

# Strategies for parents to promote physical activity for children with Autism Spectrum Disorder



# Learning Objectives

As a result of participating in this webinar, parents and guardians of children who have been diagnosed with Autism Spectrum Disorder will be able to...

1. Understand the prevalence and general characteristics of children who have been diagnosed with Autism Spectrum Disorder
2. Describe physical activity recommendations and benefits for children
3. Describe how physical activity is beneficial for children with Autism Spectrum Disorder
4. Describe strategies for engaging in developmentally-appropriate, inclusive group and/or individual physical activities to use with child(ren) with Autism Spectrum Disorder

# Brief Description of Training

- The purpose of this webinar is to educate parents about Autism Spectrum Disorder and the national physical activity recommendations for children.
- Parents will be provided with a variety of strategies to engage in developmentally-appropriate, inclusive group and/or individual physical activities to use with their child(ren) who have been diagnosed with Autism Spectrum Disorder.

# Autism Spectrum Disorders

- Group of developmental disabilities caused by a problem with the brain, including (but not limited to)
  - Autistic Disorder
  - Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS)
  - Asperger Syndrome
- Functioning at different levels
  - Vary, mildly to severely
- Thinking and learning abilities
  - Gifted to severely challenged
- May communicate, interact, behave, and learn in ways that are different from most people
  - May look same as most people

Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov))

# General Characteristics of Children with Autism Spectrum Disorder

## Characteristic

Social Interaction Impairments

## Behavior

A child may...

- Have difficulty making eye contact with others
- Show little body language or facial expressions when interacting
- Have difficulty developing relationships with peers
- Seem uninterested in sharing experiences
- Engage less in give-and-take social interaction with caregivers, siblings and other close relations

A child may...

Speech, Language, and Communication Impairments

- Have difficulty communicating with speech or with gestures
- Have difficulty understanding what others are saying to him
- Have difficulty using the language he has to interact with others
- Have difficulty starting or continuing a conversation
- Have difficulty using his own sentences, and instead, may repeat what others say (referred to as echolalia)
- Lack make-believe or pretend-play skills

A child may...

Stereotyped or Repetitive Behavior

- Show interest in very few objects or activities and play with them in repetitive ways
- Perform repetitive routines and have difficulty with changes in these routines
- Spend time in repetitive movements (such as waving a hand in front of his face)

# Children with Autism Spectrum Disorder

- 2 million individuals diagnosed with ASD in U.S.
  - Tens of millions worldwide
- 1 in 88 American children
  - Increased 10% - 17% annually in recent years
  - Tens of millions worldwide
    - Ten-fold increase in past 40 years
  - Possible explanations (though not confirmed) for rising prevalence may include
    - Improved diagnosis
    - Increased awareness
    - Environmental influences
- ASD is 4 to 5 times more common among boys than girls
  - 1 out of 54 boys
  - 1 out of 252 girls

# Physical Activity for all Children

- “An hour of PLAY every day!”
- Participate in at least 60 minutes and up to several hours of physical activity per day
- Physical activity should include
  1. Aerobic Activity (60 minutes every day)
    - Moderate-intensity aerobic activity
      - Brisk walking
    - Vigorous-intensity activity
      - Running
  2. Muscle Strengthening (3 days per week)
    - Gymnastics
    - Push-ups
  3. Bone Strengthening (3 days per week)
    - Jumping rope
    - Running

White House. (2010). *Solving the problem of childhood obesity within a generation*. White House Task Force on childhood obesity: Report to the President, May 2010.

# Is Physical Activity Important?

- For children diagnosed with ASD, participation in physical activity has been shown to have multiple benefits, including reduction of stereotypic behavior (Levinson & Reid, 1993; Prupas & Reid, 2001), increased appropriate responding (Kern et al., 1998), and the potential for social interaction (Berkeley, Zittel, Pitney, & Nichols, 2001).
- The importance of physical activity to overall health for all individuals has been well-documented and increasing physical activity among youth is a critical, national health objective. (U.S. Department of Health and Human Services (USDHHS), 2000)



# Why is Physical Activity Important?

- Good Health
  - Helps build and maintain healthy bones and muscles.
  - Helps reduce the risk of developing obesity and chronic diseases, such as diabetes, cardiovascular disease, and colon cancer.
  - Reduces feelings of depression and anxiety and promotes psychological well-being.

# Why is Physical Activity Important?

- Academic behavior and success
  - Academic achievement and grades
  - Academic behavior, such as time on task
  - Concentration and attentiveness in the classroom
- Slowing or stopping overweight or obesity
  - Overweight and obesity are significant health concerns for all children especially those with any type of disability (Lloyd, Temple, Foley, 2012)

# Why is Physical Activity Important?

- And much more...
  - Promotes self-esteem
  - Promotes self-confidence
  - Increases general levels of happiness
  - Leads to positive social outcomes
  - Reduces risk of depression
  - Helps promote better sleep
  - Reduces mental tension
  - Reduces muscular tension
  - Increases concentration
  - Increases energy levels
  - Decreases the frequency of negative, self-stimulating behaviors
  - Discourages aggressive and self-injurious behaviors
  - Improves attention span

# Are Children Physically Active?

- No.
  - How many children in the US are physically active for 60 minutes daily?
    - 18.5% of girls
    - 38.3% of boys
  - How many children in the US attend physical education (PE) class daily in their schools?
    - 27.2% of girls
    - 34.6% of boys
- Children become LESS active as they get older
  - Physical activity levels are higher in elementary school compared to middle and high school. (Pan, 2009)

# Are Children with ASD Physically Active?

- Probably not.
  - Children with disabilities are more likely to be sedentary (Lobstein, Baur, & Uauy, 2004)
- Why are children with disabilities less active?
  - Fatigue
  - Pain
  - Social isolation
  - Difficulty with activities of daily living
  - Depression
  - Perceived cognitive and athletic inability (Baet & Van Strein; Rimmer, Rowland, & Yamaki, 2007)

# Are Children with ASD Physically Active?

- Children with ASD tend to withdraw from physical activity due to the negative social and behavioral outcomes associated with the symptom. (Pan, 2009)
- Youth with ASD often do not have basic access to physical activity opportunities for various reasons related to the disability and consequently are not afforded the same choices to be active. (Pan & Frey, 2006)

# Is Physical Activity EXERCISE?

- No.
  - Physical activity is fun and is meant to be playful
  - Children should play, not exercise
- Adults can exercise, children should play.
  - Adults can (and should) play too!

Early life prevention is one of the most effective ways to improve physical and psychological health (USDHHS, 2002)

# Barriers to Physical Activity Children

- No where to play
- No one to play with
- Don't know what to do
- Poor motor coordination
- Screen time (TV, gaming, computers, iPad, etc.)
  - Interferes with physical activity time



# Barriers to Physical Activity

## Parents

- No where to play
  - Crowded, busy in the home
  - Parks and playgrounds are scary
  - School/after-school programs are too loud, busy for my child
- No one to play with
  - Parents don't know how to engage their children in physical activity
- Is physical activity safe for my child?
  - Do I need to seek their doctor's approval for my child to be physically active?
- I'm not physically active
  - Do I need to seek my doctor's approval for me to be physically active?
  - Parents don't feel they have expertise to play with their children
- Parents feel tired and overwhelmed
- Screen time (TV, gaming, computers, iPad, etc.)
  - Interferes with physical activity time

# Where can Children Play?

- School recess
- School physical education
- After-school at school or other program
- School or community sport
- Walking to or from school (or store, park, etc.) with an adult
- Parks, playgrounds, community centers, etc.
- At home

# Who can your child play with?

- Teachers
- Caregivers
- Adults
- Children
- Siblings
- \*\*You

# How can I play at home with my child?

- I need to be physically active too
- Adults need to accumulate 30 minutes or more of moderate intensity physical activity 5 or more days per week
  - (Pate et al., 1995)
- Healthy, fit family

# Strategies for Parents to Engage in Physical Activity with their Children

- Teach new physical activity skills to children by
  1. Breaking tasks down into smaller, organized tasks
  2. Rewarding child for successful attempt or achievement
- Use simple motor activities
- Take lots of breaks
- Emphasize words like “play” and “fun”
  - not “exercise” or “fitness” or “health”

# Strategies for Parents to Engage in Physical Activity with their Children

- Use visuals
- Be consistent
- Allow time for processing
- Use positive reinforcement
- Demonstrate
- Participate
- Initiate

# What can we do?

- Walk
  - Variety of speeds
  - With or without music
- Dance
  - Child chooses songs
  - Adult chooses songs
- Play Ball
  - Soccer
  - Basketball

# Activities

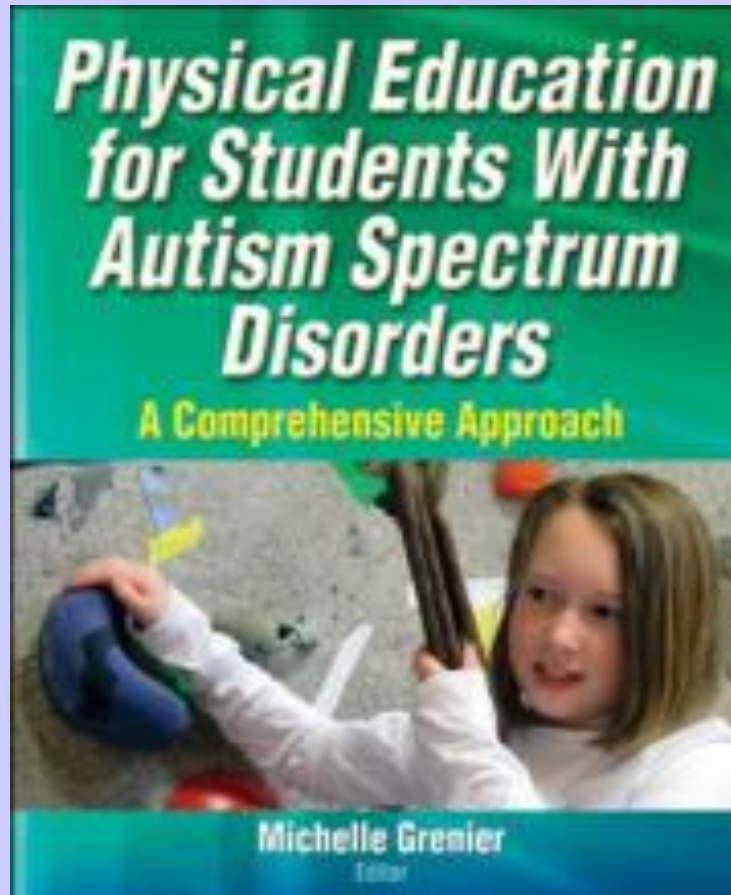
Excerpt from, *25 Exercise Games and Fun Indoor Activities to Get Kids Moving*, by Anna Fader October 4, 2011

- Jump Rope – If you have downstairs neighbors who complain, go in the hall or right outside your building. To make it more fun, pick up a book of jump-rope-rhymes.
- Balloon Ball – There are endless ways to play with balloons indoors. Try to keep it off the ground or just play catch.
- Wheelbarrow, Crab and Bear-walk – These tough positions mean you get a real workout.
- Animal – Hop like a bunny or a frog, squat and waddle like a duck, etc.



# More Activities

- Obstacle Course – Create a furniture course in your apartment or take chalk and make a course outside.
- Follow the Leader – Add to the workout by doing energetic movements like jumping, stomping and squatting.
- Dance Party – Turn on the music and shake your groove thang.
- Freeze Dance – When the music stops, freeze in your pose and hold it until the music starts again.
- Scavenger Hunt – Write up clues and hide them around the apartment. Kids can race to find each clue for a small prize at the end.



Grenier, M. (2014). *Physical education for students with Autism Spectrum Disorders: A comprehensive approach*. Champagne, IL: Human Kinetics.

*The following information is presented as a brief review of the above book for review purposes only.*

# Change or Modify Skills, Activities, Games

If changing or modifying an activity be sure to keep in mind the STEPS process:

(S)tudent or child

Knowledge of child's skills and abilities

(T)asks or activity

Establish task or activity and then modify as necessary

(E)quipment

Provide choices for kids

(P)ersonnel or people

Support needed for the activity

(S)afety

Personal safety of children as well as adults

# Jump Rope



- Walk, hop or jump over ropes placed on the floor
- Ropes that swing only halfway
- Hand-to-hand support may be needed while jumping
- May be able to perform the skill without any physical support
- Full circular swing

# Walk or Run With Your Child

- Place buckets or hula hoops at certain distances around the track or walking area
- Give the child a beanbag and have him run and place it in the next bucket
- Have him continue until he has completed the distance
- Have a peer run alongside the child to provide encouragement and verbal cues
- Modify distances



# Dribbling Rolling



Children can perform activities such as dribbling or rolling a ball but with modifications to the standard way of doing the task

- Allow children to choose the ball
- Travel around with the ball
- Dribble or roll slow or fast
- Simply walk or roll the ball
- Dribble or roll at different levels high or low
- Dribble tag

# Individual and Group Physical Activities



# Exercise Deck

Exercise Deck is a visual activity. Cards are made ahead of time with pictures of exercises. Children draw playing cards that indicate activities. The number, or value, of the playing card tells the child how many times to do the activity.





# Mirror, Mirror

Children imitate a pose that is depicted on a task card, individually or with a partner. Mirror, Mirror is an activity that gives children an opportunity to stretch and balance in while working alone or with a partner.



# Fitness Balls

“Necessity is the mother of invention. In one of our Adapted Physical Education classes, the enthusiasm for the warm-up routine was gone. Students refused to follow any exercise warm-up routine we modeled. They didn’t want to move. They simply sat down. It was obvious that an instructional change was needed. We broke out our secret weapons: the big red fitness balls. When the students entered the gym, they saw the balls and sat on them...and then they began to move, bounce, and exercise.” (Grenier, 2014)



# Four Corners

Four Corners is a way to vary laps and provide practice, modeling, and instruction for a variety of loco motor movements and sport skills. This activity teaches children to move around the perimeter of the gym or other designated area, which is a typical arrangement for running laps in physical education classes. This flexible approach to moving around the gym can easily be generalized to other gyms, unmarked recreation areas, and outdoor activity spaces.



# Stations

- Bounce Pass
- Shooting
- Punting
- Passing and receiving
- Kicking Tees
- Kicking
- Ball Handling

# Tag You're It

(Excerpt from the book)

Tag, You're It! helps students learn how to play the game of tag with the help of visual cues.

**Motor Skill Objectives** Chasing and fleeing, adjusting to small-organization games.

**Age Range** Preschool, primary (K-2), intermediate (3-5).

**Social Skill Objectives** Assuming the role of "tagger" in a game.

**Equipment and Materials Needed** A tag stick (see appendix 7E for directions for building a tag stick), tagging hand, foam noodle, or thunder stick can supply the extra visual cue to help ASD understand the "it" in tag games (see figure 7.20). The idea is to make the tagger visually obvious and to teach the student with ASD what to do as the tagger.

## Procedure

Have students practice tagging in partners. Be very explicit and demonstrate the rules for tag in your gym or on the playground. Include such instructions as, "Where can you tag?" and identify specific body parts that students can tag such as the shoulder, back, or arm. Do not tell them where not to tag. Students with ASD generally have difficulty with negative instructions. Explicitly instruct students in how to tag with the tag stick and demonstrate what you want them to do. Check for understanding by saying, "Show me how to tag." Help them to get the right touch with the proper amount of force. Once they have the tagging down, have them play partner tag. One partner should be an adult or experienced peer who has the tag stick and models what to do, saying, "Tag, you're it. Your turn [while handing the student the tag stick]. Come get me." Gradually increase the size of the group playing tag. Assign student with ASD the role of tagger along with three or four peers who can assist them.

## Helpful Hints and Modifications

- Students with ASD can be made "all-time tagger," meaning that their job in the game is only to tag.
- Teach freeze tag, instructing students to stop and freeze when they are touched by the tag stick.
- Teach students how to reenter the game. Tunnel tag is a good example. Say, "Freeze in a straddle stance until someone crawls between your legs."
- Have students use a variety of loco motor patterns in tag games.

[Read more from \*Physical Education for Students With Autism Spectrum Disorders\*, by Michelle Grenier.](#)



# Conclusion

Have Fun!

Unplug the Television!

Enjoy your child!

# Presenter Information

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