

# Physical Education for Students With Autism

## Teaching Tips and Strategies

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Riley is a 7-year-old student with autism who attends his neighborhood public school. He goes to physical education with the other 19 students in his inclusive classroom, his paraprofessional, and 3 other second-grade classes with 20 students in each class. When Riley is in physical education, he is seldom participating in the lessons taught by the general physical educator. Rather, his paraprofessional runs to follow him around the gymnasium, pulls him from corners, and encourages him to reduce his self-

stimulating behaviors. Riley screams at least once during most physical education classes.

The previous scenario is not an uncommon one even though it is obvious that Riley is either not in his least restrictive environment or the necessary supplementary aids and services are not in place for him to be successful in the current placement (Sherrill, 2004). The Individuals With Disabilities Education Improvement Act of 2004 continued to

designate physical education as a direct service, meaning it is a required service for all students. Likewise, according to this law, schools must place students in the general physical education setting and provide supplementary aids and services until it is determined that the students need an individualized education program (IEP) for physical education, at which time other placement options can be considered.

### Physical Education and the Special Education Process

In Riley's case, the general physical education teacher should have ample data to document Riley's current behaviors during class, the teaching environment that occurs around those behaviors (i.e., an ecological assessment), Riley's performance level on individual measures of motor development and physical fitness, and the effectiveness of the supplementary aids and services that are currently in place for Riley during physical education (Horvat, Block, & Kelly, 2007; Menear, Sims, and Phillips, 2007; Tripp & Zhu, 2005). The IEP team should look at the ecological assessment data and the results of an individualized motor skills assessment of Riley's strengths and needs in regards to physical education and compare these to the general physical education curriculum (Dunn & Leitschuh, 2006). The team should then develop goals that will help Riley progress through the physical education curriculum and meet the defini-

## National Standards for Physical Education

Physical activity is critical to the development and maintenance of good health. The goal of physical education is to develop physically educated individuals who have the knowledge, skills, and confidence to enjoy a lifetime of healthful physical activity.

A physically educated person:

**Standard 1:** Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

**Standard 2:** Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

**Standard 3:** Participates regularly in physical activity.

**Standard 4:** Achieves and maintains a health-enhancing level of physical fitness.

**Standard 5:** Exhibits responsible personal and social behavior that respects self and others in physical activity settings.

**Standard 6:** Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.

Source: National Association for Sport and Physical Education, 2004, p. 11.

tion of a physically educated person (see box "National Standards for Physical Education"). In addition, the IEP team should determine the most appropriate placement(s) for Riley's physical education lessons that will lead to achievement of the physical education goals on his IEP and that considers the safety of all students (Aufsesser, 2003).

The box "Sample Physical Education IEP Goals for Riley" gives an example of what Riley's IEP goals for physical education may look like. Riley's IEP team should remember that the continuum of placement options (see box "Continuum of Placements Options") for addressing Riley's physical education goals is

### Sample Physical Education IEP Goals for Riley

**Goal 1**—Riley will participate in one lifetime fitness activity for at least 20 min per exercise session.

**Goal 2**—Riley will demonstrate the object control skills of throwing, catching, and striking, at a mature performance level for his developmental age.

**Goal 3**—Riley will participate for 10 minutes with his peers in small group physical activities such as low-organized games and other cooperative activities.

dynamic; the best placement for one goal may not be his least restrictive environment for meeting another physical education goal (Block, 2007). Variables that can influence instruction in Riley's least restrictive environment include accessibility, curriculum, program participation, support personnel, teaching style, management of behavior, grading, assessment, and equipment (Auxter, Pyfer, & Huettig, 2005). The IEP team is also responsible for determining who will deliver the instruction that targets Riley's physical education goals; the instructor(s) could be the general physical education teacher and/or an adapted physical educator. A paraprofessional and peer helpers may also be needed (Lieberman & Houston-Wilson, 2002).

The sample IEP for Riley is reflective of the common needs of students with autism during physical education. The nature of autism implies that small group or individual physical activities may be more appropriate than working in large groups or competitive teams to learn lifelong physical activities (American Psychiatric Association, 2000). Additionally, the tendency for students with autism to do well with repetitive activities can be an opportunity to teach individual fitness activities such as bicycling (on a mobile or a stationary bike), using a stairmaster or an elliptical ma-

chine, or walking/running on a treadmill—all of which are fun, meaningful, and generalizable activities that can provide a lifetime of wellness (see Figure 1). A focus on fitness during elementary physical education can help ensure the development of independence in one or more lifetime fitness activities by the time Riley is older.

## *The Individuals With Disabilities Education Improvement Act of 2004 continued to designate physical education as a direct service, meaning it is a required service for all students.*

Given that Riley is in elementary school, it is also important for him to develop a range of basic motor skills that are fun, meaningful, and generalizable to activities he can participate in individually, with an appropriately sized group of peers during physical educa-

### Continuum of Placements Options

- Full, independent participation in general PE
- Full, independent participation in general PE with younger children
- Independent participation in general PE in some units
- Independent participation in some phases of the general PE class
- Participation in general PE with specific APE instruction
- Separate, but equal, APE with typical peers (reverse mainstreaming)
- Separate, but equal, APE with peers with disabilities
- APE in home, hospital, or institution

Source: Auxter, Pyfer, & Huettig, *Principles and Methods of Adapted Physical Education and Recreation*, 10/E, p. 169, ©2005 McGraw Hill Education. Reprinted with permission of the publisher.

**Figure 1. Students With Autism Can Be Very Successful With Traditional Stationary Exercise Equipment**



tion, or with peers and family during lifelong participation in community-based leisure and recreation activities. The placement for participation in physical education lessons that target these goals may change as his participation and improvement in the related activities change. For example, Riley may initially learn the fundamental motor skills of throwing and catching by using a ball and a scoop that are connected by a string while he is in a quiet environment that allows him to focus on this activity.

Then, he may work in a quiet environment with a partner by using a ball that attaches to Velcro on a hand mitt or a paddle. Next, he may throw and catch with a partner who is a few feet away; and then, he may throw to a partner who is on the move. Following that, he may work on throwing and catching as a part of a skill theme station with multiple students involved in the station activity. Then, he may throw and catch

in a small group activity. Finally—if appropriate—he may participate in a larger group game that utilizes throwing and catching skills. This progression allows for individual feedback on motor skill development while decreasing extraneous sensory stimulation that can cause unwanted behaviors.

### **Tips and Strategies**

Students with autism have needs during physical education that resemble their needs throughout other parts of the day. Many students with autism often work best with a structured and consistent routine, visual boundaries, and reduced negative sensory stimulation (Coyne & Fullerton, 2004). Meeting these needs requires much effort on the part of the physical educator because the physical education environment is different from other school environments—the physical space in which lessons are taught is larger; more people participate in the lessons; more equipment is needed

to implement the lessons; and there is combined sensory input. Physical education teachers of students with autism may need to conscientiously arrange the teaching environment and activities such that they allow the students with autism to be safe, successful, and challenged without overstimulating them. The box, “Teaching Tips for Physical Education,” provides specific teaching tips that have been successful when providing physical education to students with autism, including Riley. For information regarding the link between physical activity and improved behaviors of children with autism, readers are referred to O’Connor, French, and Henderson (2000).

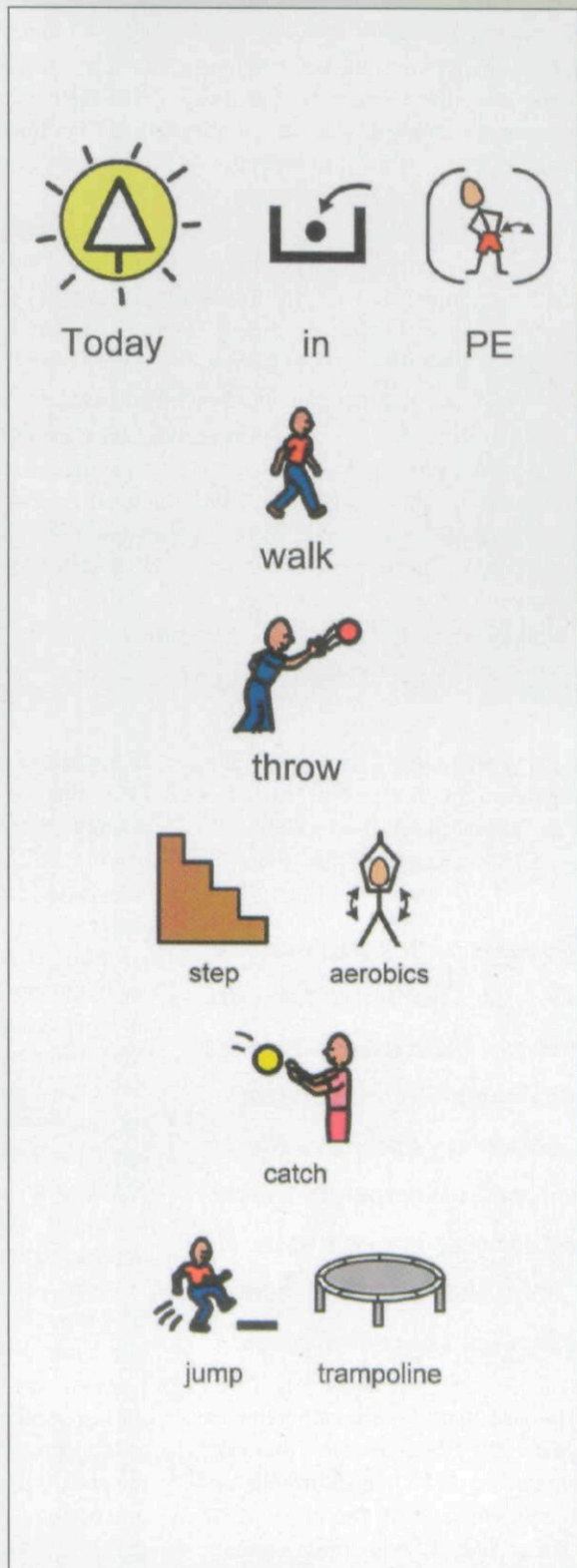
***Students with autism have needs during physical education which resemble their needs throughout other parts of the day.***

The tips in box, “Continuum of Placements Options,” are used with Riley as needed, depending on his placement for each teaching unit (see box, “Continuum of Placements Options,” for the continuum of placements options). However, one tip in particular (Tip #3) has been especially effective in all placements where his individual fitness activity goal is implemented (see box, “Sample Physical Education IEP Goals for Riley,” for his IEP goals). Riley’s individual fitness activity goal is addressed by learning to ride a bicycle. Riding a bicycle capitalizes on Riley’s need for repetition and vestibular input, and in the future it can be implemented as an independent or as a group activity. Riley works on this goal during recurring days of riding adaptive bicycles outside with a group of eight other students (his “separate, but equal, adapted physical education [APE] with peers with disabilities” placement). He also works on the goal when his inclusive class goes to the fitness lab (his “independent participation in some phases of the general physical education class” placement). Addi-

## Teaching Tips for Physical Education

1. Start every day in physical education with the same instant activity or warm-ups. End every lesson with the same cool down activity.
2. Give each student one color of his or her choice to use for his or her individual pennie vest, wall spots, floor spots, and all activity equipment. This allows the student to get going with the activity right away because he or she can predict where to go and what equipment to use. It also provides consistent visual input for physical boundaries and activity targets.
3. Keep verbal instructions brief. Use the student's dominant mode of learning to present new material. Demonstrations often work well. A video of a peer performing the activity correctly is a very concrete and helpful form of visual input. If a student needs a reminder of what to do or how to perform a movement, focus on a very limited number of concise teaching cues that emphasize the most important concepts.
4. Be consistent with methods used in the classroom for behavior management and communication (charts, peer tutors, small groups, picture symbols, timers to indicate how long participation in an activity will last, individualized curriculum). Figure A is an example of a short story for physical education. The pictures in the short story can also be used as symbols offered to help the student make choices or as part of a picture schedule used to follow the sequence of the lesson.
5. Routines are important, but recognize when old ones can be faded out and new ones implemented.
6. Eliminate wait time during physical education. Keep the students active. This will help reduce undesirable behaviors and increase physical activity benefits.
7. Remember that open space can be visually overwhelming. Try themed activity stations and use boundaries to define station areas. For station rotation, use arrows to indicate directions, keep rotation order constant, and use a constant rotation cue that is appropriate for the student's sensory needs and challenges (e.g., music, handraising). Put a floor spot for each student at each station. Gradually increase the time spent at each station. When appropriate, vary the equipment at a station or change a station theme to meet the student's needs; however, allow participation in a familiar activity before presenting the new activity to the student. Introduce new activities in small sequences of subtasks and in gradually longer periods of time spent at the new activities. Alternate the station themes so one station is for skill-based activity (i.e., catching) and the next station is for an activity that targets cardiovascular strength (i.e., mini-trampolines). See box, "Examples of Physical Education Station Themes and Related Activities" for more examples of station themes.
8. Select a variety of equipment to meet the station theme and then encourage students to choose their specific piece of equipment. By offering several options for completing a task, you foster students' recognition of their own interests and abilities, you effectively allow the student to perform his or her own self-identified task, and you give the student some control.

**Figure A. Example of a Short Story for Physical Education Class**



*continues*

## Teaching Tips for Physical Education -- Continued

9. Determine if/when you should focus on individual activities. Some group and team activities may be inappropriate for students with autism because they illicit unwanted behaviors that are due to the students' with autism sensory challenges and therefore will decrease all students' time on task.
10. Adopt a focus on fitness throughout elementary, middle school, and high school physical education. For best results, balance the child's skills and interests with his or her family's interests and the available community-based resources. The goal is for the student to learn a fitness activity that can be engaged in for a lifetime and generalized to a variety of settings.
11. Be prepared to offer an individual fitness activity to a student who needs redirection during physical education or to a student who chooses to take himself or herself out of the activity. The individual activity (i.e., a stationary bike kept in the corner of the activity area) keeps the student's focus on physical education but allows the student the needed respite from the previous activity.
12. Continuously monitor student progress and program effectiveness.
13. Keep in mind that success precedes motivation for students with autism, just as it does for most all other people! In physical education, students should always be safe (mentally, physically, and emotionally) and the physical activities in which they are engaged should provide them with a balance of success and challenge. The results will be more time on task and fewer undesirable behaviors.
14. Always remember to look for the positive. It can be slow to appear or hard to see but very rewarding!

### Examples of Physical Education Station Themes and Related Activities

- Eye-hand coordination (scarves, fluffballs, grab-ball, katch-n-throw, three sizes of rubberflex grab-balls, and two sizes of scoop & ball)
- Cardiovascular (step aerobics)
- A second eye-hand coordination station (parachute activities)
- Cardiovascular (trampolines)
- Balance (various balance beams)
- Cardiovascular (scooters with students choosing their positions)
- Bowling (a great community-based individual or team activity)
- Flexibility/cool down (individual stretches)

tionally, a stationary bike is placed in the gymnasium during his "participation in general physical education with specific APE instruction" placement.

***[S]tudents with autism can be very successful when they are placed in their least restrictive environments for physical education and have the needed supplementary aids and services present to assist them with meeting their physical education goals.***

The stationary bike in the gymnasium is used as a "safe activity" that Riley has learned to take himself to when he feels overwhelmed by the other activities being offered. This option seems to prevent or decrease Riley's meltdowns during physical education. Often, when he gets on the stationary bike, he puts forth great effort to pedal it. After near-

ly 5 minutes of pedaling at high speed, he is tired and returns to the planned activity. At this point, the physical educator realizes that there was a reason Riley took himself out of the planned activity and offers Riley appropriate adaptations when reentering the activity, based on her observations of Riley and her assumptions about what may have been overwhelming him. Sometimes the physical educator realizes that the activity has no meaning for Riley, and he will, therefore, not enjoy participating in it nor get very many benefits from the activity; thus, she makes appropriate changes. Riley will also take it upon himself to use the stationary bike when he seems to feel there is too much instructional wait time during his participation in fully inclusive classes. This approach offers Riley an appropriate substitute activity given the focus of the class is physical education: (a) It ties into his goal for a lifetime fitness skill; (b) it meets several of his sensory needs; (c) it is not disturbing to the teacher or the other students; (d) it is a concrete activity; and (e) it seems to have meaning to him. This approach

has been successfully adapted for Riley's other classrooms. His academic teachers offer him 5-min "fitness breaks" to walk briskly outside with a paraprofessional when he needs to take himself out of an activity.

### Conclusion

As you consider the examples and suggestions in this article, remind yourself to always expect more out of your students with autism during physical education. The sky can be the limit if that's your attitude! The students we work with maintain engagement in physical activities for the entire 30 min of physical education class each day of the week. They swim independently; work out with supervision in the fitness lab with free weights and stationary equipment; rotate to skill-based and cardiovascular activity stations (see Figure 2); self-select independent activities on a fitness playground (Menear, Smith, & Lanier, 2006); and are learning to ride bicycles. Like Riley, students with autism can be very successful when they are placed in their least restrictive environments for physical education

**Figure 2. Themed Skill Stations Can Offer an Overall Variety of Activities for a Lesson Along With Various Levels of Challenge at Each Station**



and have the needed supplementary aids and services present to assist them with meeting their physical education goals.

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