

ENCOURAGING PARTICIPATION IN PHYSICAL ACTIVITIES FOR CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER



The “Couch Potato” Problem

Parents of children with DCD are often confused and worried about their child’s lack of interest in physical activity. Parents, teachers and coaches may mistakenly label these children as lazy and unmotivated. In fact, the opposite is true. Children with DCD often try very hard but do not learn motor skills as easily as their peers. Often, they are motivated to participate in the sports and activities that their friends enjoy but become frustrated when they are unsuccessful. As a result, they withdraw from activity

altogether, being unable to master skills without considerable effort, and feeling isolated from their peers. This withdrawal from activity may ultimately impact their physical health and mental well-being.

What makes team sports so hard?

Children with DCD struggle with physical activities for many reasons. They experience difficulties with eye-hand coordination, particularly in situations where they must respond to things in their environment that are moving. Sports involving ball skills or the manipulation of objects are particularly challenging for the child with DCD (e.g., baseball, soccer, football, basketball, hockey). In these activities, children are required to constantly observe their surroundings and adjust their bodies in response to changes in their environment. They must anticipate where the ball (or puck) is coming from – the direction and the distance, as well as how fast it is travelling – in order to move their bodies to intercept the object. In addition to the requirement to respond to moving objects, children must manoeuvre around other people. Unable to accurately predict the movement of other players, children with DCD often bump into or get in the way of others. Children with DCD may also have difficulty understanding the rules and strategies of game play, compounding an already challenging situation. Team sports are more competitive than individual sports and can lead to feelings of frustration and low self-esteem for children with DCD.

Why does physical activity require so much effort?

Many children with DCD have low muscle tone. As a result, they tend to fatigue easily with physical activity because of the effort that is involved in maintaining their posture and balance. Coordinating the muscles that control each of the joints in their body is very challenging. Instead of moving elbow, knee, and hip joints flexibly, some children with DCD “lock” these joints and stand rigidly. These children don’t move out of the way when the ball is coming.

Other children with DCD look wobbly because they contract and relax their muscles randomly so they seem to be constantly moving. In both cases, children are unable to stabilize some joints while still moving others purposefully. This is what makes them look so awkward.

Why do children with DCD drop out of activities so quickly?

A common source of frustration for parents is that the child with DCD shows an interest in a new sport and then “drops out” after 3 or 4 sessions. What seems to be lack of motivation is actually reflecting just how hard it is for the child to learn a new skill, to concentrate on new movement patterns and to keep going when they are fatigued. The increased physical demands for children with DCD make it more likely that they will try an activity and then withdraw from it. This withdrawal, in turn, can lead to decreases in strength, power and endurance, further reducing the likelihood of successful participation in future physical activities.

Are there any sports that are likely to be successful?

While organized sporting activities will likely be challenging, there are many activities in which children with DCD can become successful, including lifestyle sports such as swimming, skating, cycling, and skiing. It is unlikely that participation in physical activity will increase muscle tone in children with DCD, but regular involvement in physical activity can improve muscle strength and overall endurance. A major goal of increased participation in the typical activities of childhood is to prevent secondary consequences such as poor or deteriorating physical fitness. It is important to be aware that children with DCD may take longer to reach increasing skill levels than other children of the same age, so extra support or individual lessons may be needed. The next section identifies specific activities for different age groups of children and outlines ways to make these more successful.

Physical Activity Choices for Children with DCD

Activities for the younger child with DCD

Exposure to physical activities at a young age encourages fun and participation, and promotes health and fitness. Many activities are beneficial for the younger child with DCD as they promote body awareness, flexibility, balance, strength, and endurance. While many of these activities can and should be encouraged for the young child with DCD, these same activities can become more frustrating as children become older. At higher levels, these activities require children to master skills that are increasingly difficult due to greater balance requirements or the learning of specific steps or routines. Some examples of these kinds of activities include:

- ✓ Dance
- ✓ Martial arts
- ✓ Gymnastics
- ✓ T-ball

Similarly, children with DCD can be successful at some team sports when they are very young but will become frustrated when competition and skill levels increase. Some examples of team sports which may be fine for younger children with DCD include:

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| ✓ Soccer | ✓ Baseball | ✓ Basketball |
| ✓ Hockey | ✓ Ringette | ✓ Volleyball |
| ✓ Lacrosse | | |

Individual sports/physical activities

Children with DCD tend to have more success with individual sports or physical activities than with team sports. They can concentrate on adapting their own bodies in relation to their environment without having to expend the additional effort necessary to successfully manoeuvre around others. Performance in these activities is measured on an individual basis, which tends to promote individual progress, effort, and participation rather than competition. Some examples of these types of individual sporting activities include:

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| ✓ Dance | ✓ Martial arts | ✓ Horseback riding |
| ✓ Gymnastics | | |

In contrast with the activities listed above, some individual sports require rapid adjustments that require children to position their body in response to objects that move. These sports are generally much more challenging for children with DCD and *should only be recommended if the child is really motivated to work on them*. Activities that are in this category include:

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| ✗ Tennis | ✗ Racquetball | ✗ Handball |
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Lifestyle sports/activities

These are sporting activities that children with DCD can participate in throughout their life. As such, these activities are worth the extra time and effort that must be invested for children with DCD to successfully learn the activity and the skills required. Children with DCD usually have greater success with these activities because the patterns of movement that are used repeat themselves over and over. As a result, they are more easily learned than other activities. Some of these activities may require occasional individual instruction/lessons for specific skills (e.g., swimming - whip kick, somersaulting with life jacket on) in order to advance to the next skill level. Some examples of these types of activities include:

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| ✓ Swimming | ✓ Skating | ✓ Skiing |
| ✓ Running | ✓ Bicycling | ✓ Rollerblading |
| ✓ Canoeing | | |

A final note: Some additional safety issues

The coordination difficulties of children with DCD make it more likely that they may fall, bruise or fracture so extra thought needs to be given when selecting physical activities. While cycling is an important lifestyle sport to promote, mountain biking adds an element of environmental uncertainty that can be quite hazardous for the child with DCD. Running on a track at school is a good aerobic activity, but caution should be exercised with cross-country running because the uneven terrain poses increased risk. Many children with DCD do not move out of the way quickly when balls or other children are heading in their direction so injuries in sports such as baseball and basketball are common. Padding, wrist guards, helmets and other safety gear are an absolute must for the child with DCD who is participating in any fast moving sport such as skiing, rollerblading, or skating. Finally, make sure that your child's coach or sports instructor understands the nature of your child's challenges and is prepared to provide a safe, supportive environment. The goal of participation in physical activity is for your child to have fun and stay fit for life!

**For more information about children with DCD, visit the
CanChild Centre for Childhood Disability Research website:**

www.fhs.mcmaster.ca/canchild

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