



Developmental Coordination Disorder

Information Sheet for Medical and Allied Health Professionals

What is Developmental Coordination Disorder (DCD)?

Developmental Coordination Disorder or DCD is a lifelong neurodevelopmental condition that causes problems with movement and coordination. People with DCD find it difficult to coordinate their bodies to perform everyday tasks.

What causes DCD?

The causes of DCD are not well understood. Like other neurodevelopmental conditions, the brain is thought to develop differently, with these differences impacting on a person's ability to learn and plan movement. Research indicates a strong genetic and heritable basis for the disorder, and early life factors such as complications during pregnancy and birth (e.g., pre-term, low birth weight) are also associated.

While DCD can present as an isolated disorder, movement difficulties often exist with difficulties in other domains (i.e., language, socialisation, behaviour). Within current diagnostic models, it is not uncommon for a diagnosis of DCD to be made in addition to other diagnoses aligned to other difficulties or behaviours they may display (e.g., autism spectrum disorder, attention deficit hyperactivity disorder, child apraxia of speech).

How prevalent is the disorder?

DCD is estimated to occur in ~5% of school-aged children, roughly 1-2 children in every classroom. The disorder is more common in boys than in girls (3:1).

What does DCD look like?

While those who go on to receive a diagnosis of DCD may present with some movement

delays or difficulties early in life (e.g., feeding, crawling and walking), difficulties are most noticeable in early childhood when learning more complex movement tasks required for daily living, education and playground activity.

Children with DCD appear uncoordinated and awkward with their movement. Their movement can be disorganised, poorly timed, slow, unstable and sometimes rushed.

Diagnosing DCD

DCD appears in the Diagnostic Manual of Mental Disorders as a neurodevelopmental condition, classified as a motor disorder. Its diagnosis requires meeting four diagnostic criteria:

- A. Learning and execution of coordinated motor skills is below age given the child's opportunity for skill learning.
- B. Movement difficulties significantly and persistently interfere with activities of daily living, academic productivity, prevocational and vocational activities, leisure and play.
- C. Onset is in the early developmental period.
- D. Motor coordination difficulties are not better explained by intellectual delay, visual impairment, or other neurological conditions that affect movement (e.g., cerebral palsy).

The diagnosis of DCD should involve a multidisciplinary team, including a paediatrician to evaluate medical history and rule out other explanations for the motor issues (criteria C and D) and an occupational therapist or developmental neuropsychologist to assess motor skills and impact on function (criteria A and B). Evaluation should include a standardised motor assessment, such as the Movement Assessment Battery for Children (M-ABC) or Bruininks Oseretsky Test of Motor Proficiency (BOT).



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It is currently recommended that a diagnosis be made in children from 5 years of age. Those under 5 years can be identified as 'at risk' and still supported by a range of allied health professionals.

Why is a diagnosis important?

It provides some understanding of why a person has persistent difficulty with their movement. It helps families, educators and therapists to provide the support they need.

Therapy

Occupational therapy is considered the primary therapy to support the development of movement skills required for everyday living. Task-oriented approaches (i.e., focusing on specific functional tasks) including Cognitive Orientation to Occupational Performance (CO-OP) therapy and Neuromotor Task Training (NTT), are two evidence-based therapies currently recommended. Other therapy approaches, such as Sensory Integration Therapy (SIT), are less effective.

Physiotherapy is also important for those experiencing issues with muscle tone and strength. Of increasing recognition in Australia are accredited exercise physiologists (AEPs), with specialist training, who can provide therapy targeted towards the skills required for participation in playground, sporting and leisure activity.

For therapists working with school-aged children, communication with educators is critical to ensuring awareness of a child's challenges and implementation of strategies to support learning at school.

Secondary Impacts

DCD is often associated with secondary impacts on mental and physical health. Onset of these often occurs during early to middle childhood. Children with DCD struggle to keep up with their peers in the classroom and playground, and experience exclusion and bullying. This can have a substantial impact on confidence and self-esteem, and often leads to anxiety.

Reduced ability also can result in avoidance, withdrawal from movement-related activities and a more sedentary lifestyle, increasing the risk of health issues such as increased weight.

Parents and guardians are also at increased risk of mental health issues.

It is important that families are educated about the signs of poor mental health and the services available to support them (e.g., mental health plans).

For further information

DCD Australia Inc. is the national peak body supporting people with DCD and their families in Australia. Our mission is to raise awareness of DCD in the community and to provide support to individuals with DCD and their families.

We will accomplish this mission through advocacy, networking, provision of resources and educating the public about DCD; and providing families with the knowledge, skills and support they require.

Find out more at dcdaustralia.org.au