

Charles Perkins Centre Project Nodes

Aboriginal nutrition, physical activity and wellbeing

Project node lead: [Dr Josephine Gwynn](#)

Understanding the substantial changes to dietary intake and participation in physical activity of Australia's first peoples since colonization, and informing education programs for local communities.

Active ageing

Project node lead: [Professor Lindy Clemson](#)

Developing solutions to improve the physical, social, and mental wellbeing of older people living at home. From aged care treatment to policies, education for health professionals, and rehabilitation programs in the community.

BABY1000

Project node lead: [Dr Adrienne Gordon](#)

Identifying and dealing with interactions before and during pregnancy that can contribute to the development of health disorders that impact future generations.

Bias in research

Project node lead: [Professor Lisa Bero](#)

Good research has always been about evidence. Reliable evidence. This node aims to ensure that research, and related policy decisions, rest on strong and unbiased pillars of evidence.

Biology of ageing

Project node lead: [Professor David Le Couteur](#)

Increasing the understanding of ageing and interventions that delay ageing in order to increase human lifespan and health span.

Brain and body

Project node lead: [Dr Greg Sutherland](#)

Exploring the connection between body disorders like obesity and diabetes, and brain diseases like Alzheimer's.

Building system wide capacity for complex and big data analysis and storage in T2D

Project node lead: [Professor Jean Yang](#), [Dr Rima Chaudhuri](#), [Professor David James](#)

Promoting strong collaboration between clinicians, biologists, mathematicians, engineers and computational scientists.

Businesses, markets and the social context of health

Project node lead: [TBA](#)

Understanding the interconnected roles of business, social context and consumer behaviour in improving health.

Cardiac Translational Imaging

Project node lead: [Professor Stuart Grieve](#)

Guiding effective decision-making in cardiac health by using emerging technologies that provide better detection of early stages of disease.

Charles Perkins Centre networks

Project node lead: [TBA](#)

Exploring the transformative effect that the Charles Perkins Centre has on the University's academic population and its external collaborators.

Child and adolescent mental health

Project node lead: **Professor David Lyle**

Engaging rural, remote and Indigenous experts in the development, delivery and evaluation of youth mental health services.

Citizen Science

Project node lead: **Professor Yun-Hee Jeon**

Citizen science enhances diversity of thought and can accelerate transformative outcomes for health and quality of life. Through this node, we will establish a framework and platform for the enhancement of citizen science.

Climate adaptation and health

Project node lead: **Dr Ollie Jay**

Our climate is constantly changing. As increasingly high temperatures accelerate mortality and morbidity rates, this node explores the heightened health risks created by these climate issues.

Community academic partnerships

Project node lead: **Professor David Lyle**

Assessing collaborations between universities from the community's point of view?

Developmental origin of health and disease (DOHaD)

Project node lead: **Professor Ralph Nanan**

A study on pregnant women in Western Sydney to determine whether disease begins developing in the womb through fetal immune programming.

Dog ownership and human health

Project node lead: **A/Professor Emmanuel Stamatakis**

Examining the influence of dog ownership on human physical and mental health and social wellbeing.

Early prevention of obesity in childhood

Project node lead: **Professor Louise Baur**

Making a direct impact on the community through research into lifestyle changes made in the early years and their effect on obesity-related diseases.

Economics of human development

Project node lead: **A/Professor Stefanie Schurer**

Why are some people more likely to succeed than others? This node addresses the question of long-term effects of socioeconomic disadvantage on the evolution of human potential.

E-health in gaming and avatars

Project node lead: **Professor Stephen Twigg**

An artificial intelligence-based clinical intervention for patients with Type-2 diabetes that aims to help them achieve health and wellness goals.

Evidence synthesis

Project node lead: **Professor Lisa Bero**

Working towards synthesizing all kinds of evidence around obesity, diabetes and cardiovascular disease, and uniting key researchers to collaborate on solutions.

Family obesity

Finding solutions to prevent and manage obesity within individuals, families and communities, in Greater Western Sydney and beyond.

Project node lead: **Dr Kathryn Williams**

Fibrosis and wound healing

Project node lead: [Professor Stephen Twigg](#)

Bringing together researchers from a diverse range of disciplines to prevent, treat and reverse fibrosis across a diversity of diseases.

Food governance

Project node lead: [Ms Alexandra Jones](#), [Dr Belinda Reeve](#)

Exploring how governments can use legal strategies to create conditions for people to live healthier lives.

Gut microbiome

Project node lead: [A/Professor Andrew Holmes](#)

Discovering the influence of our gut microorganisms over our metabolism, immune and nervous systems, our food choices and other behaviours.

Health and creativity

Project node lead: [Dr Caitilin de Bérigny](#)

Challenging staff and students to create a new vibrancy to explore new approaches to society's complex and chronic health problems.

Health and economics

Project node lead: [Professor Deborah Schofield](#)

Using health research and applied economics to influence government decision-making so we can improve cross portfolio policy, and in turn, the health and wellbeing of Australians.

Health and wellbeing in the air

Project node lead: [Professor Stephen Simpson](#)

Working with Qantas to provide integrated health and wellbeing advice, education and research to improve the experience of long-haul flying.

Health humanities

Project node lead: [Dr Olaf Werder](#)

A holistic exploration on how the arts and humanities can promote human health and wellbeing in hospitals, households, and communities.

Health informatics and health analytics

Project node lead: [Professor Jonathan Morris](#)

Demonstrating how the integration of data in the public and private sector can be used to map individual health journeys, and make our health system more efficient

Health literacy chronic disease network

Project node lead: [A/Professor Kirsten McCaffery](#)

A multidisciplinary, international research network improving the management of chronic disease for adults with lower literacy.

Healthier workplaces

Project node lead: [Dr Josephine Chau](#), [Dr Lina Engelen](#)

Examining the behaviour of sedentary workers and research the health benefits of monitoring technology and physical activity in the workplace.

Healthy food systems

Project node lead: [Dr Sinead Boylan](#)

We look at ways that communities can access nutritional food while ensuring the natural systems their food comes from remain ecologically sustainable.

Human-animal interactions

Project node lead: [Professor David Raubenheimer](#), [Dr Gabriel Machovsky-Capuska](#)

Studying the wide-ranging ways humans live with other species, and the significance of these human-animal interactions to improve our understanding of human health and disease.

Human food chain

Project node lead: [Professor David Raubenheimer](#), [Dr Gabriel Machovsky-Capuska](#)

Exploring the nutrition of production animals and how they're farmed to understand their impact on our health.

Immune therapies

Project node lead: [Professor Barbara Fazekas de St Groth](#), [Professor Derek Hart](#)

Developing new partnerships in clinical medicine, biomedical research, computing and systems biology to apply new immune therapies and diagnostic tools for monitoring patient response.

Implementation science

Project node lead: [Professor Tim Shaw](#)

Biomedical and health service research often stays in the laboratory longer than it should. This node addresses the urgent need for this new evidence to be put into practice.

Incidental physical activity and sedentary behaviour

Project node lead: [A/Professor Emmanuel Stamatakis](#)

Understanding the cultural, economic and individual circumstances leading to habit-formation to help people adopt healthy habits.

Kidney health

Project node lead: [Professor Steven Chadban](#)

Identifying and understanding the incidence, prevalence and history of kidney disease at a population level to find solutions and treatments for this disease.

Living healthier lives under the Australian sun

Project node lead: [A/Professor Scott Byrne](#)

Finding novel strategies to block the harmful effects of sunlight and UV, while retaining the beneficial effects so we can all absorb a healthy amount of sunlight.

Nutrition, ageing and health

Project node lead: [Professor David Le Couteur](#)

Investigating the effects of macronutrients and gut flora on age-related changes in the brain, inflammation and susceptibility to a number of diseases.

Nutrition and cardiovascular health

Project node lead: [Dr Michael Skilton](#)

Exploring which types of healthy diets can lower the risk of developing heart disease, and how these differ from person to person.

Nutrition, human health and natural resources

Project node lead: [Professor David Raubenheimer](#)

Tackling two of the greatest interrelated challenges of our time: supplying enough food to meet the needs of a growing global population, and looking after our planet for future generations.

Nutritional immunometabolism

Project node lead: [Dr Laurence Macia](#)

Exploring whether poor diets lead to disease and how a change in diet can help treat or prevent disease.

Obesity services

Project node lead: [Professor Michael Peek](#)

A multidisciplinary service model for obesity that involves the community with preventative interventions and state-of-the-art treatments in the the Western Sydney area.

One welfare

Project node lead: [Professor Paul McGreevy](#)

Improving and better understanding the clinical application of animal welfare and ethics throughout Australasia.

Oral and systemic health

Project node lead: [Professor Joerg Eberhard](#)

Understanding the complex interplay between oral health and general health including its links with cardiovascular disease, diabetes, dementia, arthritis, and pregnancy outcomes.

Pharmaceutical Policy

Project node lead: [Professor Lisa Bero](#), [Dr Barbara Mintzes](#)

We improve the lives of people with chronic conditions by improving pharmaceutical policies to optimise medical treatments, facilitate equal access to medications, and foster transparency.

Placebo research network

Project node lead: [Associate Professor Ben Colagiuri](#)

We improve the lives of people with chronic conditions by improving pharmaceutical policies to optimise medical treatments, facilitate equal access to medications, and foster transparency.

Politics of obesity

Project node lead: [Professor Paul Griffiths](#)

Navigating the line between the government's responsibility to protect public health and fears of a 'nanny state' by developing and targeting arguments for/against policies in Australia.

Population analysis of human diet and nutrition

Project node lead: [Professor David Raubenheimer](#)

Investigating how geographic, temporal, social and ethnic variations influence nutrient intake, health and disease.

Positive computing in health systems

Project node lead: [A/Professor Rafael Calvo](#)

Psychology experts and technology designers collaborating to investigate how technology can promote motivation, autonomy and self-empowerment to support physical wellbeing.

Precision Sleep Medicine (PRISM)

Project node lead: Professor Peter Cistulli, Associate Professor Kristina Kairaitis

Looking at insomnia, obstructive sleep apnoea, and shift work disorder, and their links to chronic diseases such as obesity, diabetes, cardiovascular disease, and cancer.

Preventative cardiology

Project node lead: [Professor Robyn Gallagher](#)

Addressing the prevalent issues in the prevention of cardiovascular disease through collaborative, interdisciplinary research.

Regional governance and leadership

Project node lead: [Professor David Lyle](#)

Establishing regional governance and leadership models to engage marginalised populations and address health inequalities experienced by rural, remote and Indigenous populations.

Remote community and aboriginal partnerships

Project node lead: [Professor David Lyle](#)

Leading responses to innovation, disparities in education and health in remote, Aboriginal and Torres Strait Islander communities.

Schizophrenia: cardiometabolic and other medical comorbidity

Project node lead: [Professor Tim Lambert](#)

Identifying and addressing high-risk schizophrenia patients for whom intensive interventions will be of great value.

Science of learning science

Project node lead: [Professor Philip Poronnik](#), [Professor Peter Goodyear](#)

Improving the learning experience for students by focusing on the emerging challenges and opportunities for multidisciplinary education in a research-intense environment.

Smart food production systems

Project node lead: [Professor Salah Sukkarieh](#)

Developing new ideas and technologies to optimise food production systems, with a focus on nutrition, and the effects of economical, social and environmental constraints.

Theory and method in biosciences

Project node lead: [Professor Paul Griffiths](#)

Advancing science by removing conceptual and methodological roadblocks. A high-level biological theory that promotes an integrative approach to research in non-communicable diseases.

Tissue engineering and regenerative medicine (TERM)

Project node lead: [Professor Tony Weiss](#)

Developing a set of interfaced, artificial solutions that repair and replace malfunctioning body parts and damaged tissue.

Twin project node

Project node lead: [Ms Susan Carrick](#)

Encouraging the growth and development of twin research to dissolve research obstacles in the wider research community.

Type 1 diabetes

Project node lead: [Professor Peter Thorn](#)

Our multidisciplinary team is working towards improvement management and, ultimately, preventing & curing type 1 diabetes

Virtual reality

Project node lead: [Professor Rafael Calvo](#)

Designing strategies for virtual reality environments that enable researchers to adapt this technology in their research for better research outcomes.

Wearables for life

Project node lead: [Professor Philip de Chazal](#)

Investigating the accuracy and potential of smart watches, fitness trackers, smart jewellery in tracking daily activities, sleep patterns and potentially improve our health.

Wireless wellbeing and personalised health

Project node lead: [Professor Margaret Allman-Farinelli](#)

A research into mobile phone apps, wireless sensing and communications to empower people to improve their quality of life while preventing obesity, diabetes and cardiovascular disease.

Work and health**Project node lead: Professor John Buchanan**

Understanding the ways in which work and health interact to assist or harm our wellbeing.

Writer in residence

The program invites Australian creative writers to apply for a generous University of Sydney fellowship, including a \$100,000 grant, to begin a project exploring issues around health.