

Childhood Determinants of Adult Health (CDAH) Study

DECEMBER 2016

Hot News: CDAH Funding

CDAH researchers and staff are thrilled at December's announcement by the National Health & Medical Research Council that our 2016 funding bid was **successful**.

This funding will allow CDAH to run its third follow-up (CDAH3) as community-based clinics across Australia. We will, however, need to run a few less clinics than in 2004-6 with our lower budget, so our focus will be need to be on larger urban areas. We are aiming to commence in Victoria in early 2017, and will run clinics throughout 2017 and 2018.

You will notice a few changes to our clinic measures - the



standing long jump, spirometry (lung function test) and heel density test will no longer be taken. But there will be some new measures, such as tests for additional markers of vascular disease and kidney function like albumin and creatinine via urine

testing. The other measures will be similar to those in the first round of clinics - height, weight, body composition, blood biochemistry, fitness (bike riding) and strength measures. We will introduce more sensitive measures of heart and blood

vessel health with advanced echocardiography. We trialled these changes at pilot CDAH3 clinics run in Tasmania and Ascot Vale, Victoria, in late 2014, which were very well attended by participants.

CDAH staff very much look forward to welcoming participants to our community-based clinics again. Please watch our Facebook page for more information:

<https://www.facebook.com/cdahstudy/> and we will be in touch with you individually to invite your participation.

International Childhood Cardiovascular Cohort (i3C) Cardiovascular (CV) Outcomes Study

The i3C CV Outcomes Study pools data from 40,000 participants in seven longstanding studies based in the USA, Finland, and CDAH in Australia. All participants had cardiovascular disease risk factors measured as children, and are now being resurveyed about their current health status to identify those diagnosed with cardiovascular disease or diabetes.

This involves a short, 10-minute survey which can be done online or by telephone interview. When participants tell us they have had a cardiovascular condition, we will ask permission to access their medical records. We send out a consent form to sign which authorises the treating hospital/medical facility to release those records to CDAH. Records are then deidentified before review and classification by an independent expert group

of cardiovascular physicians. Obtaining information on these conditions is vital to the scientific aims and validity of this study, so we strongly encourage participants to please return their signed consent forms as soon as possible to CDAH HQ.

CDAH staff are delighted with participant involvement in this survey to date, having completed 1,400 surveys with participants living in Victoria, South Australia, the Northern Territory and Queensland. We'd like to extend a huge thank you to everyone who has given us their time to provide their valuable health information in this important international study.

We don't want to miss anybody but keeping track of all our participants in our 30+ year-long study can be tricky! If you live in these areas but haven't yet heard from Janette or Karen,

please call us on (freecall) 1800 634 124. We'll be calling participants in NSW from March 2017, and in the ACT and WA in 2018.

Annual Meeting in Iowa, USA

Researchers and study coordinators from the seven international sites attended the annual i3C Consortium meeting in Iowa, USA, in September. This was the

Consortium's ninth annual meeting, with the main focus being the CV Outcome Study's progress towards our joint goal of surveying 20,000 cohort participants. Each cohort's data coordinator (Karen for CDAH) plays a crucial role in ensuring the study's success and this was the first time they met in person along with the study investigators.



Whether you have perfect health or health problems, your participation makes a huge difference to the study and its scientific value. We do hope you will agree to participate in this important ongoing research

For more information on i3C research and cohorts: <http://i3cconsortium.org/index.html>

Highlights from recent research findings

The latest CDAH publication in Psychological Medicine suggests that healthy lifestyles may not only reduce cardiovascular disease but also promote mental health.

Gall S et al. Bi-directional associations between healthy lifestyles and mood disorders in young adults: The Childhood Determinants of Adult Health Study. *Psychol Med* 2016 Sep;46(12):2535-48
<https://www.ncbi.nlm.nih.gov/pubmed/27338017>

Metabolic syndrome, a condition characterised by a clustering of cardiovascular risk factors, currently affects approximately 20-25% of the total adult population worldwide. People with metabolic syndrome are at increased risk of developing cardiovascular disease and type 2 diabetes.

In the last year, we have published two studies using CDAH data to determine if being fit in childhood plays a role in the development of metabolic syndrome in adulthood. In the first study, we found that children with higher levels of cardio-respiratory fitness, the type of fitness that uses large muscle groups, raises your heart rate, and is performed over an extended period of time, had a 36% lower risk of developing metabolic syndrome in adulthood compared with those who had low cardiorespiratory fitness levels in childhood. In the second study, we also found that those who could perform more push-ups, jump further, or had higher strength, and were collectively categorised as having the highest levels of

muscular fitness in childhood, were at 80% lower risk of developing metabolic syndrome in adulthood compared with those who had low childhood muscular fitness levels.

These two studies highlight that being a fit child could reduce the risk of developing future cardiovascular disease and type 2 diabetes.

Schmidt MD, Magnussen CG, Rees E, et al. Childhood fitness reduces the long-term cardio-metabolic risks associated with childhood obesity. *Int J Obes (Lond)*. 2016;40(7):1134-40.

<https://www.ncbi.nlm.nih.gov/pubmed/27102049>

Fraser BJ, Huynh QL, Schmidt MD, et al. Childhood Muscular Fitness Phenotypes and Adult Metabolic Syndrome. *Med Sci Sports Exerc*. 2016;48(9):1715-22.

<https://www.ncbi.nlm.nih.gov/pubmed/27128670>

Have you moved or changed your name? Please help us keep up to date with your contact details.

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CDAH-PATHWAYS SUBSTUDY

We are very excited this year to have had a new and unique CDAH sub-study known as the CDAH-Pathways Study. This study purposefully selected around 50 CDAH participants to talk with in detail over the telephone about their lifestyle. This substudy is trying to understand why certain behaviours – particularly diet and physical activity – stay the same or change (for better or for worse) over time. Instead of the usual tick-box questionnaires, this study is a little different.

We have been having 'conversations' with CDAH participants to hear their stories - the things they feel are the most important influences on behaviours over time. By combining the information from these conversations with the information we have already collected from you over the past 30 years, this substudy is providing truly unique insights into the things that hinder or help healthy lifestyles. The findings will inform future programs and policies to support people to live healthy, active lifestyles from childhood into adulthood

Frequently Asked Questions

□ How long will CDAH run, and when does it finish?

CDAH is a longitudinal study of how our lives as children shape our health as adults. The CDAH team is committed to pursuing this research for as long as possible subject to continued funding support.

□ What's next?

We will be conducting clinics across Australia throughout 2017 and 2018, hoping to have data collection completed by the end of 2018. At this stage, we are also aiming to continue the i3C short cardiovascular surveys to the end of 2018.

□ What's the purpose?

The overall purpose of the CDAH study is to determine how childhood factors affect the risk of developing heart disease and type-2 diabetes in adulthood. To do this, we need to repeat measures of physical characteristics and lifestyle behaviours every 5-10 years, ideally through to middle and older age.

□ How do I access the study findings?

Latest CDAH research findings are published on CDAH's Facebook page, and you can also find links to papers on our website at: <https://goo.gl/f9Vhn7>.



<https://www.facebook.com/cdahstudy>

CDAH STAFF

While Karen (left) is busy coordinating questionnaire completions, following up medical records and liaising regularly with US counterparts, Janette's (right) is often the voice you will hear on the telephone when it comes to organising your participation.



Our 'behind-the-scenes' volunteers are Hilary and Marie, who provide invaluable support with a myriad of office tasks.



Season's Greetings from all at the CDAH Team.
Wishing you a safe and happy New Year.