



Newsletter



August 2013

Dear CDAH Participants,

Welcome to the 2013 edition of the CDAH newsletter. In this edition you can read about a few of our latest publications, but remember to visit the website to catch up on all the latest research news. The second CDAH follow-up study is now complete and we are starting to think about the next follow-up (CDAH-3). We thank you for your continued participation.

Professor Alison Venn

Ready or not...

We're planning CDAH-3! The CDAH investigators are busy writing funding applications so we can hit the road in the next few years to begin the 3rd follow-up of the CDAH study. We'll again be traversing Australia conducting health clinics to gather data on your heart health. Watch this space and remember to update your contact details if they change by e-mailing cdah@menzies.utas.edu.au or calling 1800 634 124. Your ongoing participation in this unique Australian study is helping us to answer important questions about heart health over the life-span.

Hello...

The Menzies Research Institute Tasmania has recently welcomed a new Director, Professor Tom Marwick, a world-renowned cardiologist and researcher in the early detection of cardiovascular disease. The CDAH study team are looking forward to collaborating with Professor Marwick on CDAH-3 and beyond. <http://tinyurl.com/utas-menzies-marwick>

Goodbye...

The past year has seen the departure of some dear CDAH study team members. Marita Dalton, CDAH project manager extraordinaire, sadly left the team, and Tasmania, for the warmer weather of Byron Bay. Bev Curry, who coordinated tracing and recruitment for CDAH back in 2001-04 has completed her PhD and moved on to a new position. We also said goodbye to our treasured CDAH-2 team of Ellen, Hilary and Maree.

KEEP IN TOUCH!

Please let us know if your contact details change:

Freecall: 1800 634 124

Email: cdah@menzies.utas.edu.au

The CDAH study: growing the researchers of tomorrow!

In addition to the team of senior researchers working on the CDAH study, we have a constant stream of students undertaking PhDs using data from the CDAH study. These people are the researchers of the future. In the last 12 months four students have completed their theses, with you to thank!

Dr Charlotte McKercher examined the influence of physical activity from childhood to young adulthood on the risk of depressive disorders in young adulthood. She found that regular participation in leisure-time physical activity from childhood to adulthood was associated with a reduced risk of depression in young adulthood. This contributes to the growing body of research helping to reduce the public health burden of depression.

Dr Kylie Smith's thesis focused on eating behaviours; including things such as being involved in meal preparation, take away food consumption, skipping breakfast and the number of times that people eat each day. She showed that limiting takeaway food consumption to no more than once per week and not skipping breakfast may be particularly important to help reduce the risk of overweight and developing heart disease and type 2 diabetes.

Dr Bev Curry's thesis investigated the complex relationship between lung function and risk factors for heart disease. She found that being overweight and smoking were key common factors contributing to poorer lung function and heart disease risk.

Dr Shuying Wei examined the influence of reproductive factors on women's bone health using heel ultrasound data collected at CDAH clinics. She found that oral contraceptive users had higher bone mass as did women with irregular menstrual cycles. Higher bone mass is linked to lower fracture risk in older age.



Publication highlights

The past year has been productive for the CDAH team with studies published on a wide range of topics. For details of all our research please visit: www.menzies.utas.edu.au/cdah

Can the impact of childhood obesity be turned around?

As part of the i3C Consortium (see below) this study looked at long-term follow-up data of over 6,000 people in three countries. Over an interval of almost 25 years, only 15% of children who were of normal weight were obese as adults, whereas 82% of those who were overweight or obese as children were obese in adulthood. This research was the first to show that the cardiovascular disease risks among overweight or obese children who avoided obesity by adulthood were similar to those among persons who were never obese. It suggests that childhood obesity does not permanently increase cardiovascular risk if obesity in adulthood is avoided.

The full paper was published in the prestigious New England Journal of Medicine (2011) 365 (20):1876-85.

What are the long-term effects of exposure to parental smoking in childhood on arterial health?

Using data from ultrasound measurements of the carotid artery taken in CDAH clinics, this study looked at blood vessel health according to whether participants' parents had smoked when they were children. We found that on average people who had been exposed to their parents' smoking had less elastic arteries, an early indicator of poorer cardiovascular health. Importantly, this was not explained by differences in classical cardiovascular risk factors, including the participants' own smoking status. The effect was seen up to 27 years later, suggesting a long-term and irreversible effect of passive smoking in childhood on the health of arteries. The results highlight the importance of policies that limit children's exposure to cigarette smoke.

This paper can be found in the journal Arteriosclerosis, Thrombosis and Vascular Biology (2012) 32:1024-1031.

Does physical fitness in childhood protect knee health in adulthood?

So far there is little evidence relating childhood fitness measures to the health of joints in adulthood. A selection of CDAH participants in Melbourne and Sydney underwent magnetic resonance imaging (MRI) scans of their knees, and knee cartilage volume and bone area were measured. This study found that a number of childhood fitness measures collected in 1985 (cardiorespiratory fitness, leg and handgrip strength, sit-ups, 1.6Km run and 50m run) were associated with increased knee cartilage and bone area in adulthood. Those with greater fitness in childhood tended to have better knee cartilage as adults, possibly as a consequence of greater bone area.

This suggests physical activity in childhood can independently influence adult knee joint health possibly through adaptive mechanisms during growth.

This paper was presented at the American College of Rheumatology Annual Scientific Meeting in Washington, D.C. in November 2012.

New CDAH Headquarters

We have moved! Menzies Research Institute Tasmania is now located in the new Medical Science Precinct in Hobart.



The International Childhood Cardiovascular Cohort (i3C) Consortium

An important development for the CDAH study is the i3C Consortium. This exciting project pools data from the CDAH study with that from similar studies around the world. The study includes over 10,000 adults followed-up from childhood from several countries including Australia (the CDAH study), Finland and the USA. The i3C Consortium will extend our knowledge about the childhood origins of adult heart disease by comparing findings across countries and helping to overcome statistical problems associated with the small number of relatively young people with established heart disease in the individual studies.

For more information visit: www.i3cconsortium.org

Dr Costan Magnussen has been awarded a highly competitive National Health and Medical Research Council post-doctoral fellowship to work on data from the i3C Consortium. His research is aimed at improving methods of identifying those children at highest risk of cardiovascular disease. The findings from his project may be used to guide identification of at risk children as well as aid in the targeting of risk reduction strategies in this population with the long-term aim of reducing the burden of cardiovascular disease later in life.

Heart and minds

In late 2011, Dr Seana Gall was awarded a prestigious post-doctoral fellowship from the National Heart Foundation of Australia. Her project is using data from the second CDAH follow-up study and asking 'How does depression affect the risk of heart disease and diabetes in young adults?' Depression is a risk factor for heart disease but the mechanisms for this are poorly understood. Some research has suggested that depression leads to heart disease because people with depression tend to have poorer health behaviours (e.g. smoking), while other studies suggest the link is through immune, hormonal or inflammatory pathways. Most previous studies have been in middle aged and older adults. This study will improve understanding of the relationship between depression and heart disease risk in the under 40s when depression is common and the early stages of heart disease are being established.