows on the Lifetime Benefits



Learn more at as.pn/sportsfacts

Mental Health Benefits

- Direct correlation between exercise and mental health
 - Of students who exercise 6-7 days/week, 25.7% reported feeling sad more than 2 weeks in 12 months
 - Students who exercise 0-1 day/week = 35.7%
 - 6-7 days/week = 15% reported suicidal ideation, 6.4% reported a suicide attempt
 - 0-1 day/week = 24.6% reported SI, 10.3% reported a suicide attempt
 - Children who reported no exercise were 2x as likely to have mental health problems compared to those who had 60 minutes of exercise/day

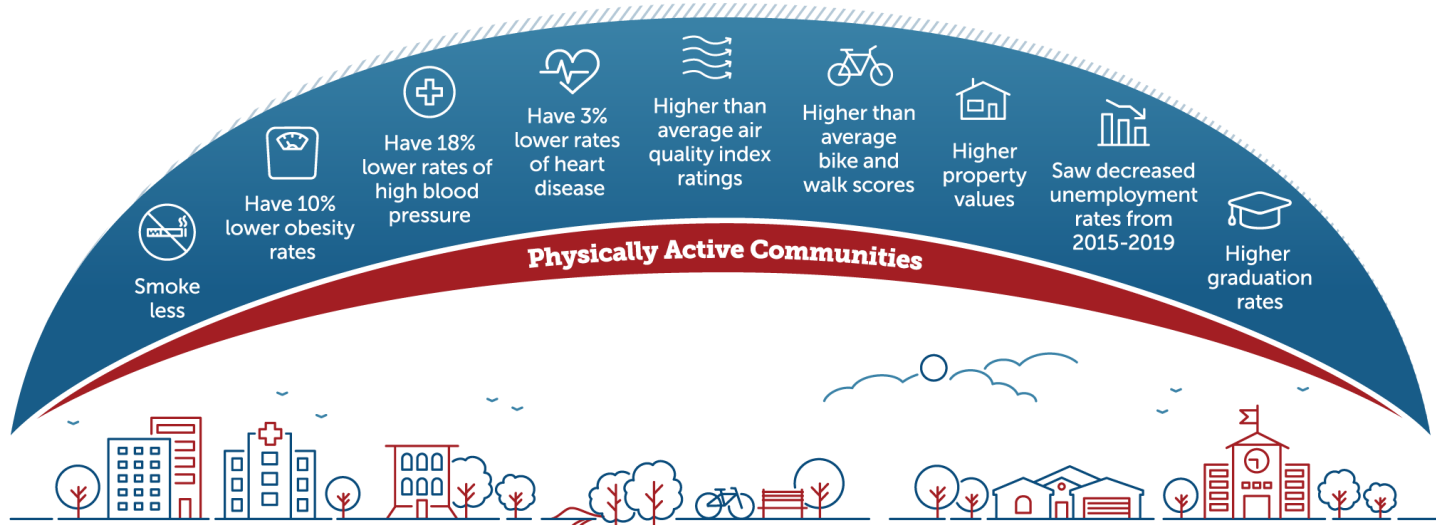
Mental Health Benefits

- Increased physical activity as teenagers = less likely to report depression as an 18 year old
- High school athletes are less likely to suffer from loneliness and low self-esteem
- Team sports have higher reports of positive psychosocial aspects



ACTIVE COMMUNITIES DO BETTER

What Research Shows on the Benefits to Residents



Learn more at [as.pr/sportsfacts](https://aspeninstitute.org/sportsfacts)

These communities typically **spend \$20 or more on parks per resident** and are more likely to support low-cost physical activity and sport experiences for kids

What can we do?





What Kids Want from Sports

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



What Kids Want from Sports

- 48. Winning
- 63. Playing in tournaments
- 66. Practicing with specialty trainers/coaches
- 67. Earning medals/trophies
- 81. Getting pictures taken



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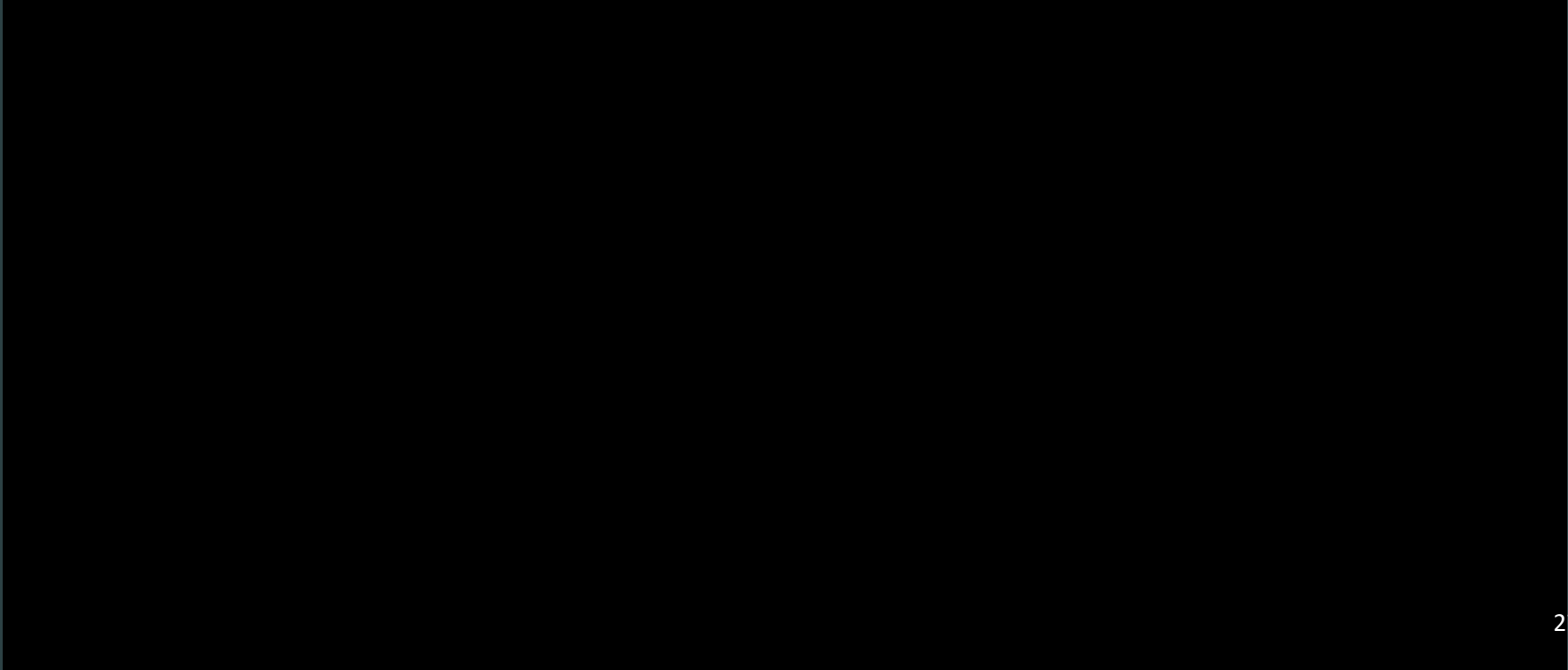
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What Kids **DON'T** Want



What Kids **DON'T** Want

- Top Reasons Kids Quit Sports by age 11
 1. No longer fun
 2. Lost ownership
 3. Limited playing time
 4. Afraid to make mistakes
 5. Feeling disrespected



Coaches Are Key

- Win at all costs mentality



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Coaches Are Key

- ~~Win at all costs mentality~~
 - Coach kids, not athletes
 - Focus on fun
 - Not winning
 - Increased confidence and self-esteem = increased likelihood of success on the field
 - Sports positively affect youth's self-esteem, goal-setting, and leadership
 - Quality of coaching is a key factor in maximizing positive effects

Social and Emotional Skills through Sport

- Reciprocal relationship between physical activity and social and emotional development
- Higher physical fitness = improved performance and problem solving
- Physical activity provides opportunities for self-efficacy and perceived competence

Social and Emotional Skills through Sport

- Coaches as first line of defense
 - Asking if they are struggling with mental health
 - Reflective listening
 - Holding space for kids to talk
 - Action plans

Social and Emotional Skills through Sport

- Calls for Coaches

01 KNOW EVERY
ATHLETE'S STORY

02 ESTABLISH A
SUPPORTIVE
TEAM CULTURE

03 CELEBRATE
EFFORT

04 FOCUS ON THE
SKILLS THAT
MATTER

05 BE A ROLE MODEL

06 BE COACHABLE

07 JOIN FORCES

> ADDITIONAL
RESOURCES

CHECKLIST

First Practice

- Host a pre-season meeting with parents to discuss your program philosophy, goals and intentions
- Ask every player which name they prefer and call them by that name
- Talk with youth athletes about how to seek out and connect with other adults they trust
- Co-create and set positive norms, rules and routines for practices and games

Planning Practice / Pregame

- Collaborate with other coaches to design effective practices
- Ensure the physical environment is free of safety concerns
- Set high expectations and clear limits on behavior
- Have players set goals and intentions regarding their physical, social, emotional and cognitive skill development
- Allow athletes to serve in leadership roles and maintain a rotation schedule so all players have the opportunity to lead

During Practice / Day of Game

- Start and end practices on time
- Participate in drills with players
- Practice positive interactions that are encouraged of players
- Adjust the structure of practice and activities to accommodate players' emotions
- Create community by adopting practices such as composing a team cheer, selecting a team name, logo or slogan, or incorporating team-building activities into games and practices
- Encourage high-fives or handshakes for greetings

After Practice / Postgame

- Give shoutouts for achievement, effort and improvement at the end of the practice: players to players, coach to players and players to coach
- Collect athlete feedback and incorporate into practices
- Talk with parents/caregivers about issues arising with their children
- Encourage parents and caregivers to reinforce these skills by talking about what they are, what they mean and what these behaviors can look like at home

Ongoing: Every Practice, Every Game

- Reinforce the norms, rules and routines
- Ensure all youth are included, with equitable access to activities, being sensitive to different learning styles
- Establish a code of conduct that prohibits bullying and establishes consequences
- Ask questions to get to know every youth, their families and their motivations
- Organize formal meetings with your players throughout the season in order to help them express their feelings, wants and needs
- Be cognizant of your own and others' perspectives
- Practice self-care, engage in reflection around your own social and emotional well-being
- Talk to every youth at every practice and during every game

[Learn more at as.pn/callsforcoaches](https://www.aspeninstitute.org/callsforcoaches)



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Physical Literacy

- To be physically literate, an individual should have the ability, confidence, and desire to be physically active for life

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 - ABILITY- competency in basic movements and a fitness level that allows the individual to engage in a variety of sports and games
 - CONFIDENCE - knowing you have the ability to play sports and enjoy other physical activities
 - DESIRE - the intrinsic enthusiasm for physical activity

Physical Literacy



If you can...

RUN



BALANCE



SWIM



You can enjoy...

- Playing tag
- Soccer
- Basketball
- Lacrosse
- Ultimate Frisbee
- Triathlon
- Tennis



- Gymnastics
- Biking
- Softball
- Football
- Snowboarding
- Zumba
- Yoga



- Swimming
- Snorkeling
- Kayaking
- Water polo
- Surfing
- Diving
- Rowing



Implementing Physical Literacy

- Be a role model!



Implementing Physical Literacy

- Play alongside them







Implementing Physical Literacy

- Create space



Implementing Physical Literacy

- Encouragement



Resources For Activity



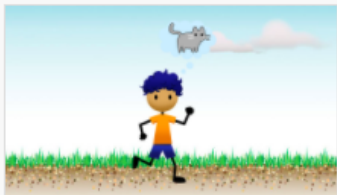
SHOW ACTIVITIES:

ALL AGES ↓

ALL SKILLS ↓

SORT ACTIVITIES

Activities for kids



Animal Friends

Skill: Balance 15 minutes

This activity develops coordination and balance as kids try to imitate the movements of different animals.

[More»](#)



Balance Poses

Skill: Balance 10 minutes

This activity develops coordination and balance.

[More»](#)



Ball Hockey for Children

Skill: Strike 30 minutes

Receive free tips and activities every month

Your name

Your email address

- Yes, please also send me the biannual AFL Pro Newsletter for educators, coaches and rec leaders

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PUBLIC SERVICE ANNOUNCEMENT

CANADA

Help flatten the curve



The Play at Home Playbook: Powered by Playworks

Created on 3.27.20

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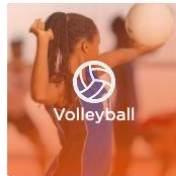
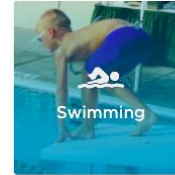
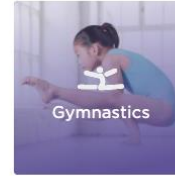
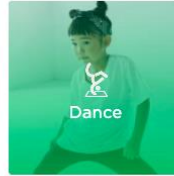
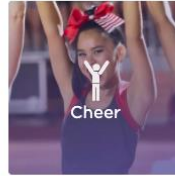
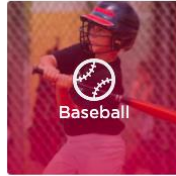
Sports Specialization

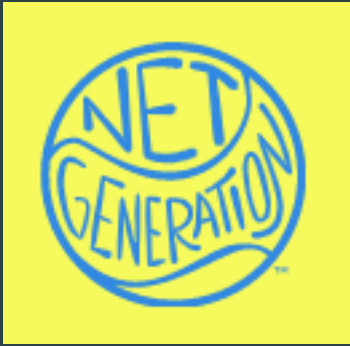
- Year-long, intensive participation in a single sport or activity at the expense of other activities prior to age 13
- Risks:
 - More likely to be injured
 - Less likely to be active for life
 - More likely to burnout/retire early
 - More likely to develop poor basic movement skills
 - Less likely to excel in one sport

Success for Multi-Sport Athletes

- In 2014, 7 out of 10 Olympians grew up as multi-sport athletes
- At the 2020 NFL Draft, 28 of the 32 first-round picks were multi-sport athletes (88%)
 - 2018 & 2019: 29 out of 32 (>90%)
- Division 1 NCAA athletes are more likely to have played multiple sports in high school
 - Their first organized sport was different from their current one
- Since 2014, 87% of University of Alabama football recruits played multiple sports in high school
 - National average of NCAA football is 79%

Featured Sports









Healthy Sport Index

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What Matters Most to You?

Physical Activity

Low Emphasis

High Emphasis



Safety

Low Emphasis

High Emphasis



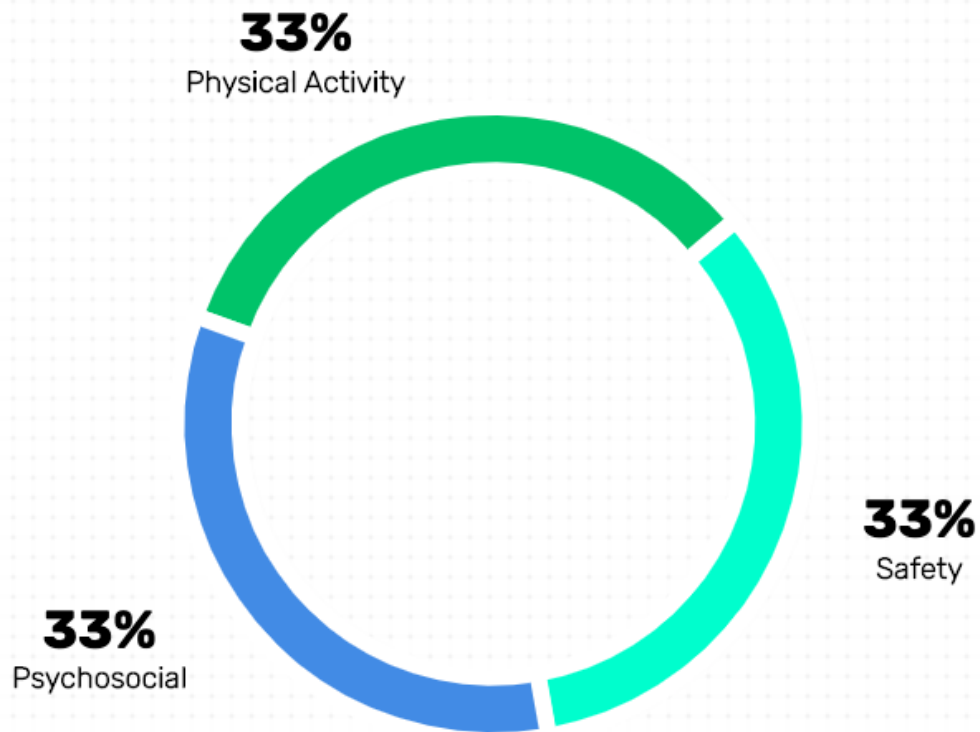
Psychosocial

Low Emphasis

High Emphasis



Reset All Sliders





Healthy Sport Index

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Cross Country Boys

Cross country is a sport that involves extensive running for long distances and periods of time, and it requires great endurance and the ability to embrace solitude. Recommended complementary/alternate sports for runners include swimming, soccer and tennis.



Swimming Girls

Swimming is a sport that keeps the heart rate up but takes some stress off the body, while also building endurance, muscle strength and cardiovascular fitness. Recommended complementary/alternate sports for swimmers include gymnastics, track and field, volleyball and cross country.

What Matters Most to You?

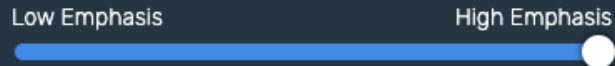
Physical Activity



Safety



Psychosocial



Reset All Sliders

32%
Physical Activity



14%
Safety

54%
Psychosocial



Healthy Sport Index



Soccer

Boys

Soccer is a sport that rewards footwork, stamina, leg strength, and teamwork, and requires a great amount of endurance, plus vision and balance. Recommended complementary/alternate sports for soccer players include tennis and track and field.



Soccer

Girls

Soccer is a sport that rewards footwork, stamina, leg strength, and teamwork, and requires a great amount of endurance, plus vision and balance. Recommended complementary/alternate sports for soccer players include tennis and track and field.



Returning to Sport Safely

- Gradual return is crucial!
 - Increase activity by 10% each week

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Return to Run Progression (Accelerated)

Stage	Walk	Run
1	5 minutes	1 minute
2	4 minutes	2 minutes
3	3 minutes	3 minutes
4	2 minutes	4 minutes
5	1 minute	5 minutes
6		Continuous 30 minute *

*Stage 6: Begin with 5 minutes of walking, followed by 30 minutes of running (gradually increasing your pace to comfortable speed), then end with 5 minutes of running.

Injury Prevention

- Highest risk for sports related injury:
 - Early specializers
 - Physically inactive youth
 - Young girls



Injury Prevention

- What can we do?
 - Resistance training
 - Dynamic warmup
 - Education for coaches



Resistance Training

- Encourage those who fall into high-risk group to begin resistance training
 - Reduce sports-related injury risk
 - 68% reduction
 - Improve physical literacy
 - Improve sports performance
 - Improve several health measures



Dynamic Warmup

- Reduces injury risk in different sports across several age ranges
- Shown to improve:
 - Strength
 - Reaction
 - Performance
- Warm up can be very simple
 - FIFA11+
 - Takes around 20 minutes
- For younger kids, there's a FIFA11+ Kids



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FIFA 11+

PART 1 RUNNING EXERCISES - 8 MINUTES

 <p>1 RUNNING STRAIGHT AHEAD The focus is on the forward lean of the torso. It is essential to lean forward at the ankles from the feet, not from the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>2 RUNNING HIP OUT The focus is on the hip out. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>3 RUNNING HIP IN The focus is on the hip in. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>
 <p>4 RUNNING CIRCLING PARTNER The focus is on the circling partner. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>5 RUNNING SHOULDER CONTACT The focus is on the shoulder contact. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>6 RUNNING QUICK FORWARDS & BACKWARDS The focus is on the quick forwards and backwards. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>

PART 2 STRENGTH - PLYOMETRICS - BALANCE - 10 MINUTES

LEVEL 1	LEVEL 2	LEVEL 3
 <p>7 THE BENCH STATIC The focus is on the static bench. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>7 THE BENCH ALTERNATE LEGS The focus is on the alternate legs. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>7 THE BENCH ONE LEG LIFT AND HOLD The focus is on the one leg lift and hold. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>
 <p>8 SIDWAYS BENCH STATIC The focus is on the static sideways bench. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>8 SIDWAYS BENCH RAISE & LOWER HIP The focus is on the raise and lower hip. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>8 SIDWAYS BENCH WITH LEG LIFT The focus is on the leg lift. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>
 <p>9 HAMSTRINGS BEGINNER The focus is on the beginner hamstring. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>9 HAMSTRINGS INTERMEDIATE The focus is on the intermediate hamstring. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>9 HAMSTRINGS ADVANCED The focus is on the advanced hamstring. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>
 <p>10 SINGLE-LEG STANCE HOLD THE BALL The focus is on the hold the ball. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>10 SINGLE-LEG STANCE THROWING BALL WITH PARTNER The focus is on the throwing ball with partner. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>10 SINGLE-LEG STANCE TEST YOUR PARTNER The focus is on the test your partner. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>
 <p>11 SQUATS WITH TOE RAISE The focus is on the toe raise. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>11 SQUATS WALKING LUNGES The focus is on the walking lunges. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>11 SQUATS ONE-LEG SQUATS The focus is on the one leg squats. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>
 <p>12 JUMPING VERTICAL JUMPS The focus is on the vertical jumps. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>12 JUMPING LATERAL JUMPS The focus is on the lateral jumps. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>12 JUMPING BOX JUMPS The focus is on the box jumps. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>

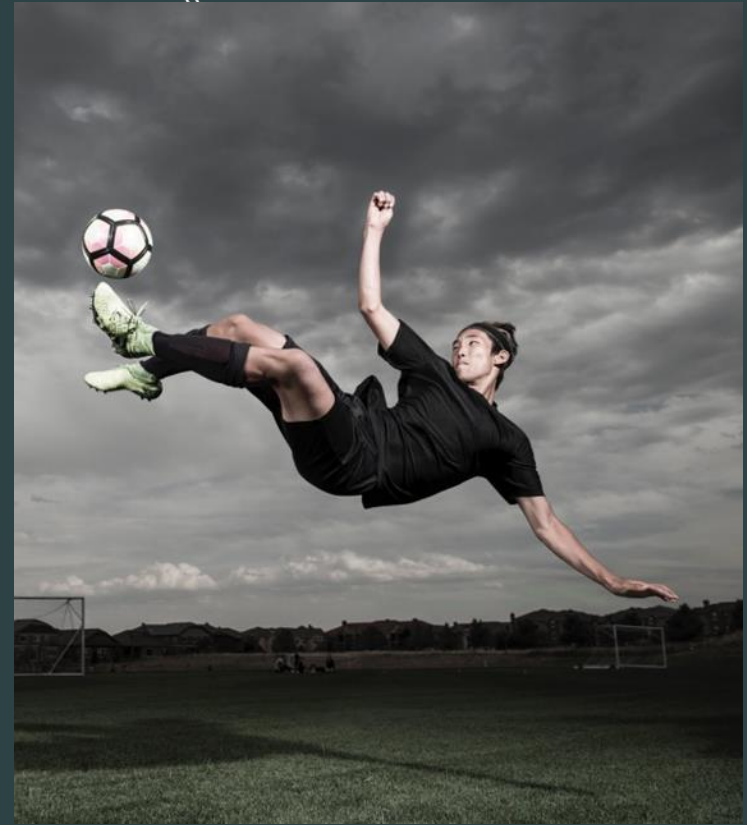
PART 3 RUNNING EXERCISES - 2 MINUTES

 <p>13 RUNNING ACROSS THE PITCH The focus is on the across the pitch. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>14 RUNNING BOUNDING The focus is on the bounding. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>	 <p>15 RUNNING PLANT & CUT The focus is on the plant and cut. The feet should be under the hips. Key together: The torso should lean forward at an angle of 10-15 degrees. The feet should be under the hips. 2 min.</p>
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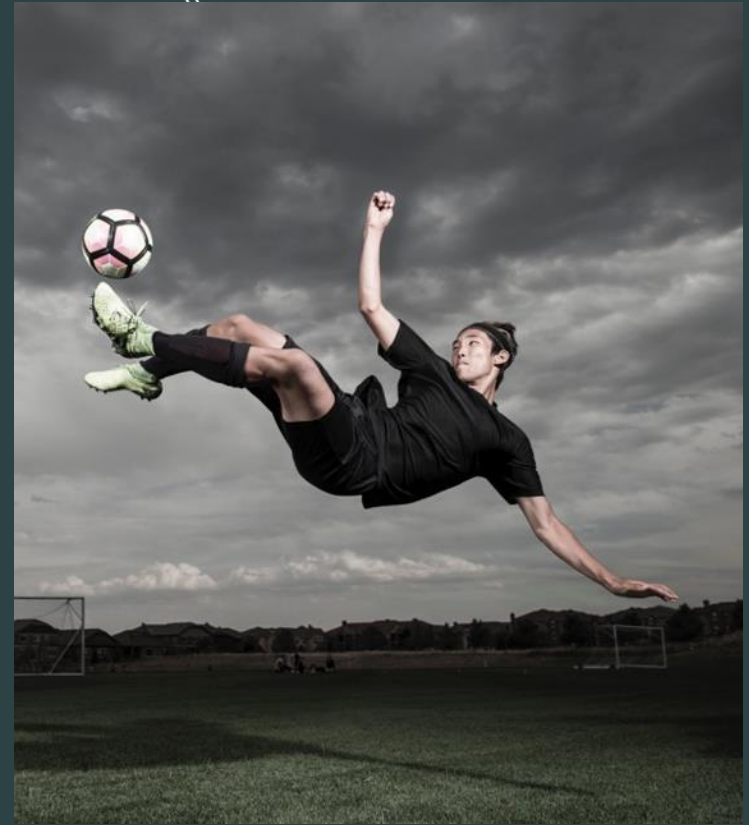
“New Normal”

- Unique time in our society as it relates to youth sports



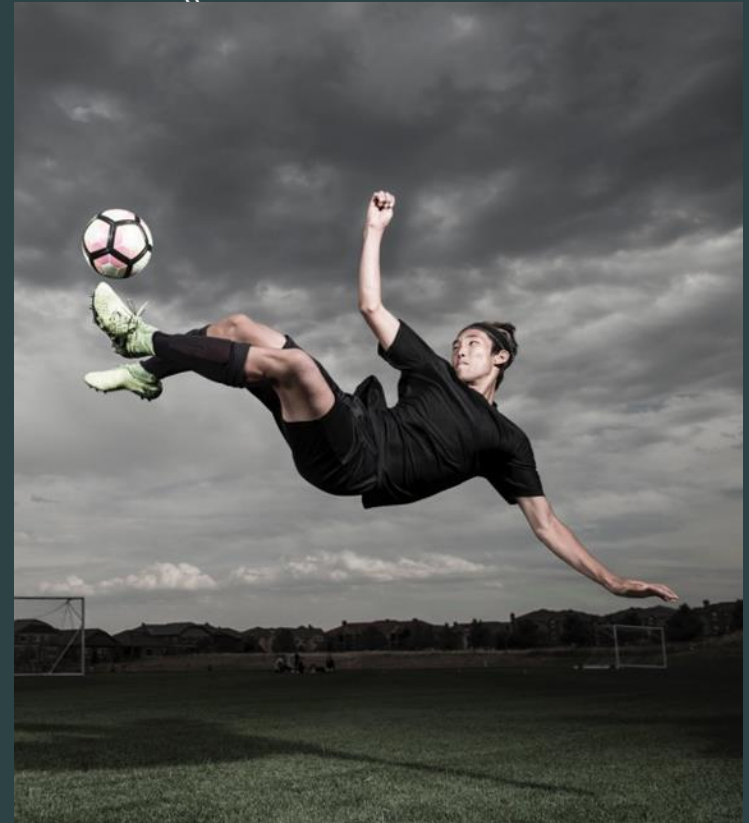
“New Normal”

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- **Ask kids what do they want**



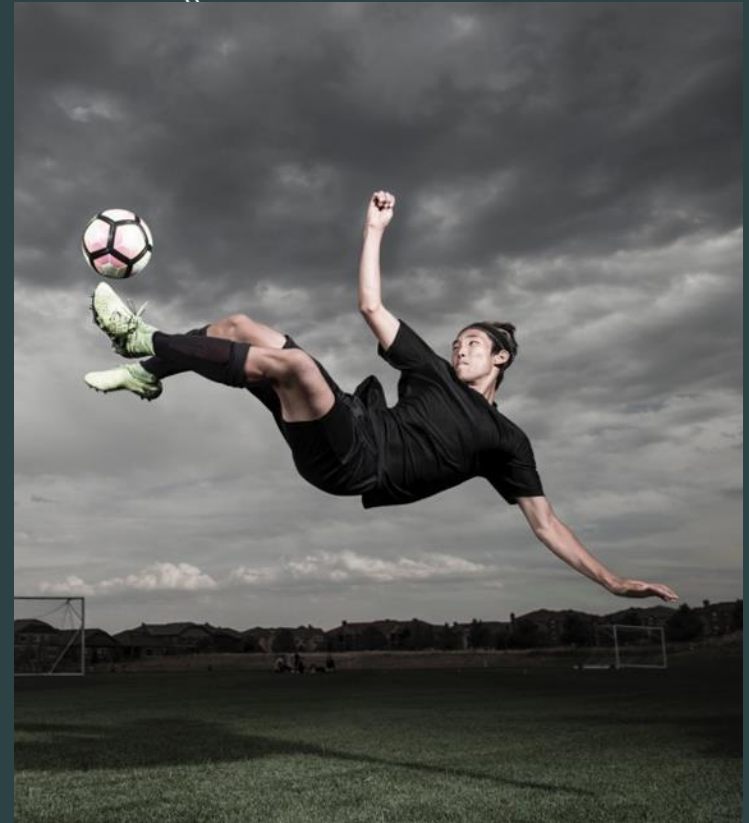
“New Normal”

- Unique time in our society as it relates to youth sports
- **Ask kids what they want**
 - Free play



“New Normal”

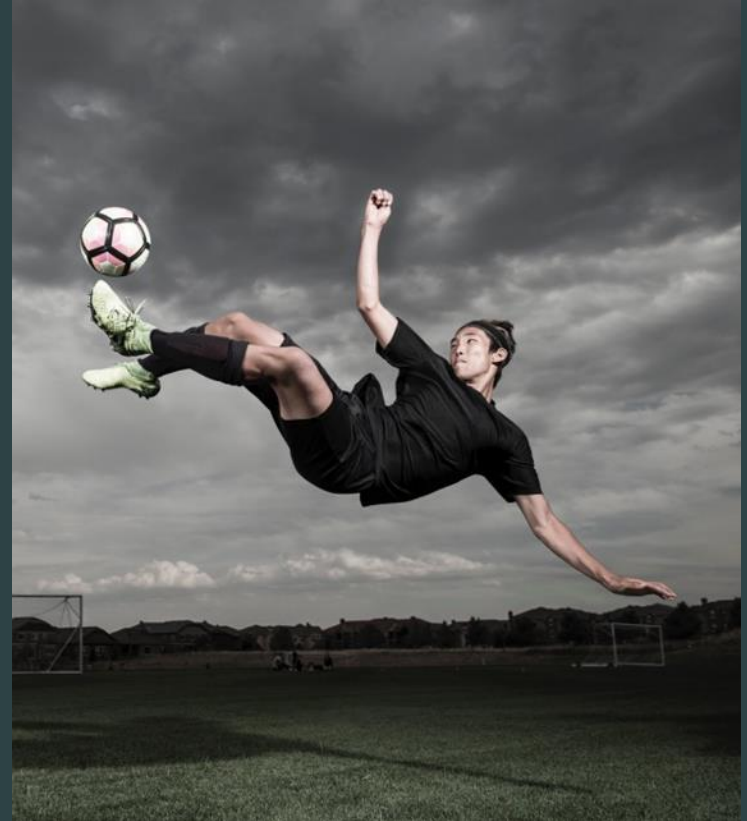
- Unique time in our society as it relates to youth sports
- **Ask kids what do they want**
 - Free play
- Look to your local rec centers



“New Normal”

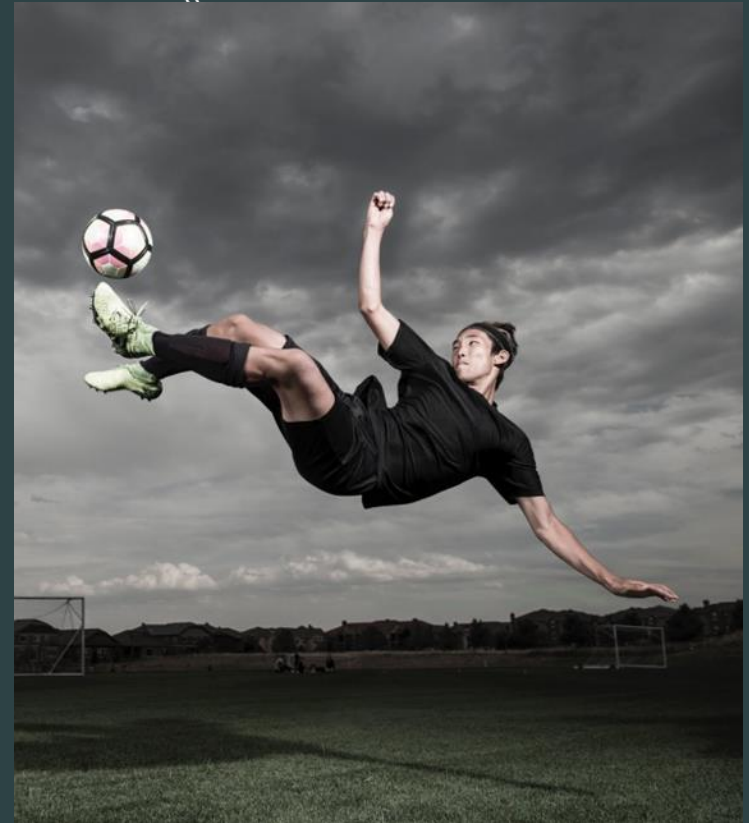
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- Look to your local rec centers

sport**engine**



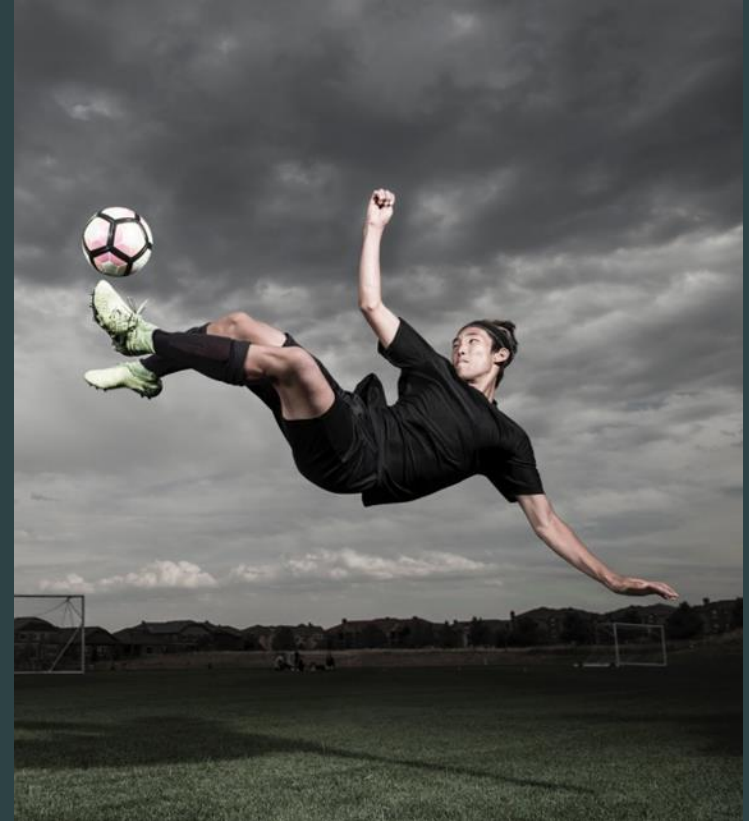
“New Normal”

- Unique time in our society as it relates to youth sports
- **Ask kids what do they want**
 - Free play
- Look to your local rec centers
- Educate coaches



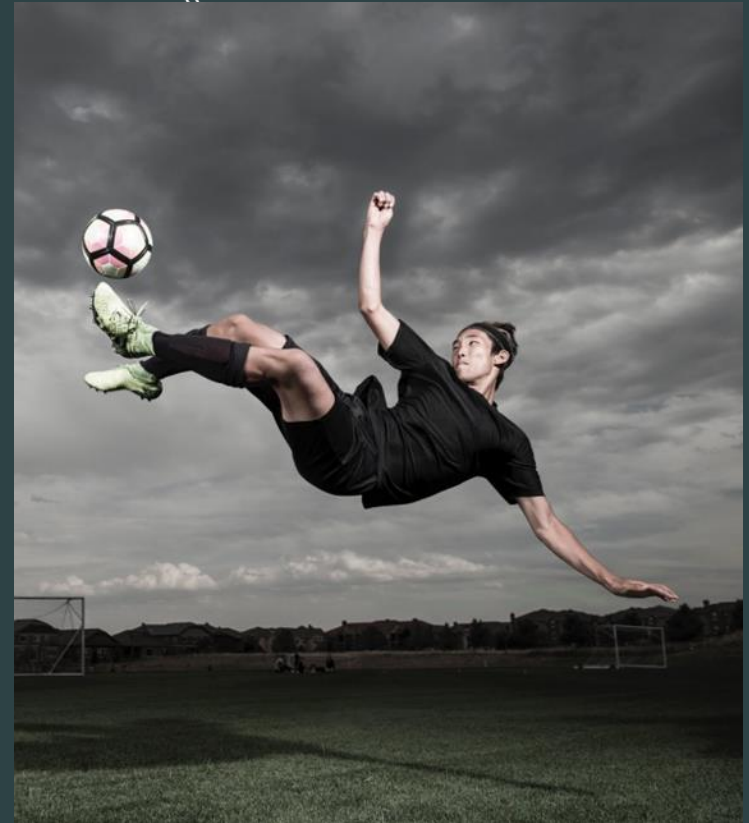
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“New Normal”

- Unique time in our society as it relates to youth sports
- **Ask kids what do they want**
 - Free play
- Look to your local rec centers
- Educate coaches
- Injury reduction
 - Resistance training
 - Dynamic warmup



Questions?

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