

Developmental coordination disorder

Children normally acquire skilled movement in a relatively predictable way, based on their age, their individual characteristics and on their experiences in particular environments.

Developmental coordination disorder (DCD) is an umbrella term used to describe a number of issues that affect a child's ability to acquire or perform skilled movements. Children with these movement difficulties can have trouble with many tasks required in daily living and at school – movements that require gross motor skills, such as catching and jumping, tend to be affected.

Lack of fitness and confidence are significant factors that can lead to a cycle of inactivity, frustration and low self-esteem. DCD is often linked with various learning delays and disorders. Estimates vary but it is thought that about one Australian child in every 10 can experience these issues.

Overcoming this problem involves taking part in sport and other forms of physical activity in a supportive environment. Lots of practice and encouragement can help.

Symptoms

When a person with developmental coordination disorder plays sport, particularly a team sport, they may:

- Lack hand-to-eye coordination, which causes problems with basic skills such as throwing and catching
- Need to rely heavily on seeing how things are done to learn movements
- Lack adequate gross motor control skills – for example, they may find it difficult to stand on one leg or handle equipment like a bat or racquet
- Display uncoordinated physical movements
- Have an awkward posture and running style
- Find it difficult to understand the rules of an unfamiliar game
- Need more than average time and effort to master a new physical skill
- Not be able to anticipate what might happen next – for example, they cannot 'read the play' to realise that the ball may be sent their way
- Not respond quickly to their surroundings – for example, they may stand still when a ball is kicked to them
- Not be able to manoeuvre successfully around objects or other players and will constantly bump into things or trip over
- Have a lower level of athletic abilities compared to other children of the same age
- Show evidence of fine motor control problems, such as untidy writing.

Consequences of developmental coordination disorder

The consequences of DCD depend on the person but typically include:

- Frustration
- Low self-esteem
- Limited social skills
- A perception from others that the person is not trying and is lacking motivation
- Withdrawal from existing sporting activities
- Resistance to trying other forms of physical activity
- Reduced muscle tone
- Unhealthy weight
- Reduced fitness

- Further deterioration in physical abilities from lack of participation
- Complications of unhealthy weight and sedentary lifestyle – for example, high blood pressure and increased risk of diabetes.

A range of causes

What actually causes this condition is still unknown and there is no single test that will identify its existence. Usually, a range of factors work in combination, requiring a careful process of elimination to find a likely cause. Common factors may include:

- **Hereditary** – parents who lack certain physical abilities may see these tendencies evolve in their children.
- **Chronic illness or injury** – physical illness can mean reduced opportunities for participation and learning.
- **Parental example** – children tend to follow their parents' lead, which means that parents not naturally drawn to physical activity and sport may not emphasise participation in their children.
- **Overly protective parents** – some parents may discourage their children from playing sports for fear of injury.
- **Negative reinforcement** – a sporting environment that is not supportive could lead to negative experiences (like teasing or bullying), which make it less likely the person will continue with the activity or try something else.
- **Lack of fitness** – people with a low level of fitness will run out of puff very quickly, which can contribute to reduced success in sport and physical activity efforts.
- **Lack of opportunity to practise** – it is difficult for anyone to perform an activity well if they don't do it regularly.
- **Lack of confidence** – the above factors breed nervousness and hesitancy, which further decrease athletic performance.

Associations with other problems

For reasons that are not clear, children with DCD are more likely to have other problems including:

- Intellectual disability
- Autism
- Attention deficit hyperactivity disorder
- Language disorders
- Learning disorders.

Diagnosis

DCD is not caused by or linked with a medical disorder so diagnostic tests don't exist. Diagnosis methods may include:

- Observing the child while they perform physical activity
- Comparing the child with others of the same age range
- Asking the child how they feel about participating in sport
- Checking if the child is unfit or overweight.

General suggestions

It is possible for a person with DCD to discover the many joys and benefits of physical activity. Suggestions include:

- Choose individual sports or physical activities rather than team sports. People with DCD may struggle in an unsupportive competitive environment.
- Choose physical activities with repetitive movements – they are easier to learn than those with random movements. For example, cycling a bike has a regular pattern of motion that is quickly grasped, while playing soccer requires adapting constantly to the countless quirks of each game.
- Limit activity that requires fast responses and movements, such as tennis or squash.

- Opt for solo physical activities, which are easier for people with DCD to manage – try swimming, skating, cycling, skiing and dance.

Suggestions for parents

Tips to help your child include:

- Start them early and provide plenty of opportunities for them to learn and gain experience. Evidence suggests that children are more likely to develop confidence and skill if they participate in physical activity from a young age. This is particularly true for team sports.
- Lead by example. Choose a physical activity that you feel competent performing and involve the whole family. Try to make the activity fun.
- Consider some extra lessons. Even if your child enjoys their chosen activity, they may benefit from extra lessons or even individual tutoring. This can prevent them from lagging behind others in their team or class, which will further boost their confidence.
- Make sure the right safety equipment is used. This is essential for everyone who plays sport, but especially for children with DCD. Compared to the average child, one with DCD is more likely to fall over, collide with an object or get struck with a ball.
- Talk over your concerns with your child's coach, instructor or trainer, who should have further suggestions on how to support and encourage your child's sporting abilities.
- Praise your child often. If they feel good about themselves while playing sport or exercising, they are much more likely to participate.

Where to get help

- Your doctor
- School PE teacher
- Sports coach
- Smartplay Tel. (03) 9674 8777

Things to remember

- Developmental coordination disorder (DCD) is an umbrella term applied to children and adults who are uncoordinated and generally have difficulty with sport and athletic activities.
- Developmental coordination disorder is not linked with or caused by any medical disorder.
- Treatment includes holistic, child-centred sport and physical activity participation and practice.

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Physical Activity Australia

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