

MRI scans could improve our understanding of dyspraxia

June 17 2016, by Lindsay Brooke



Credit: University of Nottingham

A new research team at The University of Nottingham is using MRI scanning to learn more about the role of the cerebellum in Developmental Coordination Disorder (DCD) – the motor skills disorder also known as Dyspraxia.

The Hand Lab team, led by Dr Nicholas Holmes, based in the School of Psychology is looking for volunteers aged between eight and ten years old to participate in the study. So far 60 [children](#) have undergone brain scans but the researchers need 30 more and they are looking for volunteers to participate in the study this summer.

Dr Holmes said: "The tests can be done over two 90 minute sessions in the school holidays or evenings. The volunteers will also participate in a newly developed hand-eye coordination task to test reaction times and grasping techniques."

Dr Holmes brought The Hand Lab team Nottingham from Reading last year. He said: "Our research looks at how we perceive our hand's location, size, and shape, how this affects our movement and thought, and what role the brain plays in these processes."

Discovering more about DCD

Containing half the neurons in the brain the [cerebellum](#) is known as the 'little brain'. It receives sensory information and fine-tunes the body's movements. It is hoped MRI scans of eight to ten year old volunteers will provide enough information to help explore other questions about DCD as well as detect any underlying problems in this part of the [brain](#) that might be associated with the condition and eventually lead to new ways of diagnosing and treating the condition.

Dr Holmes said: "Because the cerebellum plays such a fundamental role in our ability to coordinate, we want to discover if there is any link between the cerebellum and DCD. The hope is that if we can pinpoint a problem we might be able to find ways of diagnosing and treating the condition."

A difficult to diagnose disorder

DCD is a common, but difficult to diagnose disorder, affecting fine and gross motor coordination in children and adults. The research, funded by the Medical Research Council needs the help of children who may be showing signs of dyspraxia or DCD as well as typically developing children.

Up to one in every 20 children may be affected

DCD can result in low self-esteem among children. They struggle to

perform as well as their peers in everyday activities such as sport, writing and drawing. It can affect their ability to learn and they may need extra help at school. It has been estimated that as many as one in every 20 children may be affected by the condition to some degree and it appears to be more common in boys than girls.

The research team is working with a local parent support group in Nottingham in hope of getting enough [volunteers](#) to take part in the study.

Provided by University of Nottingham

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