

Developmental Coordination Disorder

Section on Pediatrics FACT SHEET



PEDIATRICS

AMERICAN PHYSICAL THERAPY ASSOCIATION

Section on Pediatrics APTA

1111 North Fairfax Street
Alexandria, VA 22314-1488

Phone: 800/999-2782, ext. 3254
Fax: 703/706-8575

E-mail: peditrics@apta.org

www.pediatricapta.org



What Is Developmental Coordination Disorder (DCD)?

DCD (ICD-9 code: 315.4) is a chronic condition found in children characterized by motor impairment that interferes with the child's activities of daily living or academic achievement.

Characteristics

Motor

- Low muscle tone
- Persistence of infant reflexes
- Difficulties maintaining balance
- Awkward running pattern
- Falls frequently
- Difficulty imitating body positions
- Difficulty following 2- to 3-step motor commands
- Drops items
- Difficulty with handwriting or drawing (most frequently mentioned motor problem)
- Difficulty gripping
- Difficulty using utensils for eating
- Difficulty dressing

Psychosocial

- Learning difficulties
- Reading problems
- Behavior problems
- Poor interactive play skills
- Lower self-esteem
- Lower self-worth
- Increased anxiety
- Avoids physical activity

Quick Facts

- 6% of children 5-11 years old are diagnosed with DCD
- DCD is diagnosed more often in boys than girls
- A higher incidence of DCD may be found among children with a history of prenatal or perinatal difficulties
- DCD is often associated with Attention Deficit Hyperactivity Disorder, phonological disorder, expressive language disorder, or mixed receptive-expressive language disorder
- Not to be confused with:
 - Specific neurological disorders, such as cerebral palsy, progressive lesions of the cerebellum
 - Mental Retardation
 - Pervasive Developmental Disorder
 - Attention Deficit Hyperactivity Disorder

Diagnostic criteria (from DSM IV):

- Performance of activities that require motor coordination is substantially below what would be expected given the child's chronological age and measured intelligence. May be manifested by:

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- Marked delays in the achievement of motor milestones (ie, crawling, sitting, and walking).
- Dropping things
- “Clumsiness”
- Poor performance in sports
- Poor handwriting
- The disturbance in motor performance significantly interferes with academic achievement or activities of daily living.
- The disturbance is not due to a general medical condition such as cerebral palsy, hemiplegia, or muscular dystrophy.
- The disturbance does not meet criteria for Pervasive Developmental Disorder.
- If mental retardation is present, the motor difficulties present must be in excess of those usually associated with mental retardation alone.

Why Is It Important for Children Diagnosed with DCD to Receive Intervention?

- Current research supports the idea that children do not outgrow clumsiness.
- Intervention has been shown to positively affect the development of gross and fine motor coordination when a specific skill is motivating, meaningful, and practiced extensively.
- Children and adolescents with DCD are at risk for low academic performance, poor self-esteem, and inadequate physical activity. This may lead to limited social participation in family, community, and recreation activities, and physical-social activities at school.

Physical Therapy Can Help by:

- Improving gross and fine motor coordination, which may lead to:
 - Improved hand-writing and activities of daily living,
 - Improved motivation to participate in physical and social activity,
 - Improved feelings of pride and satisfaction.
- Collaborating with team members (ie, teacher, occupational therapist, speech language pathologist, family, social worker) to ensure optimal functioning, participation, and life-long fitness.
- Assisting in the development of behaviors that will help the child remain physically active throughout life by encouraging him/her to participate in activities that he/she enjoys that do not require much hand-eye coordination or the ability to focus attention (ie, hiking, running, biking, skating, swimming, yoga, and aerobic exercise).
- Introducing activities that are developmentally appropriate, and that involve small incremental challenges to ensure success and improve self-esteem.

Key References

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Web Sites

Apraxia KIDS at www.apraxia-kids.org/links/linksdcd.html

Bright Futures at www.brightfutures.org/physicalactivity/issues_concerns/10.html
and www.brightfutures.org/physicalactivity/issues_concerns/11.htm

The Dyspraxia Association of Ireland at www.dyspraxiaireland.com

CanChild at www.bluewirecs.tzo.com/canchild/kc/KC1996-3.pdf

For More Information

If you have additional questions, would like to order additional copies of this fact sheet, or would like to join the Section on Pediatrics, please contact the Executive Office of the Section on Pediatrics of the American Physical Therapy Association at:

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1111 North Fairfax Street
Alexandria, VA 22314
800/999-2782, ext 3254
Fax: 703/706-8575
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