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Beyond Just Clumsy: Developmental Coordination Disorder

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What is DCD?

Bumping into furniture and accidents on the playground are all a part of growing up. But what if your child struggles with movement throughout the day, every day? Those who struggle with learning motor tasks and coordination could present with Developmental Coordination Disorder (DCD), which has also been called dyspraxia and global apraxia. DCD is a neuro developmental disorder, meaning that the source of the problem is in the brain (as opposed to weakness in the muscles) and becomes more apparent as children grow. It is estimated that 5 to 6% of children have DCD, occurring more frequently in boys than girls. It is unclear where in the brain the problem starts, but it is typically first observed around age 5 and persists until adulthood.



Children with DCD are as intelligent as other children their age, but the signal from the brain to the muscles is disrupted, which can cause problems with the following:



- **Gross motor movement**

- Gross motor skills use the larger muscle groups. Someone with DCD may struggle with walking up and down stairs, running and jumping during play, and playing sports.



- **Fine motor movement**

- Fine motor skills are defined by small, precise movements of the hands. Someone with DCD may struggle with holding utensils, cutting with scissors, handwriting, and typing.



- **Motor planning and coordination**

- Motor planning skills are used to sequence movements to accomplish a task (e.g. First open the toothpaste, then put toothpaste on the brush...). Someone with DCD may struggle with routines like getting dressed, navigating around furniture and people without bumping into them, and driving. Motor planning can also impact balance, which would make it difficult to sit in a chair.

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Therapy

Although there is no cure for DCD, intervention at a young age can help children manage motor challenges into adulthood. Occupational therapists work on fine motor tasks, and physical therapists work on gross motor tasks. Changing pathways in the brain through strength and balancing exercises has been proven to help. Fun, new therapies have also been shown to improve motor skills, such as virtual gaming and hippotherapy (therapy on horses)! If your child qualifies, therapy is available through a 504 plan or an Individualized Education Plan within his/her school. Consult with your school's child study team if you suspect your child has DCD. Also, private therapy is available outside of the school setting.

DCD and Speech and Language

Although DCD is not a speech or language disorder, some research has suggested that DCD and speech and language disorders co-occur. Studies have shown that at least a third of children with a specific language disability also have DCD. A recent study has shown that children who were suspected to have childhood apraxia of speech (CAS) also showed signs and symptoms of DCD. DCD was suspected in 49% of children with CAS, as opposed to 9% of children without CAS (Duchow et al. 2019). DCD also has been shown to co-occur with ADHD, autism spectrum disorder, and dyslexia.



Clumsiness in children with speech and language disorders does not necessarily mean they have DCD, but knowing that the two may co-occur can serve as a "red flag." Parents and speech-language pathologists can be the first to identify signs and symptoms of DCD. If DCD is suspected, they can then consult with other professionals, such as pediatricians, occupational therapists, and physical therapists, to determine if testing and therapy are needed.

DCD impacts not only motor skills but also social interaction. Children with DCD participate less in sports and games, which leaves fewer opportunities to interact with peers. Being perceived as "clumsy" can also make children less secure about peer interactions. Children with DCD are more likely to be victims of bullying due to motor differences. SLPs and parents can facilitate social interactions and create opportunities for children with DCD to interact appropriately with peers, such as play dates.

Resources:

Blank, R., Carnett, A. L., Cairney, J., Green, D., Kirby, A., Polatajko, H., Rosenblum, S., Smits-Engelsman, B., Sugden, D., Wilson, P., & Vinçon, S. (2019). International clinical practice recommendations on the definition, diagnosis, assessment, intervention, and psychosocial aspects of developmental coordination. *Developmental Medicine & Child Neurology*, 61(3), 242-285. Retrieved from <http://doi.org/10.1111/dmnc.14132>

Duchow, H., Lindsay, A., Roth, K., Schell, S., Allen, D., & Boliek, C.A. (2019). The co-occurrence of possible coordination disorder and suspected childhood apraxia of speech. *Canadian Journal of Speech-Language Pathology*, 43(2), 81-93

Understanding Developmental Coordination Disorder (DCD). (n.d.). Retrieved July 17, 2019, from <http://www.understood.org/en/learning-attentionissues/child-learning-disabilities/dyspraxia/understanding-developmental-coordination-disorder-dcd>

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