Movement and Mental Health
Alex Altenburger, PT, DPT
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
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

- 2012: 19.0%
- 2013: 19.0%
- 2014: 19.7%
- 2015: 18.9%
- 2016: 18.3%
- 2017: 17.5%
- 2018: 17.1%
- 2019: 16.9%
- 2020: 13.7%
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

- **Male**: 2012: 39.1%, 2019: 37.1%, 2020: 49.1%
- **Female**: 2012: 33.5%, 2019: 32.7%, 2020: 29.5%
- **Household income under $25,000**: 2012: 22.7%, 2019: 23.6%, 2020: 33.8%
- **Household income over $100,000**: 2012: 48.8%, 2019: 43.2%, 2020: 44.3%
- **White**: 2012: 40.0%, 2019: 40.7%, 2020: 44.1%
- **Black**: 2012: 34.8%, 2019: 34.8%, 2020: 38.9%
- **Asian/Pacific Islander**: 2012: 34.8%, 2019: 34.9%, 2020: 33.1%
- **Hispanic**: 2012: 33.9%, 2019: 34.1%, 2020: 38.5%
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

Race/Ethnicity
- All: 27.8%
- Black: 32.7%
- White: 28.1%
- Hispanic: 27.3%

Household Income
- Under $50,000: 25.9%
- $50,000-$99,999: 22.7%
- $100,000+: 36.4%

Age
- 6-10 years old: 31.1%
- 11-14 years old: 27.1%
- 15-18 years old: 24.2%

Sport
- Basketball: 32.0%
- Soccer: 20.8%
- Baseball: 35.9%

State
- California: 29.6%
- New York: 35.8%
- Texas: 17.6%
- Florida: 29.7%
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
Anxiety and Depression Symptoms by Adolescent Athletes During COVID-19

<table>
<thead>
<tr>
<th>Grade</th>
<th>Moderate/Severe Anxiety</th>
<th>Moderately Severe/Severe Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9th Grade</td>
<td>8.3%</td>
<td>21.4%</td>
</tr>
<tr>
<td>10th Grade</td>
<td>11.0%</td>
<td>23.2%</td>
</tr>
<tr>
<td>11th Grade</td>
<td>10.5%</td>
<td>28.5%</td>
</tr>
<tr>
<td>12th Grade</td>
<td>21.6%</td>
<td>37.7%</td>
</tr>
<tr>
<td>Males</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9th Grade</td>
<td>4.2%</td>
<td>14.4%</td>
</tr>
<tr>
<td>10th Grade</td>
<td>5.0%</td>
<td>18.4%</td>
</tr>
<tr>
<td>11th Grade</td>
<td>10.5%</td>
<td>17.3%</td>
</tr>
<tr>
<td>12th Grade</td>
<td>17.7%</td>
<td>35.0%</td>
</tr>
</tbody>
</table>

Team Sport Athletes Poverty
- Low-Level Poverty: 17.9%, 36.0%
- Mid-Level Poverty: 19.6%, 42.2%
- High-Level Poverty: 28.4%, 44.0%

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

- Mental Health: 25.0%
- Physical Fitness: 23.4%
- Emotional Control: 21.6%
- Social Well-Being: 30.2%
Benefits of Physical Activity
ACTIVE KIDS DO BETTER IN LIFE
What Research Shows on the Lifetime Benefits

Active parents are associated with active kids

Physically Active Children
1/10 as likely to be obese
Up to 40% higher test scores
Less smoking, drug use, pregnancy and risky sex
15% more likely to go to college
Lower levels of depression and self-derogation
Higher self-esteem
7-8% higher annual earnings

Intergenerational Cycle

1/3 the rate of disability
Compression of morbidity
Reduced risk of heart disease, stroke, cancer, and diabetes

More productive at work
Lower health costs

EARLY CHILDHOOD
ADOLESCENCE
ADULTHOOD

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

Physically Active Communities

- Smoke less
- Have 10% lower obesity rates
- Have 18% lower rates of high blood pressure
- Have 3% lower rates of heart disease
- Higher than average air quality index ratings
- Higher than average bike and walk scores
- Higher property values
- Saw decreased unemployment rates from 2015-2019
- Higher graduation rates

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.

Learn more at aspn/sportsfacts
What can we do?
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
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
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
Coaches Are Key

• Win at all costs mentality
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 preseason 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 by 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/callforcoaches
Physical Literacy

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

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

– ABILITY- competency in basic movements and a fitness level that allows the individual to engage in a variety of sports and games
Physical Literacy

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

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

  – 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
TOOLS FOR AN ACTIVE LIFE

If you can...

RUN

You can enjoy...

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

BALANCE

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

SWIM

Swimming
- Snorkeling
- Kayaking
- Water polo
- Surfing
- Diving
- Rowing
Implementing Physical Literacy

• Be a role model!
Implementing Physical Literacy

• Play alongside them
Implementing Physical Literacy

• Play alongside them
Implementing Physical Literacy

- Exposure to several activities
Implementing Physical Literacy

• Create space
Implementing Physical Literacy

• Encouragement
Resources For Activity

ACTIVE FOR LIFE®
Raising physically literate kids

PLAYWORKS

sportengine

GoNoodle
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

SUBSCRIBE NOW

PUBLIC SERVICE ANNOUNCEMENT

CANADA
Help flatten the curve
The Play at Home Playbook: Powered by Playworks

Created on 3.27.20
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

- Baseball
- Basketball
- Cheer
- Dance
- Football
- Gymnastics
- Ice Hockey
- Lacrosse
- Martial Arts
- Soccer
- Softball
- Swimming
- Volleyball
- Wrestling
What Matters Most to You?

- **Physical Activity**
  - Low Emphasis
  - High Emphasis

- **Safety**
  - Low Emphasis
  - High Emphasis

- **Psychosocial**
  - Low Emphasis
  - High Emphasis

Reset All Sliders

**33%**
- Physical Activity

**33%**
- Safety

**33%**
- Psychosocial
**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**
  - Low Emphasis
  - High Emphasis

- **Safety**
  - Low Emphasis
  - High Emphasis

- **Psychosocial**
  - Low Emphasis
  - High Emphasis

- Reset All Sliders

- **Physical Activity**
  - 32%

- **Safety**
  - 14%

- **Psychosocial**
  - 54%
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
Returning to Sport Safely

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

<table>
<thead>
<tr>
<th>Stage</th>
<th>Walk</th>
<th>Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5 minutes</td>
<td>1 minute</td>
</tr>
<tr>
<td>2</td>
<td>4 minutes</td>
<td>2 minutes</td>
</tr>
<tr>
<td>3</td>
<td>3 minutes</td>
<td>3 minutes</td>
</tr>
<tr>
<td>4</td>
<td>2 minutes</td>
<td>4 minutes</td>
</tr>
<tr>
<td>5</td>
<td>1 minute</td>
<td>5 minutes</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Continuous 30 minute *</td>
</tr>
</tbody>
</table>

*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
Dynamic Warmup

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“New Normal”

• Unique time in our society as it relates to youth sports
“New Normal”

• Unique time in our society as it relates to youth sports
• Ask kids what do they want
“New Normal”

• Unique time in our society as it relates to youth sports
• Ask kids what do 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”

- Unique time in our society as it relates to youth sports
- Ask kids what do they want
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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
“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
“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?

• alex.altenburger@childrenscolorado.org