



Recognizing and Referring Children with Developmental Coordination Disorder

The role of the speech-language pathologist

Contents

PAGE 1 _____

Introduction

PAGE 2 _____

Recognizing children with developmental coordination disorder (DCD)

- *Definition*
- *DSM IV criteria*
- *Prevalence*

PAGE 3 _____

- *Characteristic Features*
- *Contact information*

PAGE 4 _____

For your convenience, this flyer for parents can be easily photocopied.

Speech-language pathologists often receive referrals of 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 paper 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 a “marked impairment in the development of motor coordination... only if this impairment significantly interferes with academic achievement or 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) Performance in daily activities that require motor coordination is substantially below that expected, given the person’s chronological age and measured intelligence. This may be manifested by marked delays in achieving motor milestones (e.g., walking, crawling, sitting), dropping things, “clumsiness”, poor performance in sports, or poor handwriting.
- B) The disturbance in Criterion A significantly interferes with academic achievement or activities of daily living.
- C) The disturbance is not due to a general medical condition (e.g., cerebral palsy, hemiplegia, or muscular dystrophy) and does not meet criteria for Pervasive Developmental Disorder.
- D) If mental retardation is present, the motor difficulties are in excess of those usually associated with it.

Note: Criteria C and D require 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.

(APA Diagnostic and Statistical Manual, 2000; pp. 58)

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 about identifying children with DCD, please see . . .

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
- Requires 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 motor in-coordination.

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

www.canchild.ca

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When Your Child is Having Motor or Self-Care Difficulties.....

Some children who have speech and/or language difficulties also have trouble performing some motor activities. They may have trouble coordinating their movements to run, skip or jump. They may experience frustration at learning to ride a tricycle or to catch a ball. Others may have difficulty managing to eat neatly with a spoon or fork, learning to print their name or use scissors, doing up buttons and zippers or learning to tie their shoelaces.

You may have some concerns about your child's ability to perform some or all of these motor activities. Your child has now been seen by a speech-language pathologist and he or she thinks that there is a reason for your child to also be seen by an occupational therapist or a physical therapist. Both occupational and physical therapists work with children who have a variety of movement and coordination problems that impact on their ability to perform well at school, at home and on the playground. Some children who have the types of motor problems described above may have developmental coordination disorder. If your child is struggling with self-care or early academic tasks, he or she will likely benefit from a referral to an occupational therapist.

What can an occupational therapist do?

An occupational therapist will:

- Provide a thorough assessment of your child's developmental skills
- Determine how different aspects of your child's daily life are affected
- Teach your child ways of thinking his/her way through learning new tasks
- Provide adapted equipment and materials to improve task performance
- Help you and your child to set appropriate expectations
- Modify environmental factors to maximize participation
- Guide you in your selection of leisure and sports activities for success
- Help you, your child and others to maximize his/her strengths

How do I find an occupational therapist or physical therapist in my area?

Your child's speech-language pathologist can help you find and make a referral to an occupational or physical therapist. It may also be a good idea for your child to be seen by your family physician or pediatrician. Your doctor will be able to assist the occupational therapist and physical therapist in determining the possible reasons for your child's motor difficulties.

You can find more information about developmental coordination disorder at:



www.canchild.ca

(905) 525-9140, ext. 27850