

Success in PE Class for Students
with Autism and other disorders
affecting Gross Motor
Coordination

Carol Kehler, BMR-PT

Sandy Loewen, BMR-PT

School Therapy Services

The Rehabilitation Center for Children

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Outline

1. Overview of autism and other disorders
2. Keys to Successful Participation
3. Making Adaptations for Success

Exercise and Autism

- Temple Grandin – “Prior to building the squeeze machine, the only other way I could get relief was strenuous exercise or manual labor.”
- Vigorous exercise can decrease stereotypical and disruptive behaviour (McGimsey & Favell 1988, Walters & Walters 1980.)

How Autism affects learning

- Limited eye contact
- Difficulty reading body language and understanding social rules
- Limited social engagement; more successful in adult-oriented interactions than with peers
- Difficulty following multi-step commands

How Autism affects learning

- Sound sensitivity: humming lights, loud music, acoustic differences between rooms
- Sensory issues (clothing, smells, touch, personal space) may be so powerful that the student is unable to focus on anything else
- Sleep patterns may be erratic and affect their ability to focus

Can result in OVERLOAD!

This may trigger any or all of:

Fight

Fright

Flight

This is not “acting out” behaviour.

Other disorders

- Developmental Delay
- symptoms like Developmental Coordination Disorder
- Language Disorders/ Social Delay
- Combined Diagnoses like FAS, Autism, Spina Bifida, Seizure Disorder, Mood Disorder, etc.
- Genetic Disorders e.g.. Fragile X Syndrome
- Down Syndrome
- ADHD

How do these disorders affect motor skills?

1. Low muscle tone – “floppy” body
2. Some hyperflexibility, especially in the elbows, knees, feet, back
3. Low strength: especially core, some distal decreased strength e.g. in hands (affecting fine motor skills) and feet/ankles

How do these disorders affect motor skills?

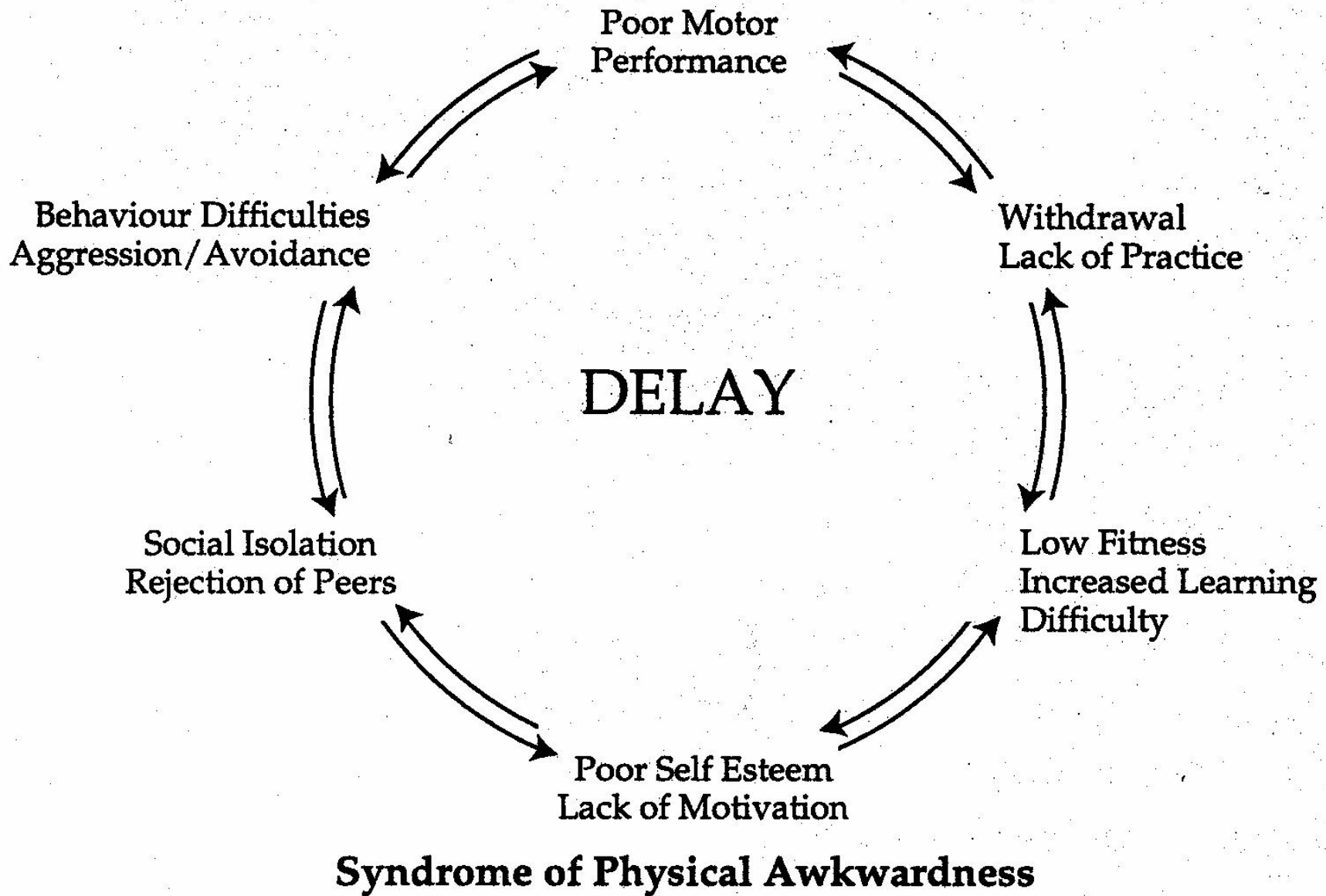
4. Difficulties with higher balance: often seen as tripping in the class, gym, or playground. “They know how to move better than they know how to stand still.”
5. Atypical coordination: seen as challenges with ball skills, movement skills in phys. Ed class or on the playground.

How do these disorders affect motor skills?

6. Unable to discriminate left vs. right.
7. Motor planning challenges: seen as difficulty with learning a new skill or movement pattern in class or the gym, e.g. with skipping or galloping. They may be physically able to do each *part*, but can't put them together.

How do these disorders affect motor skills?

8. A narrow repertoire of phys. Ed/recreational skills and playground skills, decreased playground structure safety (impulsivity.)
9. Secondary social/self-esteem effects from altered interaction with peers, delayed gross motor development.
10. Tend to wander at recess, or not get involved in peer-oriented games unless provided with structure (generally by an adult.)



Moving to Inclusion - The Physically
Awkward Child

Case Study – what to do?!

- Tag on T-shirt irritating
- New laundry soap used
- Bus took a different route this morning
- Substitute teaching assistant
- Tar is being replaced on the school roof
- Geese are flying overhead and your plan is to have PE outside

Keys to Successful Participation in PE – preliminary steps

1. Know the student's needs / preferences by attending the IEP if possible, or touching base with the resource teacher.
2. Know about precautions/medical information pertinent to your students.
3. Expect regular attendance by student **and** EA (going to PE is an important part of the routine.)

Keys to Successful Participation in PE – preliminary steps

4. Suggest that the student and EA spend time acclimatizing to the gym during a quiet time, slowly go into a full gym time.
5. During this time, choose preferred activities to foster a positive attitude towards the space.

Keys to Successful Participation in PE – preliminary steps

6. Prepare classmates without disabilities by allowing them to experience atypical sensations, eg. Have everyone wear mitts for part of a class.
7. An alternative activity can be a valid option if the student is not able to be in the gym.
8. Consider the gym environment from a sensory perspective (music.)

Keys to Successful Participation in PE – preliminary steps

9. Consider offering an adapted PE class allowing the students to succeed at their own level of participation and skill.

Keys to Successful Participation in PE – Student considerations

1. Find out how the student is coping that day.
2. The student may have difficulty sitting for instruction. Allow for movement or alternative postures (on tummy.)

Keys to Successful Participation in PE – Student considerations

3. Prioritize skills (3 or 4) for the student to learn during the school year.
4. Identify skills they can learn in PE that will be useful at recess / recreation / socializing.
5. Break up an activity into sub skills and gradually put them together.
6. Pre-teach and re-teach. Practise, practise, practise!

Sport means different things to
different people.

“Basketball” may mean
bouncing a ball and shooting
baskets with one other
person.

Activity for Life – Preparing for Adulthood

- Yoga
- Cycling
- Bowling
- Weight-Lifting
- Curling
- Roller Skating
- Golf (regular/mini)
- Aerobics
- Ice Skating
- Skiing
- Snow-shoeing
- Track and Field
- Swimming
- Lawn Bowling
- Dance
- Hiking

Community Options

- Special Olympics
- Adapted programs through Parks and Recreation
- Optimist Health Early Years Sports Programs
- Kidsport Funding available
- See handout for specifics

Adapting PE Equipment

Refer to Moving to Inclusion
equipment manual for excellent
reference – Active Living Alliance
for Canadians with a Disability –
Manitoba (478-6169)

Basic Adaptation Ideas (from Moving to Inclusion)

1. Adapt the nature of the activity
2. Change the environment
3. Change the rules
4. Adapt the equipment

Basic Adaptation Ideas – Adapt the Nature of the Activity

1. Promote success – start easy to ensure success, then move to more difficult
2. Cooperative games vs competition
 - Teamwork vs. individual success
 - Double up on goal-tenders, other positions (working together)

Basic Adaptation Ideas – Adapt the Nature of the Activity

- Vary scoring eg. get points for passing
- 3. Inclusion vs elimination: use substitution rather than elimination (eg. adapted Dodgeball)
- Substitute players more frequently

Basic Adaptation Ideas – Change the Environment

- Change the court size
- Allow more room/less clutter to make the space less distracting, boundaries more visually clear
- Increase visual cues; use of symbols, use benches to mark boundaries, colors to denote the appropriate goal/basket.

Basic Adaptation Ideas – Change the Rules

- Increase/decrease time limits
- Slow the pace if needed
- Allow boundary limitations (allow ball to hit the wall)
- Change body positions, eg. everyone on all fours or in sitting
- Play on scooters or wheelchairs

Basic Adaptation Ideas – Change the Rules

- Use a buddy system (EA can be a buddy to *anyone*)
- Change the number of players on at a time
- Rotate through positions
- Provide more or less opportunities to score
- Limit defenders (to make it easier to score)

Basic Adaptation Ideas – Adapt Equipment

- Lighter-weight: beach balls, balloons, nerf balls, scarves (early visual-motor skills)
- Various textures and sizes: beanbags made with various fabrics, knobby balls
- Attach string/streamers to make a ball easier to catch
- Use a variety of colors

Basic Adaptation Ideas – Adapt Equipment

- Attach badminton birdie to racquet
- Suspend balls for racquet sports
- Use shorter-handled racquets
- Start by hitting a balloon (be aware of latex precautions)
- Use soft foam frisbees
- Tape pool noodle to the bottom of a floor-hockey stick

Basic Adaptation Ideas – Adapt Equipment

- Suspend balls for racquet sports
- Use pylon for T-ball/baseball (upside-down plunger inside pylon)
- Duct-tape two scooters together if you don't have a long scooter
- Use hula hoops as boundary markers or larger targets
- Base markers with sound effects

Summary

1. Expect participation – this will look unique for each student depending on their needs and abilities.
2. Everyone needs to be physically active.
3. The definition of “Sport” can change.
4. The student needs support in the gym to ensure successful participation.

References

1. A teacher's Guide to Including Students with Disabilities in General physical Education, 2nd edition – Martin E. Block – 2000, Paul H. Brooks publishing company
2. Moving to Inclusion – Active living through physical education: Maximizing opportunities for students who are physically awkward – CAHPER/ALACD
3. Moving to Inclusion Equipment Manual – ALACD – www.ala.ca