



Recognizing and Referring Children with Developmental Coordination Disorder

The role of the Speech-Language Pathologist

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Speech-language pathologists often receive referrals for young children who are demonstrating early delays in speech and/or language development. Many of these children also have motor coordination difficulties that, although not immediately evident, can be detected, if one knows what to look for.

Recently, increased attention is being given to the motor difficulties of children who used to be labeled “clumsy” or “physically awkward” but who are now recognized as having Developmental Coordination Disorder (DCD). In the past, these children received little attention because many believed that they would overcome their difficulties with time. We now know that children’s motor coordination difficulties affect their ability to participate in everyday activities at home, at school and in the community and may impact significantly on their physical, social and emotional well-being.

Research has demonstrated that approximately half of the children who present with “specific” speech/language impairments may also have DCD. There are strong theoretical reasons to believe that the underlying mechanism of both disorders may be shared. It is important for speech-language pathologists to learn to recognize characteristic signs and behaviors of children with DCD in order to enable early identification and appropriate intervention.

You may observe that children look awkward, that they squirm around because they have trouble maintaining a stable position, or that their hands don’t seem to work together efficiently. More often, however, you may notice that you are “helping” children with coordination problems more than is necessary for their age. Do you find yourself pushing in the child’s chair, stabilizing paper or objects for them, cueing and assisting them to complete a very basic task? Becoming familiar with the expectations for typical children may help you to recognize when children are delayed in their ability to manage self-care activities such as dressing, feeding or to perform pre-academic skills such as cutting and printing.

If a child demonstrates uncoordinated movements and motor abilities below those expected for their age, they may have Developmental Coordination Disorder (DCD). This flyer will help you recognize children at risk for DCD and determine the need for referral to other service providers for further evaluation.



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Recognizing Children with Developmental Coordination Disorder (DCD)

Often described by those around them as clumsy, children presenting with the characteristics of DCD may be referred to as “motor delayed.” You may hear from parents that these children have difficulty learning new motor tasks such as skipping, hopping, or jumping. Printing, copying, cutting and other fine motor tasks may present challenges. Children with DCD usually also have difficulty with zippers, snaps, buttons, tying shoelaces, throwing and catching balls, and other tasks that require two hands to work together co-operatively. Motor skills require effort so children with DCD are often slow to complete tasks and may appear inattentive. Children may have a slouched posture and fatigue easily, often appearing to lean on walls or furniture. Children with DCD usually begin to withdraw from and avoid physical activities or sports at an early age.

Definition:

Developmental Coordination Disorder is an impairment in the development of motor coordination that significantly interferes with academic achievement and activities of daily living. Developmental Coordination Disorder may exist in isolation OR may co-occur with other conditions such as learning disabilities or attention deficit disorder.

Diagnostic Criteria:

- 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, pre-vocational 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.

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

Note: Criterion D requires the involvement of a family practitioner or developmental pediatrician to rule out other explanations for the clumsiness. In many states and provinces, only a medical doctor or a psychologist is permitted to make this diagnosis.

Prevalence: 5-6% of the school-aged population, more common in boys

Associated Disorders: Phonological Disorder, Expressive Language Disorder, Mixed Receptive-Expressive Language Disorder

For more information:

Missiuna, C., Gaines, R., & Pollock, N. (2002). Recognizing and referring children at risk for developmental coordination disorder: Role of the speech language pathologist. *Journal of Speech-Language Pathology and Audiology*, 26, 172-179.

Characteristic Features of Children with Developmental Coordination Disorder:

- Clumsiness, found across the intellectual spectrum
- Handwriting / printing / copying difficulties
- Require extra effort and attention when tasks have a motor component
- Difficulty with activities of daily living (e.g., dressing, feeding, grooming)
- Difficulty with sports and on the playground (last to “get picked” for teams)
- Difficulty learning new motor skills
- Difficulty with, or reduced interest in, physical activities

If you suspect that a child is demonstrating the characteristics of DCD, you may want to ask parents about developmental concerns in other domains (fine motor, self-care). It will be important to inquire as to whether or not there are difficulties at home or at school. Is the child having trouble with buttons, using eating utensils or tying shoelaces? Are fine motor activities such as printing, cutting, or completing puzzles difficult for the child? Does the child have to exert a lot of effort to complete motor tasks? Do parents find themselves assisting the child with self-care activities, more than they believe that they should?

If your observations and parental report are consistent with the characteristics outlined above, you may consider making a referral to an occupational therapist. A child with DCD may also be referred to a physiotherapist with gross motor concerns. It is probable that a child with DCD will experience delays in fine motor and/or self-care skill acquisition that may not have been identified before this.

You should also consider encouraging the family to be seen by their family physician. It is important that a medical practitioner rule out other conditions that might explain the poor motor coordination.

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

dcd.canchild.ca

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