

## Children with Coordination Difficulties: A Flyer for Physical Educators

***Some children have a great deal of difficulty learning to coordinate their movements and may appear awkward or clumsy. These children often struggle with participation in physical education class as well as in other subjects that involve handling objects, such as art, music or drama classes. Learning new motor skills, especially those that require coordination of their bodies in relation to moving objects, including balls, pucks and/or other children, can be demanding and stressful for children with coordination challenges. Children with these types of difficulties may have Developmental Coordination Disorder (DCD).***



### What is DCD?

Developmental Coordination Disorder (DCD) is a recognized motor disorder involving marked impairment in the development of motor coordination which significantly interferes with academic achievement or activities of daily living (DSM IV, 2000). Children with DCD usually have average or above average intellectual abilities and demonstrate a notable discrepancy between their motor skills and other skill areas. DCD may exist in isolation or may co-occur with other conditions such as attention deficit hyperactivity disorder.

### DCD and Physical Education

Even though many people have not heard of the disorder, DCD affects about 5% of school-aged children around the world. Children with DCD differ from one another because the degree of severity of the disorder varies, as does its presentation. Some children struggle with fine motor skills, others with gross motor skills, others when speed or accuracy is involved, and so on. Regardless of any individual child's difficulties, the underlying reason for their problems is the same. Children with DCD have difficulty coordinating movements that require them to stabilize some parts of their body while moving other parts.

Children with DCD are often motivated to participate in physical education at first, but they experience significant frustration when they can't seem to "get the hang of it". They complain that their bodies will not do what they want them to do. While other children learn and progress with instruction and experience, children with DCD seem to learn slowly and may show very little improvement from one period of instruction to the next. They also show

variability or inconsistency in their motor performance. Repeated failure experiences cause children with DCD to eventually withdraw from physical activities altogether. Unable to overcome their physical challenges, they begin to feel isolated from their peers. Research evidence suggests that the motor difficulties experienced by children with DCD predispose them to decreased physical activity participation and put them at risk for developing poor physical fitness and cardiovascular health, as well as obesity. In addition, it appears that children with DCD continue to have coordination difficulties later in life. They do not simply “grow out” of the problem.

It is important to support and encourage children with DCD to engage fully in physical education instruction. Through the use of alternate teaching strategies and positive reinforcement, children with motor coordination challenges can participate in games and physical activities. They can progress and receive enjoyment from physical education and establish activity patterns that will help them remain healthy throughout their lives.

## Understanding and Observing the Motor Difficulties

Through increased awareness of the specific motor difficulties that may be present, physical educators will be able to identify children with poor motor abilities and find ways to support them as they engage in physical activities.

The child with DCD may:

- appear clumsy or awkward
- bump into, or knock things over frequently
- experience difficulty with gross motor skills (e.g., running, hopping, skipping, initiating a jump from a small height, climbing)
- experience difficulty with fine motor skills (e.g., changing clothes, tying shoe laces, doing up buttons)
- have difficulty adjusting movements in response to changes in the environment (e.g., gradually slowing down a movement, changing direction quickly)
- have difficulty figuring out the necessary force and direction to throw an object or ball towards a target
- have difficulty positioning body and hands in an optimal position to catch an object or ball
- have difficulty learning new motor skills; once learned, certain motor skills may be performed quite well while others may be performed poorly
- avoid or appear to be uninterested in tasks that require physical activity
- demonstrate low frustration tolerance, decreased self-esteem, lack of motivation

## WHAT CAN A PHYSICAL EDUCATOR DO TO HELP A CHILD WITH COORDINATION DIFFICULTIES PERFORM AT SCHOOL?

The most important thing an educator can do to help a child reach full potential is to make sure that the task and the learning environment are right for the child. The following principles will help you “M.A.T.C.H.” the activity to the child.

### M.A.T.C.H. the Activity to the Child

#### **M**odify the task

This involves changing aspects of a task or a group of tasks that are too difficult for the child to perform. The important thing about modifying a task is that the children can still experience success if they make a genuine effort to participate in the activity.

#### **A**lter your Expectations

Consider what the ultimate goal of an activity is and then think about where you can be flexible. Allowing extra time or the use of alternate methods to complete a task can make the difference between a lesson learned and an experience of failure for a child with DCD.

#### **T**each Strategies

Children with DCD have the full capacity to learn with their peers, but may require a slightly different teaching approach. Investigate alternate teaching strategies designed for children with special needs.

#### **C**hange the Environment

Pay attention to what is going on around a child when he/she is experiencing success or difficulty (i.e. noise, level of activity, visual distractions). Minimize the environmental factors that make performance difficult for the child.

#### **H**elp by Understanding

Understanding the nature of DCD will help you to problem solve and provide all of your students with rich learning experiences. By encouraging a non-competitive classroom environment that fosters individual achievement, you can help children with DCD maintain both their self-esteem and their motivation to participate in physical activities. If children feel supported and understood, they are more likely to attempt new activities and to persevere until they achieve success.

## Teaching Tips

When observing children with motor difficulties in physical education class, watch *how* they perform, not just the end result. Observe what strategies they use to overcome their difficulties. Note how these children interact with peers and monitor self-esteem.

### The following guidelines may be helpful:

- *Ask questions* - determine if the child understands the task and prompt them to think about specific aspects of the task and their body position ("Is your body in ready position?" "Where do your arms need to be?" "What happens when you bounce the ball harder?").
- *Describe movements verbally* - use language to guide the movements that are required ("arms up", "elbows straight", "feet planted apart" etc).
- *Analyze and adapt tasks* - change the equipment, adapt the task (e.g., roll a larger ball or roll it more slowly).
- *Little and often* - try short, regular periods of practice each day rather than longer periods once or twice a week. Make these practices part of the child's routine.
- *Vary the practice* - use different types of balls to catch, coming from different types of throws, from varying distances and directions and draw attention to the differences.
- *Expert "scaffolding"* - support the learning of tasks by making tasks simpler and then building them back up; gradually add complexity to tasks.
- *Move to learn and learn to move* - encourage the learning of motor skills necessary for life-long fitness (see Encouraging Participation in Physical Activities at [http://dcd.canchild.ca/en/EducationalMaterials/resources/DCDPhysAct\\_Dec9Final.pdf](http://dcd.canchild.ca/en/EducationalMaterials/resources/DCDPhysAct_Dec9Final.pdf))

**Reference:** American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders. (4th ed.) Washington, DC: Author.

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**For more information about children with DCD, visit the *CanChild* website:**

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