



Role of the Optometrist:

A new perspective on school-aged children with visual motor difficulties

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This flyer for parents can be photocopied for your convenience.

Children who present with school-related difficulties that have a visual or visual-motor basis may have a number of things happening. In this paper, we provide information about school-aged children who have had their vision tested and who do not appear to have significant visual problems. These children may have either a non-verbal learning disability or developmental coordination disorder:

Children with Non-Verbal Learning Disabilities (NVLD)

Children with NVLD have difficulty interpreting and using visual information. You may hear that they have trouble understanding non-verbal cues, difficulty finding their way around the school, trouble with tasks requiring background/foreground distinctions, and social problems. These children should be referred to a *psychologist* for further assessment.

Children with Developmental Coordination Disorder (DCD)

By far, the largest group of children who you will see with visual-motor problems, are children with DCD. Recognized by those around them as being clumsy children or physically awkward, they are often referred to as “fine motor delayed.” These children have difficulty with academic tasks such as *printing, copying, handwriting, cutting*, and other fine motor tasks that lead to *written language, math and spelling* problems. Motor skills require effort so children with DCD are often slow to complete tasks at school and may appear inattentive. Less obvious, but equally important to the family, children with DCD usually also have difficulty with zippers, snaps, buttons, tying shoelaces, throwing and catching balls, learning to ride a bicycle, skipping, and other motor activities. Finally, children with DCD usually begin to withdraw from and avoid motor activities at an early age. They often seem verbally advanced but immature socially and may have behavioural or emotional problems. These children should be referred to an *occupational therapist* for further assessment.



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Recognizing Children with Developmental Coordination Disorder

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 verbal or non-verbal 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, 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 the province of Ontario, only a medical doctor or a psychologist is permitted to make this diagnosis.

(APA Diagnostic and Statistical Manual, 1994; pp. 54-55)

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

Characteristic Features of Children with Developmental Coordination Disorder:

- Clumsiness, found across the intellectual spectrum
- Handwriting / printing / copying difficulties
- Difficulty finishing academic tasks on time
- 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

Referring Children with Developmental Coordination Disorder

Children with DCD have **motor-based** difficulties that, by definition, impact on academic or self-care activities (see criteria A and B in the DSM IV definition of DCD on page 2). It is these problems that occupational therapists assess. Furthermore, with occupational therapy intervention, parents can anticipate improvements in the child's ability to succeed in school, home, playground and community settings.

If you suspect that a child might have DCD, encourage parents to have the child seen by an occupational therapist for further assessment. An occupational therapist will:

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

Occupational therapists who specialize in working with children can be found in a number of different places in Ontario including:

- Children's Treatment Centres
- Community Care Access Centres (School Health Support Program)
- Children's Hospitals
- Occupational Therapy Departments in General Hospitals
- Private Practitioners (children's agencies usually have a list)

For more information:

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When Your Child is Having Difficulty in School

Children can have difficulty in the early school years for a number of reasons. They may have trouble learning to print, to read, or to copy things from the board. They may have trouble becoming independent at dressing themselves, managing their belongings, or getting along with other children.

You, or your child's teacher, may have some concerns about your child's ability to print, copy, or to complete his/her work on time. Your child has now been seen by the optometrist and his/her vision has been assessed. Your optometrist believes that there is a reason for your child to be seen by an occupational therapist. Occupational therapists work with children who have coordination problems or organizational difficulties that are contributing to their academic difficulties. Some children who have these problems have developmental coordination disorder and can benefit from working with an occupational therapist.

What can an occupational therapist do?

- 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 his/her teachers set appropriate expectations
- Modify environmental factors to maximize participation
- Guide you in your selection of leisure activities for success
- Help you, your child and others to maximize his/her strengths

How do I find an occupational therapist in my area?

Occupational therapists who specialize in working with children can be found in a number of different places in Ontario including:

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