

Does ADHD have a genetic link?



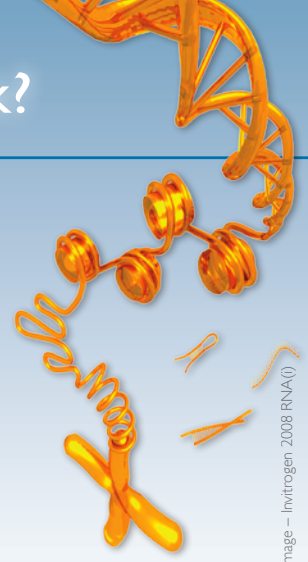
ABOVE: Joe Wagner, one of the researchers at the Queensland Brain Institute.

ADHD is a common behavioural condition that affects thousands of children and families in Australia. Research scientists working in this area suspect ADHD might have a strong genetic component.

Psychological studies have shown that many children with ADHD experience cognitive problems – such as difficulties associated with focusing attention, remembering things, day-to-day planning or inhibiting behaviour.

The precise relationship between cognitive problems in children with ADHD and their inherited genes is not yet known.

A group of Australian researchers is currently embarking upon a large scientific study to better understand the links between genetics and children diagnosed with ADHD.



who is doing the study?

Researchers at the Queensland Brain Institute, the Mater Children's Hospital Brisbane, the Royal Children's Hospital Melbourne and Curtin University of Technology have been funded by the National Health and Medical Research Council (NMRC) of Australia to investigate the relationships between genetics, cognition and brain function in children with ADHD.

By documenting cognitive ability in children with ADHD, researchers hope to determine genetic differences between those children with and without cognitive problems. Furthermore, by examining brain activity using functional magnetic resonance imaging (fMRI) we will be able to determine how genes influence brain function in children with ADHD.

The cognitive assessments we conduct as part of the study are similar to those used during a psycho-educational assessment. It is hoped that ultimately our discoveries will help medical practitioners to better target treatments for children and adolescents with ADHD.

how will the research benefit people with ADHD?

This study is designed to improve our knowledge of the genetic basis of ADHD. It is important to note that although this research might have implications for the future development of therapeutic treatments, there is unlikely to be any immediate benefit for you or your child. However, some of the data gathered by the researchers can only be obtained through specialist testing. Should you wish, the research scientists will provide your doctor with any clinically relevant data that might assist them in assessing your child's ability. Although the research scientists will not be able to provide detailed reports of your child's abilities, useful information about reading, spelling and general ability will be provided to your doctor at your request.

which children are eligible?

The three-year study is expected to start in early 2009 and involve an estimated 600 families who have a child with ADHD.

The research is supported by doctors who treat ADHD patients at two of Australia's largest children's hospitals, and the neuroscientists developing the study come from university-based research centres in Brisbane and Melbourne.

to be eligible to participate your child must:

- ♦ have been diagnosed with ADHD
- ♦ be between the ages of 8 and 16
- ♦ have no history of neurological disorder or psychosis.

what does the study involve?

You and your child will be invited to attend one of our centers in Brisbane (Mater Children's Hospital) or Melbourne (Royal Children's Hospital). You will usually be asked to attend two sessions.

During the first session, our staff will ask you detailed questions regarding your child's behaviour. You and your child will then be asked to complete some questionnaires. The entire first session should take about 90 minutes.

At the second session, your child will be asked to perform several assessments of ability (reading, spelling, problem solving), as well as some computer-based tasks.

computer-based testing

The computer tasks are important as they will allow the researchers to assess your child's cognitive ability in several different areas. Researchers will later cross-reference the information obtained from the questionnaires and computer tasks with the genetic profiles of all the ADHD children in the study.

Your child may also be asked to participate in a non-invasive fMRI study to determine how genes for ADHD influence brain activity.

This aspect of the research will be conducted at the Wesley Hospital in Brisbane or at the Royal Children's Hospital in Melbourne. Our researchers will determine with you at the time of your initial visit whether you are interested in participating in the fMRI component of the study.

how is the genetic data collected?

Because the researchers are looking for genetic links, a routine saliva sample is required from parent/s and child to map your unique DNA signature. Once collected, the genetic material will be cross-referenced with the results from the questionnaires and assessments. After the data is collected, it is de-identified to ensure your privacy.

how to participate in the study ...

If you are in Melbourne, please contact Amanda Connolly at the Academic Child Psychiatry Unit at the Royal Children's Hospital on (03) 9345 4666 or email ajconnolly3@gmail.com.

If you are in Brisbane, please contact Mr Joe Wagner at the Queensland Brain Institute on 0434 375 652 or email ujqwagn1@uq.edu.au

More information about this study can be obtained from the Chief Investigators at each location.

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www.adhdstudy.com.au