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A NEW AND IMPROVED

Physical Education Setting

for Children with ADHD

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Attention-deficit hyperactivity disorder (ADHD) affects five to seven percent of youth and adolescents in community-based samples in the United States (Willcutt, 2012). Attention-deficit hyperactivity disorder is a diverse, continual and expanding disorder affecting many domains, including the cognitive, emotional, motor and behavioral domains (Archer & Kostrzewa, 2012). Not all children and adolescents with ADHD function equally. Some children with ADHD may only display a few characteristics of the disorder, or they may excessively exhibit specific characteristics compared with their peers with ADHD. Therefore, ADHD has been split into three main types: ADHD-combined, hyperactivity and inattention, ADHD-predominately hyperactive, and ADHD-predominately inattentive (Becker, McBurnett, Hinshaw, & Pfiffner, 2013; Marshall, Evans, Eiraldi, Becker, & Power, 2014; Willcutt et al., 2012).



A common problem in the physical education setting for children with ADHD is that they are exposed to more distractions, less structure, less organization, and many more peers than in the regular classroom. These factors are likely to elicit more ADHD-specific behaviors such as lack of social skills, inability to maintain attention, impulsivity, hyperactivity, and disruptive behavior/discipline problems. In addition, many physical educators may not be aware of minor adaptations they can make in the physical education setting to create a better learning environment for children with ADHD (Harvey, Wilkinson, Presse, Joobar, & Grizenko, 2014). For instance, something as seemingly simple as keeping equipment organized and out of sight can go a long way toward keeping students with ADHD from being distracted. The purpose of this article is to introduce ways to make the physical education environment more conducive for students with ADHD and to enhance learning for all students. The strategies introduced here include equipment management; class organization; cooperative learning and peer tutoring; classroom management, discipline and rewards; and routines and structure.

Equipment Management

The correct placement of equipment is one adaptation that can easily be incorporated in the physical education setting. Physical education teachers along with students can benefit from having an organized gym and equipment room. For instance, hanging an equipment room list of what equipment is needed for each class every day helps the teacher and students save time in retrieving and setting up equipment, and it also makes it easier to account for equipment when it is returned. In the equipment room, it is best to put the most highly used pieces toward the front. An equipment room's motto should be, "A place for everything, and everything in its place." Labeling containers and spots on shelves for where specific items belong (e.g., volleyballs, batons, bats, foam balls, etc.) as well as creating boxes on the floor using duct tape (e.g., volleyball nets, air pump, etc.) will speed up equipment retrieval and return, cut down on clutter, and help ensure successful return of the equipment to the correct location (Sanderson, Heckaman, Ernest, Johnson, & Raab, 2013; see Table 1).

It is common for physical educators to have equipment that will not fit in their equipment room. In this case, the equipment sits in the corner of the gym or against the wall. Having equipment out is not only distracting but also tempts impulsivity. One way to decrease the risk for such a distraction is to hang a curtain or build a wall using mats around the area where extra equipment sits. Also, choosing to use equipment that can be hung on the wall (e.g., Hula Hoops or jump ropes), equipment that can be placed in closed containers (e.g., pinnies, balls, flags, etc.), and less enticing equipment (e.g., folded mats stacked neatly) in a space close to the equipment room may prevent students from getting distracted.

Another potential cause for an overstimulating physical education experience for students with ADHD is when the teacher hands out equipment to students before explaining the rules. In this situation, teachers can lose students' attention to their instructions (Sanderson et al., 2013). It can be one of the greatest distractions in the physical education environment. A few simple changes can eliminate this problem altogether. Having equipment out when students come in minimizes downtime and creates more time for the lesson, but it can be distracting. It might be better to first explain the rules and objectives of the lesson and then have students retrieve the equipment. New equipment can be an even bigger distraction. When introducing new equipment, it is best not to have it out during instruction; instead, bring the new equipment out for free play or short lead-up games before introducing the lesson or activity. Also creating a specific area for warm-up and instruction separate from the play area and not facing the play area will allow students to focus more on what is being taught (see Figure 1). Creating a warm-up area leaves the rest of the gym for play, where the equipment can be set out ahead of time and ready for the day's lesson. When giving instructions while activity is taking place, use a specific signal to let students know all equipment should be out of their hands and on the floor.

Class Organization

Organization can provide both students and instructors with a sense of stability and control. Correctly organizing the physical education setting will help keep all students, especially

Table 1. Ways to Organize Physical Education Equipment

Equipment room	• Place most often-used equipment toward the front. • All equipment has specific labeled spots. • All students need to be familiar with the equipment room and where equipment goes.
Extra equipment	• Place all extra equipment together. • Do not place it in close proximity to students or the teacher while directions are given. • If extra equipment is close to the equipment room, make sure the location where directions are given is not facing the equipment room. • Do not put extra equipment close to where students walk into the gym. • Do not put extra equipment near an area where students who cannot participate would be sitting. • Place extra equipment away from the "safe space."

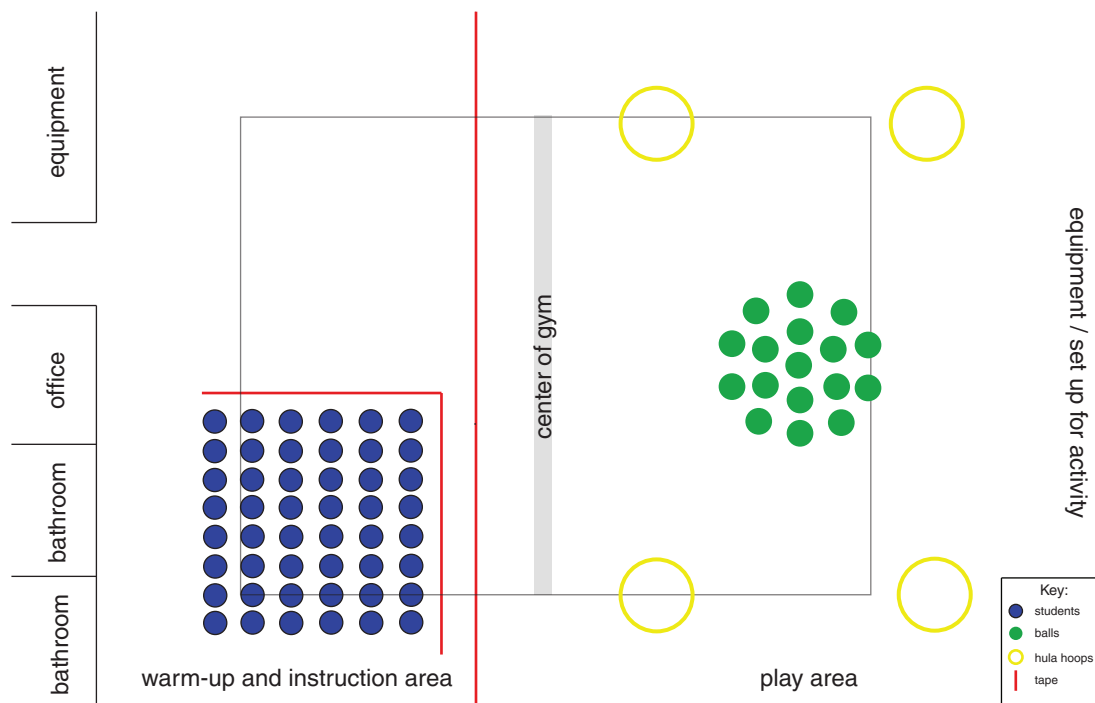


Figure 1. Example warm-up/play area

students with ADHD, more focused. Quality organization helps make the physical education environment more pleasant. Physical educators can also incorporate a designated area of seclusion for students with ADHD (see Table 2). Designating a specific spot in the gym for overstimulated students can help

them to get away and reconvene (Carbone, 2001). The placement of a student with ADHD in the classroom is crucial. Carbone (2001) suggested that students with attention disorders should be placed at the front of the classroom. Having students with ADHD sit at the front keeps them on task, and because

Table 2. Class Organization Recommendations

Seating	• Create specific spots for students. • Mark spots with bright tape or markers. • Space the spots evenly. • Place the spots in rows. • Place students with ADHD in the middle and front.
Boundaries	• Teachers should use cones, tape or anything bright and very visible. • Clearly mark where students should or should not be.
Instructions	• Ensure there is no debris or equipment on the floor. • Ensure there is no extensive amount of bulletin boards or posters on the wall. • Do not provide instructions in front of or facing a door or office area. • If the educator cannot obtain a plain backdrop to stand in front of while teaching, hang one or multiple plain sheets on a wall or use mats to cover the wall.
Get-away area	• Incorporate a small area away from the game in a corner. • Build a makeshift wall (with mats). • Have students go to the area when they are overstimulated. • Have a small list of physical activities for them to do alone (i.e., sit-ups, push-ups, lunges). • The space should be in sight of the teacher but not other students.

Note. ADHD = attention-deficit hyperactivity disorder.



Figure 2. Clean backdrop example.

they are in front, they will not be so distracted by other students. This placement will also help teachers remember names and know when a child is off task, and it will cut down on disobedience.

Teachers can add organization to the physical education environment by setting clear boundaries during activities and during warm-ups. Specific barriers should be used outside and inside using poly spots, cones or paint (Moore, Johnson, & Thornton, 2013). Lastly, all instructions and warm-up activities should be given in front of a tidy space (see Figure 2) to decrease distractions and cut down on time spent reiterating rules and instructions.

Cooperative Learning and Peer Tutoring

Practicing peer tutoring while learning new skills can prove beneficial. It allows students with ADHD to improve their social skills and their ability to stay on task and remain focused. When students with ADHD are learning a new skill, such as dribbling a basketball, in a group of 80 children, it can be difficult to keep focus. However, in smaller groups, it is easier for them to concentrate. Smaller groups also allow teachers to notice unwanted behaviors. Peer tutors should be chosen based on skill and maturity, and they can be used throughout a specific unit or semester. This method is a form of cooperative learning and has been found to increase performance and achievement (Zentall, Craig, & Kuester, 2011). Cooperative learning may help students with ADHD become comfort-

able in a more secure environment and may keep them from becoming overstimulated by a large number of students while still socializing with peers. Having a peer tutor reduces class size and provides more opportunities for one-on-one instruction, effectively removing the environmental factors that create academic difficulties for students with ADHD (Daley & Birchwood, 2010).

Students with ADHD respond well to positive feedback and thrive on compliments. One way to reward these students is through role-play activities. Role-play can be incorporated into cooperative learning — for instance, by letting each team choose their own mascot and then allowing short 10-second breaks to act out the role of their mascot. This activity promotes creative thinking and free movement. Role-play activities can be used when transitioning from game to game, or they can be used for free movement. Free movement activities are great for students with ADHD. Free movement activities can also be used when transitioning from game to game or when teachers see that a game or activity is starting to lose the attention of students.

Classroom Management, Discipline and Rewards

Quality classroom management is one of the most important factors in conducting effective lessons and being a teacher in general (Moore et al., 2013). Children with ADHD often exhibit problem behaviors in class, which teachers often struggle to manage due to a lack of knowledge and skills to use classroom management strategies (Gaastra, Groen, Tucha, & Tucha, 2016). Practicing effective classroom management can help diminish disobedience issues. Posting rules visibly for students in very simple, short and positively phrased sentences creates an easy reference when correcting inappropriate behaviors and reinforcing appropriate behaviors (DuPaul & Weyandt, 2006). Listing the rules as what to do instead of what not to do keeps the physical education environment positive. When it comes to disciplinary actions, it is important to remember to use the same system in the same way for every student and every offense, every time.

When conducting disciplinary actions, it is important to remember that interventions that single out or draw negative attention to a student with ADHD, especially via time-outs, can actually increase problematic behaviors (DuPaul, Weyandt, & Janusis, 2011). Creating a warning signal for a first offense lets students know to improve or change their behaviors without negative attention in front of their peers. The traditional time-out idea should never be incorporated in physical education, because the whole point of this class is to be active. One idea instead of a traditional time-out is to designate a specific spot away from other students and equipment that is still visible to the teacher. Instead of calling it a time-out, the teacher can give it a positive name like “the walk-it-out spot.” Students who are sent there due to their behavior can walk it out or shake it off and come back to class. This spot should not be used as a first-offense option, but rather, it should be used after one or two

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warnings. Students who are sent there should also still be moving (i.e., the point of physical education). They could perform specific locomotor skills (e.g., walking, skipping, hopping) in a figure-eight pattern taped on the floor.

Like most children, students with ADHD function well with positive feedback and rewards. A reward in the physical education setting does not necessarily have to be formal (such as a gold star, name on the board, etc.). Rewards can be informal as well (such as acknowledgment for good behavior, rewarding activities, etc.). When giving positive feedback, it is important to let students know exactly what they did that deserved such

attention. Giving specific positive feedback works best to also encourage desired behaviors. Specific rewards should also be switched out often so they do not become boring (DuPaul et al., 2011).

Routines and Structure

Another beneficial method for reducing hyperactivity is to establish daily routines and add structure. Children with ADHD function best when they have a set routine and a structured environment. Structure is a major key to a successful physical education setting for all students, but especially for students with ADHD. Several minor additions and changes to the physical education classroom will add structure (see Table 3). In children with ADHD, downtime is an enemy. When given downtime, the attention deficit leaves the student's mind to wander and leads to mischief, impulsive decisions and disruptive behaviors. Structure is arguably the most important strategy for students with ADHD in the education environment.

Incorporating routines adds structure while diminishing downtime and helping students remember expectations. All students can benefit from a consistent time schedule of classes, breaks, lunch and so on. Students feel more secure and happy when they are in a structured, predictable environment. Having a set schedule also helps teachers reduce downtime, which in turn limits disobedient behavior. Bathroom breaks can also cause problems for students with ADHD. Placing poly spots outside the bathroom door lets students know when there is an opportunity to get in line and prevents too many students from

Table 3. Creating Structure in the Physical Education Environment

Modeling	• Have a set system for modeling and explaining expected behaviors. • Walk in with students as they should. • Give a visual for how to play the game and explain it with movements and without. • Show students on the first day where to go for every operation during the class period.
Consequences	• Post a condensed list of consequences in correlation with the school's disciplinary action plan where students can see it at all times. • Bulletin boards are great; make them large and easily visible with clear and concise words.
Creating jobs for students	• Getting equipment out • Putting equipment away • Line leader • Warm-up leaders • Team captains • Bathroom monitor (makes sure no one is in the bathroom before leaving)
Rewards	• Provide rewards when students stay on task or have performed well, worked hard, etc. • Have peers provide verbal acknowledgement to each other (i.e., "Bobby, you are paying attention so well to instructions, why don't you be team captain today?"). • Rewards can be free movement activities (10–15 seconds). • Rewards can also be free play outside or with certain equipment or stations of students' choice (last 10 minutes of class).

Table 4. Sample Class Schedule

Enter gym	8:00 a.m.
Warm-up	8:04 a.m.
Instructions	8:09 a.m.
Take equipment out	8:11 a.m.
Play time	8:12 a.m.
Put away equipment	8:37 a.m.
Line up	8:40 a.m.
Leave	8:40 a.m.

going to the bathroom at once and getting distracted or wasting time. This strategy can create fewer bathroom-related interruptions and keep the bathroom area cleaner and safer.

The teacher and students can benefit greatly from organizing classes by category. For example, grouping physical education classes into subgroups by designated colors, animals or numbers can maintain a sense of structure among classes and individuals. This method keeps the students accountable for their actions and helps students know exactly what does and does not pertain to their class. Posting a visible class-specific timeline of each class (listed by class color, for example) on the gym wall helps with time management (see Table 4). The timeline should be a list of the daily routines that students are expected to follow. In addition to a timeline, students with ADHD could also benefit from a board on which upcoming events, such as those that may take time away from physical education class time, are posted in advance with the date on which they are scheduled and listed by class name or color.

Posting this information close to where students line up to leave could be most beneficial.

Teacher modeling is also important. Physical educators should teach expected behaviors by modeling, teaching, practicing and reinforcing each step of an activity (Sanderson et al., 2013). It is likely that all students will respond positively to a responsible model and imitate the behavior. Modeling will prove beneficial when things pop up unexpectedly, as they often do in the physical education setting. So, when distractions are high, having a model may help students stick to the appropriate behavior.

A disadvantage that most physical education teachers face daily is the large number of students under their supervision compared with the classroom setting. Although more difficult for physical educators due to the number of students, it is important to know all the names of students and peers. It will decrease opportunities for disobedience, increase respect for the teacher and peers, and make the student feel more important.

Teachers could also benefit from using specific whistle, verbal or visual signals, also known as protocols (Graham, 2008), for certain behaviors, routines or tasks that are practiced daily. When creating a routine, students will know exactly what to expect when they hear or see the signal. This practice works well with large groups and classes. There has been limited research on the use of specific protocols in physical education settings, but some researchers have mentioned the benefits of using routines in their research (Sanderson et al., 2013). "Consistent use of specific key words or sounds teaches students to respond in the desired way without further explanation" (Sanderson et al., 2013, p. 23). Teachers should keep in mind when choosing specific protocols, however, that all children are different and a combination of signals may work best. Teachers can use verbal cues, nonverbal cues such as a whistle, or visual cues when using protocols in the physical education setting (see Table 5).

Table 5. Sample Protocols

Desired Student Action	Verbal Signal	Nonverbal Signal
Start	• "Begin." • "On your mark, get set, go!" • "Start." • "Go."	• One whistle blow • Music starts
Stop	• "Stop." • "Game over."	• Two whistle blows • Music stops
Attention	• "Attention." • "Spots."	• Three whistle blows • Three hand claps (students imitate)
Seats	• "Seats." • "Spots." • "Places."	• Four whistle blows • Count down from five to give them time to reach their spot
Freeze	• "Pause." • "Stop." • "Everybody clap your hands."	• Three quick claps • Music stops • One long whistle blow

Cooperative learning may help students with ADHD become comfortable in a more secure environment and may keep them from becoming overstimulated by a large number of students while still socializing with peers.

Summary

Physical educators can implement many adaptations to structure their classes and organize the use of equipment in the physical education setting to increase participation and enjoyment. These small changes, when added together, can also decrease behavior problems and downtime. Educators should keep the specific needs and contexts of their classes in mind, and adjustments may be needed to cater to specific classes. Teachers should keep in mind that all students are different and that ADHD encompasses a broad range of attributes. Getting to know each individual student with and without ADHD will help students individually, as well as the class as a whole. Rowland et al. (2015) found that 15.5% of individuals in the United States suffer from a form of ADHD, and these students will participate in physical education at some point in their lives. Although the suggestions presented here may seem time-consuming, they have the potential to provide an environment that will, in time, relax the overstimulated mind and enhance students' performance. All these improvements can be done with a small budget and a little imagination.

References

- Archer, T., & Kostrzewa, R. M. (2012). Physical exercise alleviates ADHD symptoms: Regional deficits and developmental trajectory. *Neurotoxicity Research*, 21, 195–209.
- Becker, S. P., McBurnett, K., Hinshaw, S. P., & Pfiffner, L. J. (2013). Negative social preference in relation to internalizing symptoms among children with ADHD predominantly inattentive type: Girls fare worse than boys. *Journal of Clinical Child & Adolescent Psychology*, 42, 784–795.
- Carbone, E. (2001). Arranging the classroom with an eye (and ear) to students with ADHD. *Teaching Exceptional Children*, 34(2), 72–81.
- Daley, D., & Birchwood, J. (2010). ADHD and academic performance: Why does ADHD impact on academic performance and what can be done to support ADHD children in the classroom? *Child: Care, Health, & Development*, 36, 455–464.
- DuPaul, G. J., & Weyandt, L. L. (2006). School-based intervention for children with attention deficit hyperactivity disorder: Effects on academic, social, and behavioural functioning. *International Journal of Disability, Development, and Education*, 53, 161–176.
- DuPaul, G. J., Weyandt, L. L., & Janusis, G. M. (2011). ADHD in the classroom: Effective intervention strategies. *Theory into Practice*, 50, 283–300.
- Gaasstra, G. F., Groen, Y., Tucha, L., & Tucha, O. (2016). The effects of classroom interventions on off-task and disruptive classroom behavior in children with symptoms of attention-deficit/hyperactivity disorder: A meta-analytic review. *PLoS One*, 11, e0148841. doi:10.1371/journal.pone.0148841
- Graham, G. (2008). *Teaching children physical education: Becoming a master teacher* (3rd ed.). Champaign, IL: Human Kinetics.
- Harvey, W. J., Wilkinson, S., Presse, C., Joobar, R., & Grizenko, N. (2014). Children say the darndest things: Physical activity and children with attention-deficit hyperactivity disorder. *Physical Education and Sport Pedagogy*, 19, 205–220.
- Marshall, S. A., Evans, S. W., Eiraldi, R. B., Becker, S. P., & Power, T. J. (2014). Social and academic impairment in youth with ADHD, predominantly inattentive type and sluggish cognitive tempo. *Journal of Abnormal Child Psychology*, 42, 77–90.
- Moore, E., Johnson, C., & Thornton, M. (2013). Planning effective outdoor lessons for physical education. *Journal of Physical Education, Recreation & Dance*, 84(5), 11–13.
- Rowland, A. S., Skipper, B. J., Umbach, D. M., Rabiner, D. L., Campbell, R. A., Naftel, A. J., & Sandler, D. P. (2015). The prevalence of ADHD in a population-based sample. *Journal of Attention Disorders*, 19, 741–754.
- Sanderson, S., Heckaman, K. A., Ernest, J. M., Johnson, S., & Raab, S. (2013). Strategies for maintaining appropriate behavior in inclusive physical education settings. *Strategies*, 26, 20–25.
- Willcutt, E. G. (2012). The prevalence of DSM-IV attention deficit/hyperactivity disorder: A meta-analytic review. *Neurotherapeutics*, 9, 490–499.
- Willcutt, E. G., Nigg, J. T., Pennington, B. F., Solanto, M. V., Rohde, L. A., Tannock, R., . . . Lahey, B. B. (2012). Validity of DSM-IV attention deficit/hyperactivity disorder symptom dimensions and subtypes. *Journal of Abnormal Psychology*, 121, 991–1010.
- Zentall, S. S., Craig, B. A., & Kuester, D. A. (2011). Social behavior in cooperative groups: Students at risk for ADHD and their peers. *Journal of Educational Research*, 104, 28–41. **S**

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