

DEVELOPMENTAL COORDINATION DISORDER (including Dyspraxia)



What is a Developmental Coordination Disorder?

Developmental Coordination Disorder (DCD) is a motor skills disorder that affects five to six percent of all school-aged children. 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.

Frequently described as "clumsy" or "awkward" by their parents and teachers, children with DCD have difficulty mastering simple motor activities e.g. tying shoes, 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 with only specific activities. 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.

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 tasks 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 to reduce the emotional, physical and social consequences that are often associated with this disorder.

The 4 *DSM IV* diagnostic criteria for DCD are as follows:

1. Performance in daily activities that require motor coordination is substantially below given the person's chronological age and measured intelligence. This change may manifest as marked delays in achieving motor milestones (e.g. walking, crawling, and sitting) and as dropping things, clumsiness, poor performance in sports or poor handwriting.
2. The disturbance in criterion 1 substantially interferes with academic achievement and/or activities of daily living.
3. The disturbance is not due to a general medical condition (e.g. cerebral palsy, hemiplegia, muscular dystrophy) and it does not meet criteria for a pervasive developmental disorder.
4. If 'mental retardation' is present the motor difficulties are in excess of those usually associated with it.

<http://dcd.canchild.ca/en/AboutDCD/overview.asp>

How an Occupational Therapist may help.....

Occupational Therapy (OT) can help a child/young person with a DCD participate in the activities within their daily lives that they need to do and/or want to do. Working closely with families and schools, an OT may provide any of the following interventions depending on the individual's needs and goals:

- Motor skills assessments, including balance, ball skills and fine motor skills ensuring they have the underlying strength and stability required to perform these tasks.
- Advice and strategies to support their development and/or participation in self-care tasks. This may include the provision of equipment and /or advice regarding ways of teaching and learning the skills.
- Assessment and advice for handwriting with programmes, to help develop underlying skills as well as programmes to help letter formation and the recommendation of equipment.
- Sensory assessment, advice and equipment to help improve their ability to process sensory information for improved participation in activities.

- Advice and strategies to help motor planning and organisation at home and within the classroom.
- Advice and strategies on how to participate or learn play and leisure activities such as swimming and riding a bike.

Case Example

Alex is a 4 year old boy who was referred to the OT service due to having difficulties getting himself dressed, running in the playground, falling over a lot and struggling with pencil tasks.

Alex was seen for an OT assessment who identified that he has DCD with Praxic difficulties (motor planning). Alex appeared to have poor body awareness, difficulty with knowing how much force he placed through objects and bumping in to other people and objects around him. When trying to get himself dressed Alex was getting his clothing on back to front and was struggling to organise himself in order to correct his mistakes. Alex had increased movement in his shoulder and finger joints. This made holding a pencil tricky for him therefore his pre writing skills were delayed.

OT provided a home programme of activities to help Alex improve his postural strength and stability. He was seen in the clinic for therapy to help him improve his body awareness and his overall coordination. Alex was then seen in school by an OT Assistant who gave strategies and activity ideas to school to help Alex make progress with his fine motor and self-care skills.

Having an understanding of Alex's difficulties helped his family and his school to have more realistic expectations of Alex and also empowered them as how best to support him. Alex is making progress, his school work is differentiated for him and he is taught using lots of visual prompts. He has been given picture cards to help him with dressing and is making progress with his pre-writing skills by using lots of different media (paint, sand, chalk). Providing this intervention and strategies early in Alex's life will hopefully reduce the risk of social and emotional difficulties for him in the future and also help him be supported to achieve his full potential in his school life.

Useful Contacts

- <http://www.tinytimcentre.co.uk> - Centre in Coventry with access to soft play, sensory and massage sessions for children with special needs.
- <http://www.dyspraxiafoundation.org.uk> the official Dyspraxia website. This has lots of advice sheets which can be downloaded for both homes and schools.
- www.cwdyspraxia.org.uk/ Coventry and Warwickshire Dyspraxia group. Offers support for families and children/young people with DCD/Dyspraxia. They meet bi-weekly, run a charity shop and have regular trips.
- <http://www.hwtears.com>. The Handwriting Without Tears website which has lots of advice relating to handwriting and also downloadable worksheets.
- <http://canchild.ca/en/index.asp> Canadian website with research and information relating to DCD, including what different professions can provide.
- <http://www.sentrain.net/about.asp> An online training package for teachers relating to motor coordination.

Relevant Occupational Therapy Home Programmes available for members on the website

- Coordination
- Balance
- Bilateral skills
- Self care skills
- Motor planning
- Handwriting
- Sensory skills