

Childhood Determinants of Adult Health (CDAH) Study

NEWSLETTER SEPTEMBER 2021

A Message from the Chief Investigator



Much has changed in the world since we completed the last wave of follow-up for the CDAH study in 2019. We are very grateful that we didn't have the challenge of scheduling study clinics around lockdowns! But we do appreciate the difficulties Covid will have brought for many of you and hope the year ahead brings some positive changes.

Fortunately, Covid has not stopped us analysing data and our PhD students and researchers continue to address a wide range of study questions. Findings from a few recent publications are highlighted below and we are making exciting progress with our international collaboration, the i3C Consortium, which pools data from CDAH with 6 other cohort studies. I'm confident that the fruits of your participation in CDAH and 20 years of collaborative research effort will lead to some very influential findings in the near future. We look forward to finding better ways to

ensure good cardiovascular health at all ages.

Finally, we work very hard to keep up-to-date with our moving cohort! To make sure we have up-to-date address, phone number, email address and alternative contacts for everyone, we ask that you complete an online 'CONTACT DETAILS' form for us. This should only take a few minutes.

Professor Alison Venn, Director, Menzies Institute for Medical Research

CDAH-Pathways Study V2.0 – Whose BMI Improves Over Time?

In the CDAH-Pathways V1.0 study in 2016-17, we spoke with 50 CDAH participants who were on a variety of body mass index (BMI, which reflects weight and height) pathways from childhood to adulthood.

We found a strong sense of 'health identity' amongst those on more favourable BMI pathways, and saw that family eating and physical activity experiences and norms in childhood had long-lasting impacts on BMI. But we wanted to know more about the small group of people whose BMI improved over time (the decreasing from high BMI group). This BMI pattern is rare but may be able to give us some important clues for supporting more favourable and preventing less favourable BMI pathways. The CDAH-Pathways V2.0 study aims to do just that. This year, we are contacting a small group of CDAH participants who have provided data about their BMI in 1985 and at least twice in adulthood and whose BMI has improved over time. So far, we have spoken to 10 people and will be in contact with another 5-10 in the coming month to hear more about how they have managed to 'buck the trend' our environment that often encourages unhealthy eating and discourages movement. Keep an eye out for our findings in future!

Highlights from Recent Research Findings

You can click on any of the titles to open up the full version of these papers of interest!

[Association between depression, anxiety and weight change in young adults](#)

You may remember doing the 'CIDI' online interview, which asked lots of questions about anxiety, depression etc. Analysis of the data, together with measurements of body mass index, found that, in men and those who had symptoms of depression around the time of CDAH1 (2004-2006) were more likely to have an increase in their BMI over the 5 years to the CDAH2 follow-up (2009-2011), and this was partly explained by unhealthier lifestyles. For women, a high BMI at CDAH1 was associated with a greater likelihood of developing symptoms of depression during follow-up. There were no associations between anxiety and BMI. These findings highlight the important connections between physical and mental health, including the wide-ranging benefits of healthy lifestyles.

[An eating pattern characterised by skipped or delayed breakfast is associated with mood disorders among an Australian adult cohort](#)

Most people know that what you eat can affect your health but did you know that when you eat is also important? We examined the times of day that CDAH participants reported eating meals and snacks at the first (aged 26-36 years) and second (aged 31-41 years) follow-ups. There were three main patterns: *Traditional* (higher intakes at breakfast, lunch and dinner times), *Grazing* (intake spread throughout the day) and *Late* (skipped/delayed breakfast with higher intakes at night). We then examined if these meal patterns were linked to mood disorders (depression or dysthymia). We found that non-traditional eating patterns, particularly skipped or delayed breakfast, may be linked to a higher risk of mood disorder.

[Cluster patterns of behavioural risk factors among children: Longitudinal associations with adult cardio-metabolic risk factors](#)

From the data collected during the original Australian Schools Health and Fitness Survey (when you were aged between 7 & 15), researchers were able to define four patterns, or clusters, of health-related characteristics described as 'most healthy', 'high physical activity', 'most unhealthy' and 'breakfast skippers'. These groups were then compared to see whether their metabolic syndrome score differed in adulthood. This score is devised from waist circumference, blood pressure, fasting blood glucose, and blood cholesterol levels. It was found that those in the 'most unhealthy' or 'breakfast skippers' childhood groups on average had a higher metabolic syndrome score. These findings emphasise the impact of childhood behaviour on important adult health outcomes and may be useful for identification of children at higher risk for poor adult cardio-metabolic health.

Factors Associated with Persistently High Muscular Power from Childhood to Adulthood

High muscular power, which in CDAH was determined by how far participants could jump from a standing start, is associated with a range of health outcomes, including lower cardiovascular risk. But how do we promote persistently high muscular power? Using data from the CDAH Study, we identified a range of factors associated with persistently high muscular power between childhood (7–15 years) and adulthood (26–36 years). We found that a healthy weight status, good aerobic fitness, greater protein intake, and high socioeconomic status were associated with high muscular power levels maintained from childhood to adulthood.

Meet the Researcher

Petr Otahal has been involved with CDAH since joining Menzies in 2007. He is a biostatistician and has contributed to research on CDAH in collaboration with many PhD students and researchers over the last decade. His job is to ensure that each study has the necessary statistical rigour. Lately he has also been working on his own PhD which is on dealing with missing data. In CDAH, like many cohort studies, there are participants who are lost to follow-up or who are unable to participate in a particular wave of follow-up. This “missing” data is difficult for researchers and may influence or bias the findings from their research. While not as good as having the actual recorded data from active participation, there are statistical techniques that use previously collected data to help fill in the missing information and improve the accuracy of research findings. Petr’s PhD is working out which are the most suitable techniques for the CDAH study.



International Childhood Cardiovascular Cohorts (i3C) Consortium UPDATE

Through your exceptional contributions to this research, and our collaboration with the investigators of six other similar cohorts (five in the USA and one in Finland), we will soon be able to report the most definitive evidence to date on how childhood factors contribute to the risk of cardiovascular disease in adulthood. This work has involved follow-up of nearly 40,000 children to identify those who have had a cardiovascular event in adulthood, such as heart attack or stroke. The findings are currently undergoing peer review for publication in a leading international journal and we look forward to sharing them with you as soon as possible.

For more information on i3C research and cohorts: <https://i3cconsortium.org/cohorts/>

For i3C publications, please visit: <https://i3cconsortium.org/publications/>

Frequently Asked Questions

Who do I contact with a change of details?

CDAH has a Data Manager (Marita Dalton) who is monitoring all incoming emails and the CDAH 1800 number (1800 634 124). The best way to get in touch is by emailing us at menzies.cdah@utas.edu.au.

Will there be more CDAH clinics?

As the aim of the CDAH Study is to follow people over various life stages, we hope to conduct clinics every 10 years or so. This of course is dependent on obtaining funding each time, but we will certainly be trying our hardest to visit you around 2025!

How do I find out what research is coming from the study?

The best way to see some of the scientific publications produced by the study is via our Facebook page. It's a public page so you don't even have to be a Facebook member to take a look. Click here: <https://www.facebook.com/cdahstudy/> or just type in 'childhood determinants' and it will pop up.

To see the research publications from the International Childhood Cardiovascular Cohort (i3C) Consortium, please visit: <http://i3cconsortium.org/publications/>

Keeping in Touch!



It's a big job keeping track of more than five thousand CDAH cohort members! Many of you have been in touch recently to let us know of change of address etc, and we thank you for that.

If you haven't already, we ask that you complete an online '**CONTACT DETAILS**' form for us.

Of course, we always love to hear from you in person, so feel free to email us ([Menzies.cdah@utas.edu.au](mailto:menzies.cdah@utas.edu.au)) or call 1800 634 124.

Best wishes from the CDAH Study Team