Matters of the heart

Meet Christine*

Christine is 10 years old, and struggles with her weight. Her parents and siblings are also overweight, and the family is used to eating food that is inexpensive and convenient.

Christine's neighbourhood has a lot of fast food available, but not much access to fresh fruit and veggies. There are not many green spaces or parks that Christine and her siblings can easily get to either.

Christine's family don't have a lot of money, and they don't have access to services that can help them to better manage their weight.

Even though she's only 10, Christine's risk of later developing a heart condition is already increased, compared to other kids her age. Without intervention, this risk will only increase further.

*Christine is a representation of the experience of many young people who have early-life risk factors for cardiometabolic disease.

LifeCourse research

Health and wellbeing are complex and vary across the lifespan.

LifeCourse research provides a platform that equips researchers with the tools, collaborations and access to produce more meaningful and robust research.

Creating a healthy start to life is vital to reduce disease risk later in life, and close the gaps created by social and economic inequities.

Preventing cardiometabolic diseases can address not just the burden of disease, but the burden on hospitals, health services, economy and on families across Australia.

Mission

Heart disease is the number one cause of death worldwide. We work to support every child to develop good cardiovascular and metabolic health, which can set them up for cardiovascular and metabolic health in adulthood.

The pathways to developing cardiometabolic problems begin during pregnancy and early childhood, and childhood obesity is one of the biggest predictors. Supporting healthy habits and lifestyle from a young age provides the foundation for a healthy heart.

MCRI has a number of research cohorts that track participants from before birth and into adulthood. We co-lead one of the few cohorts that have cardiovascular measures on children from birth to adulthood. This allows our researchers to understand the earliest signs of cardiometabolic problems, and identify what helps and hinders good cardiometabolic health.

We also have two intergenerational cohorts, meaning study participants and their children. This allows us to explore generational patterns of obesity and cardiometabolic disease, and learn about factors that could disrupt these patterns, regardless of any genetic predisposition.

Where to next?

LifeCourse research aims to enable researchers to harness the power of our data to influence policies, programs and public opinion. We're showing that a healthy adulthood begins in childhood.

This unique platform champions collaborations between rich longitudinal datasets across MCRI and our Melbourne Children's campus partners – The Royal Children's Hospital and the University of Melbourne Department of Paediatrics, underpinned by The Royal Children's Hospital Foundation.

This strengthens the power and visibility of the individual studies and produces research that has more impact.

The rise of cardiometabolic disease means that now we're seeing children as young as 10 diagnosed with type 2 diabetes. We need more preventative measures, education and solutions to ensure better heart health for this generation and the next.

Prevention is always better and earlier prevention is better still.

At Murdoch Children's Research Institute, our LifeCourse Initiative builds on our strength in population health.

In population health, we collect data and samples from people over the course of years, decades and even generations, to study the origins of common diseases. We are the home of almost two thirds of this kind of research in our region. We are leading the hunt to address our looming population-wide epidemics of obesity, mental illness, allergy and more.

The Murdoch Children's Research Institute

The Murdoch Children's Research Institute (MCRI) is Australia's leading child health research organisation.

Our researchers work to translate knowledge into effective prevention, intervention and treatment to address a range of disorders affecting infants, children and adolescents.

MCRI advocates for quality equitable care for all children and works closely with its partners, The Royal Children's Hospital and the University of Melbourne's Department of Paediatrics, within a single, purpose-built facility. The campus partnership is known as Melbourne Children's, with many of the key campus research initiatives supported by The Royal Children's Hospital Foundation.

murdoch children's research institute

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