

Diagnoses

Developmental Coordination Disorder

Overview

What is DCD?

Developmental Coordination Disorder (DCD) is a motor skills disorder that affects five to six percent of all school-aged children. The ratio of boys to girls varies from 2:1 to 5:1, depending on the group studied. DCD occurs when a delay in the development of motor skills, or difficulty coordinating movements, results in a child being unable to perform common, everyday tasks. By definition, children with DCD do not have an identifiable medical or neurological condition that explains their coordination problems.

5-6

%

of school-aged children are affected by Developmental Coordination Disorder (DCD).

Frequently described as "clumsy" or "awkward" by their parents and teachers, children with DCD have difficulty mastering simple motor activities, such as tying shoes or going down stairs, and are unable to perform age-appropriate academic and self-care tasks. Some children may experience difficulties in a variety of areas while others may have problems only with specific activities. For a list of some of the more common characteristics that may be observed in a child with DCD, [click here](#). Children with DCD usually have normal or above average intellectual abilities. However, their motor coordination difficulties may impact their academic progress, social integration and emotional development.

DCD is commonly associated with other developmental conditions, including attention deficit/hyperactivity disorder (ADHD), learning disabilities (LD), speech-language delays and emotional and behavioural problems. For more information on related developmental disorders and their co-occurrence with DCD, [click here](#).

Do children with DCD "outgrow" their motor difficulties?

While it was once thought that children with DCD would simply outgrow their motor difficulties, research tells us that DCD persists throughout adolescence into adulthood. Children with DCD can and do learn to perform certain motor tasks well, however, they have difficulty when faced with new, age-appropriate ones and are at risk for secondary difficulties that result from their motor challenges. Although there is currently no cure for DCD, early intervention and treatment may help

challenges. Although there is currently no cure for DCD, early intervention and treatment may help to reduce the emotional, physical and social consequences that are often associated with this disorder.

Diagnostic Criteria

The following criteria are necessary for a diagnosis of DCD to be given:

A) Learning and execution of coordinated motor skills is below expected level for age, given opportunity for skill learning.

B) Motor skill difficulties significantly interfere with activities of daily living and impact academic/school productivity, prevocational and vocational activities, leisure and play.

C) Onset is in the early developmental period.

D) Motor skill difficulties are not better explained by intellectual delay, visual impairment or other neurological conditions that affect movement.

Note: Motor **milestones** are often not delayed; the delay is usually in the acquisition of motor **skills**. Criterion D require the involvement of a medical practitioner to rule out other explanations for the clumsiness.* In the province of Ontario, only a medical doctor or a psychologist is permitted to diagnose DCD.

Source: American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC: Author.

Consensus Statements

Since the first description of a syndrome of clumsiness as a developmental disorder in the 1930s, and refinement of the term to "clumsy child syndrome" in 1975, children with motor coordination problems have been given a variety of labels over the past few decades including, but not limited to: developmental dyspraxia, minimal brain dysfunction, perceptuo-motor dysfunction, physically awkward, and specific developmental disorder of motor function.

With health professionals increasingly sharing research evidence across countries and disciplines, this wide variation in terminology led to considerable confusion. Without a consistent label for the disorder, it became difficult to obtain prevalence estimates and to establish diagnostic criteria. As a result, the disorder did not gain legitimacy as a health problem until 1994, when an international panel of experts was convened at a consensus meeting held in London, Ontario. At that meeting, a decision was made to recognize "clumsy" children as having Developmental Coordination Disorder (DCD). DCD is the term that was introduced in the Diagnostic and Statistical Manual in 1989 and that has been retained in more recent editions of the manual.

In the time since that landmark consensus statement in 1994, research into the disorder has grown considerably with a need to re-visit the concepts as outlined in the 1994 consensus. In 2006, The Leeds Consensus Statement was developed as part of the Economic and Social Research Council Seminar Series in Leeds, United Kingdom. International DCD researchers and clinicians

representing multiple disciplines met to re-examine and develop consensus on topic areas such as DCD core concepts, diagnostic criteria, assessment, co-occurring disorders and management. This consensus document highlights the retention of the term DCD, recognition of the disorder as distinct and unique, and outlines recommendations for the application of diagnostic criteria. Guidelines for assessment are provided along with general intervention principles.

At the ninth Developmental Coordination Disorder (DCD) International Conference held in Switzerland in June 2011, new guidelines for the assessment and diagnosis of DCD were announced. These guidelines resulted from the work of an international group of researchers and clinicians. They have been accepted in a number of European countries and are now posted on the [European Academy of Childhood Disability \(EACD\) website](#), and in *Developmental Medicine & Child Neurology* ([click for abstract](#)). Guidelines for the United Kingdom are currently under development.

For more information:

Polatajko, H. J., Fox, M., & Missiuna, C. (1995). An international consensus on children with developmental coordination disorder. *Canadian Journal of Occupational Therapy*, 62, 3-6.

Sugden, D. A., Chambers, M., & Utley, A. (2006). Leeds Consensus Statement 2006.

DCD Online Workshops

[For parents, teachers, PTs, & Physicians \(/en/diagnoses/developmental-coordination-disorder/workshops\)](#)

Related Resources

- » [Children with Coordination Difficulties: A Flyer for Physical Educators \(/en/resources/126-children-with-coordination-difficulties-a-flyer-for-physical-educators\)](#)
- » [M.A.T.C.H. Flyers: A Resource for Educators \(/en/resources/123-m-a-t-c-h-flyers-a-resource-for-educators\)](#)
- » [Recognizing and Referring Children with Developmental Coordination Disorder: The Role of the Physician \(/en/resources/120-recognizing-and-referring-children-with-developmental-coordination-disorder-the-role-of-the-physician\)](#)
- » [Recognizing and Referring Children with Developmental Coordination Disorder: The role of the Physiotherapist \(/en/resources/131-recognizing-and-referring-children-with-developmental-coordination-disorder-the-role-of-the-physiotherapist\)](#)
- » [Children with DCD: At home, at school and in the community \(Booklet\) \(/en/resources/112-children-with-dcd-at-home-at-school-and-in-the-community-booklet\)](#)