



The Misunderstanding of Exercise for those with Autism

**Medical Fitness Association Webinar
January 25, 2024**



Presented by
David Geslak, BS, ACSM EP-C, CSCS
President & Autism Exercise Specialist



ExerciseConnection.com

Language Used

It's important to remember that the term “autism” represents a suite of presentations and behaviors, and no two individuals with autism are alike.

Similarly, different people may prefer different terminology: Despite a contemporary push toward using people-first language when describing developmental conditions, some with autism embrace and take pride in the term “autistics” as a group identifier. This is identity-first language.

Throughout our presentations, website, articles, etc. we often use the language interchangeably to respect the opinions of the individuals, caregivers and family members.



Today I will LEARN about the challenges those with autism face in trying to live physically active lifestyles.



I AGREE to pay attention and not fall asleep.



I WILL hold questions till the end. This is a quick presentation and David wants to cover everything.

Today I will leave with insight of how I can help the autism community make the exercise connection in my community.



President & Founder

Pioneer in Exercise & Autism

- Giant Steps (Illinois) – Created PE/APE Program
 - Former ParaEducator
- Published Author & Researcher
- International Keynote Presenter
- University Guest Lecturer
- Former Iowa Football Assistant S&C Coach

ACSM/EC Autism Exercise Specialist

Autism Exercise
SPECIALIST
C E R T I F I C A T E



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EC's Multidisciplinary Team



AMBER PANTALEO, LBS I

Vice President

Former Special Ed. Teacher



CAM LESSLIE, M.S.

APE Teacher

Curridulum Designer



MARY ANGELICO, PT

Physical Therapist

Mom of an autistic adult



TOM MARCH, MS

Behavior Analyst

Autism Exercise Specialist



**JESSICA GESLAK,
M. S., CCC-SLP**

Speech Language Pathologist

Former Para-Educator



NOEL PEREZ

VES Systems Assembler

Non-Verbal Adult with Autism



BENJAMIN D. BOUDREAUX, PhD

**Advisor | Postdoctoral Fellow
Columbia University**

Adult with Autism



MICHELLE SMITH

**Advisor
Clinical Exercise Physiologist**

Autistic adult



TIM DAVIS, PhD, CAPE

Advisor – Sensory Motor

SUNY Cortland Professor

Lippincott® Connect available for this title



AMERICAN COLLEGE
of SPORTS MEDICINE
LEADING THE WAY

ACSM's Exercise Testing and Prescription

Second Edition



Madeline Paternostro Bayles

Wolters Kluwer



AMBER PANTALEO,
LBS I



DAVID GESLAK

2nd Edition

Chapter Authors:

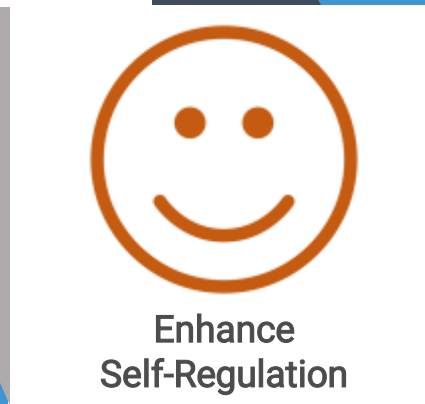
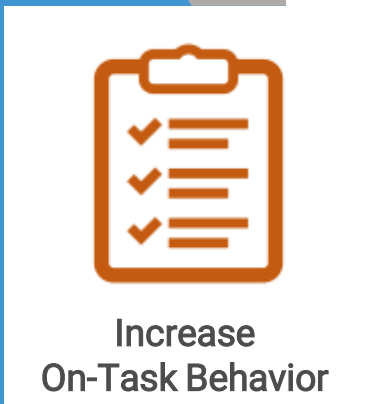
*Special Considerations for
Neurodevelopmental Disorders*

JUST PUBLISHED!

The Problem



- 1 Evidence-based practices create success for those with autism in the classroom. But they have not always made their way to the PE classes, gyms or community-based programs, leaving autistic's wandering and wondering.
- 2 The Individuals with Disabilities Education Act (IDEA 300.108) mandates that physical education (PE) services must be made available to every child with a disability. Many schools are struggling to comply and frequently failing.
- 3 Special education professionals continue to be overworked and overwhelmed. They are not given the tools and training to meet the PE mandate and more importantly, use exercise to help their students succeed.
- 4 81% of people with disabilities say they do not feel welcome in fitness spaces.
- 5 Many parents and caregivers do not recognize the benefits and/or have a misconception of what exercise and physical activity looks like.



Unique Benefits of Exercise



The Perception vs. Reality of
**Exercise & Physical
Activity**



Physical Activity Guidelines



In 2020, WHO released the first global PA and sedentary behavior guidelines for people with disabilities, including children and adolescents aged 5–17 years.

WHO recommends that children less than 18 years engage in a **daily average of 60 minutes of moderate to vigorous PA** across the week.

Aerobic Exercise Recommendations for Adults



FITT	Recommendation
Frequency	At least 3 days per week
Intensity	Moderate (40%-59 HRR) <u>to</u> Vigorous (60%-89% HRR)
Time	Moderate = 30-60min/day (\geq 150min/week) Vigorous = 20-60min/day (\geq 75min/week)
Type	Aerobic exercise performed in a continuous or intermittent manner



10

MINUTES

LOW – MOD.
INTENSITY
CONDITIONING



ENHANCED
SELF-
REGULATION*
THROUGH
60-MINUTES



*Measured by observing reductions
in hand flapping & echolalia

Olin, S. S., McFadden, B. A., Golem, D. L., Pellegrino, J. K., Walker, A. J., Sanders, D. J., & Arent, S. M. (2017). The effects of exercise dose on stereotypic behavior in children with autism. Medicine and Science in Sports and Exercise, 49, 983–990.



EXERCISE CONNECT

Enhancing Focus, Fitness & Family in the Autism C

Rethinking the FITT Principle



General Population

- Frequency – at least 3 days/wk
- Intensity – moderate and/or vigorous
- Time – 30-60min/d (mod.)
 - 20-60min/d (vig.)
 - 150 min / wk
- Type - Aerobic

Realities with the Autistic Population*

- Frequency - 1-2 days /wk
- Intensity – Very light to light
- Time – 10-30 min/day
 - ~60 min/wk
- Type – Resistance training, flexibility (i.e., dynamic), motor coordination, aerobic



- Physical and Occupational Therapy often ends when:
 - Goals are met
 - Insurance runs out
- Their child's need for sensory input and physical activity does not end
- Making exercise part of their routine at a young age (e.g., early intervention) provides the best opportunity to make it part of their lifestyle/routine



The Key to Exercise Success is Using

Evidence-Based Practices



28 Evidence-Based Teaching Practices



EC's Top 10 EBPs:

- Augmentative & Alternative Communication
- Exercise & Movement
- Modeling
- Prompting
- Reinforcement
- Social Narratives
- Task Analysis
- Technology-Aided Instruction
- Video Modeling
- Visual Supports


Exercise & Movement *is* an Evidence- Based Practice



- Interventions that use physical exertion, specific motor skills/techniques, or mindful movement to target a variety of skills and behaviors.

Positive Outcomes:

- Academic
- Adaptive/Self Help
- Challenging behavior
- Cognitive
- Communication
- Motor
- Play
- School Readiness
- Social



**Solutions that Challenge the Students,
NOT the Teachers.**

Visual Exercise
SYSTEM

exercise  buddy

Visual Exercise SYSTEM

MANIPULATIVES

Strategies for Group
Instruction

Social Narratives

Visual
Schedules

Tools for Individualized
Instruction



*Systems Available:

- Five Components of Physical Activity
- Sports
- Yoga
- Fitness Room
- Wheelchair
- Dynamic Flexibility
- Dome

exercise buddy



Upload custom
visuals & video
models



Save unlimited
workouts using visual
schedules



Track & Report
individualized
exercise data



Create custom
assessments &
monitor performance



Embeds Six Evidence-Based Practices



1

Technology-Aided Instruction

2

Visual Supports

3

Video Modeling

4

Social Narratives

5

Reinforcement

6

Exercise and Movement



Physical Education in Our **Public Schools & Higher Education**





- Only 14 states in the United States require an advanced certification for physical educators (PE) teaching students with disabilities.
 - 36 states require *only* one 3-hour credit course in Adapted Physical Education
- Most PE teachers challenged with overcrowded classrooms.
- PE in its current state can be a recipe for failure for those with autism & other disabilities.

MOVEMENT FIRST,
SPORT SECOND.



PERSISTENCE

NOT PERFECTION





IDEA 300.108 mandates that physical education (PE) services must be made available to every child with a disability.

In the 2018 report, Federal Monitoring and Enforcement of IDEA Compliance, it stated...

"It is disturbing that very little has actually changed since the passage of IDEA more than 40 year ago with regard to the use of monitoring as an effective tool to drive systemic change that is demonstrated to have an effect on student learning and outcomes."



Exercise and Physical Activity **When the Bus Stops Coming**





- A 2020 survey conducted by the National Center on Health, Physical Activity and Disability (NCHPAD) and Degree deodorant found that **81% of people with disabilities say they do not feel welcome in fitness spaces** (Wilroy et al. 2021)
- **In the fitness industry, ableism runs rampant.** Men in tank tops with bulging muscles and women in sports bras with toned physiques are showcased as pictures of inspirational and aspirational health.
- In most higher education kinesiology/exercise science, etc. curriculums autism & exercise is not part of the curriculum. BUT that is changing....

Who Qualifies?



NCCA accredited fitness professionals

Licensed PE/APE teachers

Licensed therapists (PT, OT, RT, SLP's)

ABA & Behavior Therapists

Special Education Teachers

Nurses

Athletic Trainers

*Students in Respective Majors



SUPPORTING RESEARCH Advances in Autism Journal

Frequency at which participants reported using evidence-based practices increased significantly from pretest to posttest ($p = .031$)

Participants' perceived self-efficacy in using evidence-based practices significantly improved from pretest to posttest ($p = < .001$)

Embraced By Higher Education



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- One credit hour, 8-week blended (online & in-person) course
- Offered to students majoring in physical education, exercise science, & therapeutic recreation
- Course fee is paid by student and/or financial aid
- Block payment system: 12-17 credits is considered full time
- Aurora professor is instructor of record for the University

“The certification is a great starting point for fitness and recreational professionals who want to gain the skills needed to effectively support neurodivergent children, adolescents, and adults.

We are excited to introduce this learning opportunity to U-M Kinesiology students starting in 2023, as part of their training in adapted and inclusive physical activity programming.”



Haylie L. Miller, Ph.D.
Assistant Professor
Director, Motor & Visual Developmental Lab



- Health care professionals can play an important role to educate parents, caregivers and individuals on the benefits of physical activity, as well as share IDEA Law.
- When physical activity programs are built with the same evidence-based practices used to create success in the classroom and therapy settings, those with autism can gain the full benefits of physical activity.
- The Medical Fitness Industry has an incredible opportunity to provide exercise programming for those with autism and lead them to a physically active lifestyle.



**EXERCISE
CONNECTION**

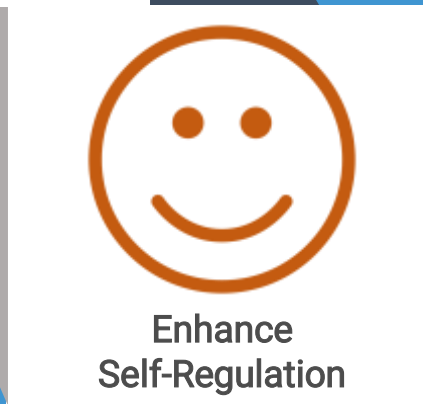
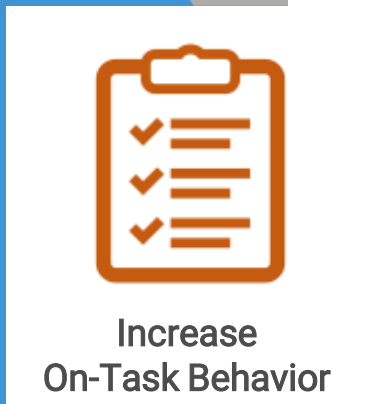
**THANK
YOU!**

**Autism Inclusive Solutions
for Physical Activity & PE**

FREE 14-DAY TRIAL →

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Unique Benefits of Exercise



Visual Exercise
SYSTEM

exercise  buddy