



# Nutrition and Physical Activity



## Knowledge Bulletin

Issue 10 ◆ 18 November 2020

Welcome to the fortnightly Nutrition and Physical Activity Bulletin (which replaces the HIIRC Weight Management website). The bulletin has a New Zealand focus and provides links to new research, evaluations, guidance, resources and upcoming events on the topics of nutrition, physical activity, obesity, sport and recreation in relation to health and wellbeing.

Key international literature and guidance from similar jurisdictions is also featured.

You can forward this bulletin to others who may be interested in receiving it. They can register and subscribe [here](#). You can also access other recent issues of the bulletin [here](#).

If you no longer wish to receive this bulletin, you can unsubscribe [here](#).

If you have any queries and if you would like to submit content for inclusion in the NPA Knowledge Bulletin, please email [npa@researchnz.com](mailto:npa@researchnz.com)

### Article access

For articles that aren't open access, contact your DHB, organisational or local library for assistance to access the full text.

If your organisation has a subscription, you may be able to use the icon under the full text links in PubMed to access the full article

## Diet and nutrition



### [Ultra-Processed Food Intake and Associations With Demographic Factors in Young New Zealand Children](#)

This research, conducted by researchers at the University of Otago's Edgar Diabetes and Obesity Research Centre, investigates infants' and young children's (12 months-5 years) intake of ultra-processed foods.

Lead author, Louise Fangupo, says food preferences and eating habits often develop early in life and can track right through childhood and adolescence into adulthood, so developing healthy habits early has both short- and long-term benefits.

*"Ultra-processed food, which is usually described as inherently unhealthy, has received a lot of attention in scientific and other literature recently but, until now, nobody has investigated its contribution to the diets of very young New Zealand children."*

To read the full Otago University media release, 2 November 2020, click [here](#)

### [How does self-perceived nutrition competence change over time during medical training? A prospective longitudinal observational study of New Zealand medical students](#)

Medical nutritional training is designed to provide medical students with the competency to assess and advise their future patients' dietary needs.

The researchers measured self-assessed competency, using the validated NUTrition Competence (NUTCOMP) survey, at three points during medical training.

They found that students' self-assessed competency in this area to be lacking and only slightly improving throughout their years of study.

They recommend, therefore, that more mandatory medical nutrition education be incorporated in the medical syllabus.

### [Myristicin, kawakawa and nutmeg: A lesson from The Great Global Pandemic](#)

This article, by Professor Richard Mithen, High Value Nutrition Chief Scientist, contributes to the body of work being produced by the New Zealand National Science Challenges (to read more about High Value Nutrition - Ko Ngā Kai Whai Painga, click [here](#)).

As part of their exploration and promotion of nutritional kai, endemic to Aotearoa (e.g. green-lipped mussels) and that grows well here (e.g. kiwifruit), this article describes the nutritional value of other native flora and the importance of taonga (sacred/treasured) species.

### [What is a plant-based diet and does it have any benefits?](#)

EUFIC - The European Food Information Council, provides a lay analysis of what a plant-based diet is defined as these days, its benefits and how to move into that frame of eating.

## Physical activity, sport and recreation

### [Inequitable mobilities: intersections of diversity with urban infrastructure influence mobility, health and wellbeing](#)

This study, conducted by Otago and Massey University researchers, looks into two potential impacting factors on community mobility – questioning two lesser explored areas:

1. *How does transport infrastructure shape mobility opportunities for people living in diverse circumstances?*
2. *What are the impacts of inequitable access to mobility for wellbeing?*

Focusing on lesser mobile (and policy-considered) groups (e.g. disabled, older people) across ethnic and socioeconomic areas, this research explores the impacts of urban infrastructure on their total mobility.

“Our findings indicate the need to consider intersectionality in transport consultation and design.”

### [Health professionals’ inclusion of green space in the management of long term conditions: a scoping review](#)

Otago University researchers from the School of Physiotherapy and Centre for Health, Activity and Rehabilitation, look at the current recommendations of green space interventions (i.e. Green Prescriptions) targeting people with long-term health conditions with an aim to self-manage therapy.

The research looks favourably at the physical, psychological and social benefits of Green Prescribing, but recommends further research explores these benefits, as well as any barriers or risks.



## Obesity and weight management

### [Body Mass Changes and Markers of Fitness, Health, and Well-Being over the First Semester of University in New Zealand Students](#)

This study looks through the New Zealand contextual lens at a well-studied topic: the impact of first-year tertiary study on on-campus students’ diets and levels of physical activity.

They found New Zealand students to be, overall, in keeping with their global counterparts, in putting on weight through poor nutritional food choices and having less sleep.

They note though that, in comparison to overseas’ students, “*changes in physical fitness and overall well-being measures were less obvious in the current study.*”

### [Integrating Systems and Sectors Toward Obesity Solutions](#)

The Roundtable on Obesity Solutions of the Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine (US) held a virtual public workshop: *Integrating Systems and Sectors Toward Obesity Solutions*, on April 6, 2020 (Part I), and June 30, 2020 (Part II).

The workshops explored complex systems and contributing factors that can influence obesity, and shared real-life examples of applying systems-thinking and systems-science approaches to addressing obesity and population health and well-being.

Read the full documented discussion: [Proceedings of a Workshop – in Brief](#)

### [Attitudes and perceptions of health professionals towards sleep health: a systematic review](#)

This study, led by Otago University researchers, reviews the reported attitudes of health professionals toward the importance of quality sleep and the associated health risks of poor sleeping patterns.

The review found that the knowledge gap in relation to sleep health is such that many health professionals simply lack the skills to identify, assess and promote this aspect of their clients’ healthcare. Therefore, this needs to be addressed to change attitudes toward and perceptions of the importance of sleep health.

To read more about the importance of quality sleeping patterns, see [10 Reasons Why Good Sleep is Important](#), which highlights the adverse impact poor sleep can have in relation to individuals’ weight and levels of physical activity.

## Health promotion

### [University researcher awarded fellowship to examine Māori experiences of pharmacist services](#)

Te Herenga Waka—Victoria University of Wellington researcher, Nora Parore (Ngāti Whātua, Ngāpuhi), has received a Health Research Council (HRC) Clinical Research Training Fellowship to examine Māori experiences of pharmacists and the health system.

The project, *He tono whakapiki ora: Whānau and Pharmacists' knowledge exchange*, will explore whānau experiences of pharmacists' services, as well as pharmacists' experiences of developing services, to determine whether the pharmacy sector aligns with the principles and practices of [Whānau Ora](#) models of care.

*"This is an important piece of the puzzle when it comes to improving health outcomes for Māori. Pharmacists are there to help people get the best out of their medicines, but we need to understand how they can best fulfil this role for Māori to ensure equitable outcomes,"* she says.

*"I hope this work will also highlight and raise awareness of the important contribution of pharmacists in wider health and wellbeing."*

### [Do health programmes within the New Zealand food industry influence the work environment for employees?](#)

This research explores workplace wellness programmes within the New Zealand Food and Grocery Council (FGC) companies.



They found variable commitments to employee wellbeing programmes within the food industry, in spite of the many benefits employees' identified, including: increased productivity; improved their physical health; a better work-life balance; improved social interaction; and more health-related education.

Not surprisingly, where initiatives were implemented, these principally focused on nutrition.

### [Exploring Pasifika wellbeing: findings from a large cluster randomised controlled trial of a mobile health intervention programme](#)

With the scale of obesity in New Zealand rising and with Pasifika having the highest incidence, followed by Māori, a number of interventions have been developed to address this in a holistic, culturally appropriate manner.

This article describes the design and outcomes a cluster randomised control trial (cRCT) of the OL@-OR@ mHealth programme that was co-designed using a Pacific health model: Fonofale.

The researchers developed a combined wellbeing rating: 'the factors of wellbeing', consisting of a number of variables, including, spiritual, physical, and mental wellbeing and family and community life, and analysed these against demographic and behavioural factors, in order to produce a multivariate assessment of the impact of the initiative.

Overall, the initiative tested well, with family and community life proving to be the most important wellbeing factor for Pasifika.

The researchers conclude that, *"Finally, to better understand wellbeing from a Pasifika perspective, further research will be needed to include other domains outside of established health models, including the role of family and community."*

## Non-communicable diseases

### [Insulin's centenary: the birth of an idea](#)

*The Lancet Diabetes & Endocrinology* provides a feature article to celebrate the centenary of the invention of insulin that changed the lives of diabetics forever.

In summary: “At 2:00 h on Oct 31, 1920, Frederick G Banting, a surgeon practising in London, ON, Canada, conceived an idea to isolate the internal secretion of the pancreas. The following week, he met with noted scientist John J R Macleod in Toronto, ON, Canada, and they developed a research plan. By August, 1921, Banting and his student assistant Charles H Best had prepared an effective extract from a canine pancreas. In January, 1922, biochemist James B Collip isolated insulin that was sufficiently pure for human use. On Oct 25, 1923, Banting and Macleod received the Nobel Prize in Physiology or Medicine for the discovery of insulin. Here, we recount the most relevant events before and after the fateful early morning of Oct 31, 1920, which culminated in the discovery and clinical use of insulin.”

### [Youth and non-European ethnicity are associated with increased loss of publicly funded insulin pump access in New Zealand people with type 1 diabetes](#)

After analysing the demographic data describing access to publicly funded Continuous Subcutaneous Insulin Infusion (CSII), as well as the cessation of use, the findings show that Māori, Pasifika and youth experience low access and high cessation rates, where they do have access.

The question as to why this is the case requires further exploration, now that this groundwork has been laid.

### [Strengthening prevention in communities through systems change: lessons from the evaluation of Healthy Families NZ](#)

Healthy Families NZ is a community intervention designed to prevent chronic diseases, by promoting healthy eating, physical activity, smoking cessation and alcohol moderation.

This article provides an evaluation of the initiative’s three-year anniversary and presents insights and direction moving forward.



## Tools and resources

### [Now We Are Eight Report reveals unique insight into NZ eight-year-olds](#)

*Growing Up in New Zealand* has released its [Now We Are Eight: Life in Middle Childhood report](#), which provides a unique insight into the lives and experiences of eight-year-old Kiwi children.

While New Zealand eight-year-olds are mostly living busy, healthy, happy lives in supportive families and developing a growing sense of their own identity and autonomy, the report highlights obesity, body image, mental wellbeing and screen time as being issues impacting our children.

Also available is a [summary of the report](#); a [Growing Up participant’s point of view](#); and [Growing Up in New Zealand data](#) for research.

### [Top tips for managing your kids' screen time](#)

This article and accompanying documentary from the US CBC *Nature of things* series [Kids vs Screens](#) explores children’s use of devices and provides sound advice for parents wanting to support their children to manage their screen time.

### [Co-design in Aotearoa New Zealand: a snapshot of the literature](#)

This document is aimed at the practitioners as much as academics and is more of a snapshot than a formal academic literature review. Its aim is to create a resource to support groups and individuals working in or commissioning co-designed initiatives.

The Auckland Co-design Lab, based within the Southern Initiative in South Auckland, is jointly funded by the Auckland Council and 10 central government agencies. The Lab’s remit is to strengthen the capacity of government to support equity and intergenerational wellbeing.

*“We believe that co-design, when practised well, and used to refer to culturally grounded participatory and developmental design practices shaped by and with people in place, offers the potential for improved community wellbeing. It is an opportunity for people to impact, lead and shape the things that influence their lives.”*

### [Physical activity – healthcare professionals](#)

Health Navigator NZ has put together resources for healthcare professionals to better promote physical activity to their clients, including the evidence about its benefits and guides to help getting patients starting to exercise or using it to manage chronic pain.

## News

### [Study of 200 countries highlight Kiwi kids among the unhealthiest in the world](#)

**Stuff, Hannah Martin, The Dominion Post, 6 November 2020**

A huge study comparing 65 million school-aged children across 200 countries and territories has highlighted New Zealand children among the unhealthiest in the world.

The study, [Height and body-mass index trajectories of school-aged children and adolescents from 1985 to 2019 in 200 countries and territories: a pooled analysis of 2181 population-based studies with 65 million participants](#), led by the Imperial College, London, and published in *The Lancet*, analysed data tracking trends in the height, weight and BMI of children aged 5-19 years between 1985 and 2019.

The results suggest that children living in the Pacific had the highest BMI in the world by 2019, with [New Zealand children not far behind](#).

However, a Kiwi expert says this doesn't take into account the increasing ethnic diversity of New Zealand's childhood population and how that has changed over three decades, saying *“one size does not fit all”*.

Elaine Rush, Professor of Nutrition at AUT University, said, *“Body size and growth trajectories are imperfect measures of nutritional quality and lifelong health advantages and risks of indigenous, multiethnic and migratory populations.”*

One of the New Zealand authors, Professor Jim Mann, director of the Edgar Obesity and Diabetes Research Centre, said this study shows that obesity – a *“silent killer pandemic”* – is escalating in New Zealand. (Read the [Otago media release, 6 November 2020](#) for more comments from Jim Mann)

Mann and other authors are calling for a national nutrition survey to be carried out.

*“New Zealand has not had a survey since 2002, so we don't actually know what New Zealanders are consuming.”*

Professor Rush said New Zealand has seen an *“unacceptably high and increasing prevalence of excess body weight and rapid growth in children in recent years.”*

This was associated with poverty, food insecurity and is higher in Māori and Pacific children, who disproportionately live in deprived areas.

### [Can red meat be included as part of a heart healthy diet?](#)

**NZ Heart Foundation, 27 October 2020**

The Heart Foundation released new recommendations on how much red meat and chicken New Zealanders should be eating as part of a heart-healthy diet.

*“The latest evidence shows that eating high levels of red meat can increase the risk of heart disease and stroke. Research shows that eating less than 350g of unprocessed red meat a week can reduce this risk. That's about three lean red-meat meals a week,”* says Heart Foundation Chief Advisor Food and Nutrition, Dave Monro.

It was found that each additional 100g of red meat eaten per day was associated with a 15 per cent higher risk of heart disease and a 12 per cent higher risk of stroke.

The review of the latest science also showed that it's more heart-healthy when red meat is replaced with other plant-based protein options.

*"Red meat can certainly be part of a healthy diet, but replacing red meat with alternatives, such as beans, chickpeas, soy and nuts has been shown to reduce cholesterol levels - a key risk factor for heart disease." says Monro.*

### [Huringa Pai at the heart of health and fitness movement in Gisborne](#)

#### **NZ Community Trust, 9 November 2020**

The New Zealand Community Trust is pleased to announce a grant of \$20,000 to the Huringa Pai Charitable Trust towards a 3D body scanner. This will greatly assist in adjusting diet, evaluating body posture, designing exercises, tracking weight loss and body composition status, to support motivating whānau to make positive and sustainable changes in their lifestyles.

The Trust has enjoyed great success with their programme, which focuses on the whānau as a group, and is now working more intensively on a one-on-one basis, to support lifestyle changes with diet and exercise to prevent and eradicate pre-diabetes and diabetes. The body scanner plays an integral part in their clinical follow-up and helps motivate whānau to make sustainable changes, since they can track physical changes on the scanner app over a period of time.

## Upcoming events

### [ICPHN 2020: 14. International Conference on Public Health Nutrition](#)

**December 01-02, 2020 in Auckland, New Zealand**

#### ***The International Research Conference Aims and Objectives***

The International Research Conference is a federated organization dedicated to bringing together a significant number of diverse scholarly events for presentation within the conference program. Events will run over a span of time during the conference depending on the number and length of the presentations. With its high quality, it provides an exceptional value for students, academics and industry researchers.

ICPHN 2020: 14. International Conference on Public Health Nutrition aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of Public Health Nutrition. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Public Health Nutrition.

### [LIFESTYLE MEDICINE 2020 VIRTUAL CONFERENCE](#)

#### **Australasian Society of Lifestyle Medicine - Friday 4-6 December 2020**

Lifestyle Medicine 2020 has been designed to prioritise practical learning and real-world skills with new experiential workshops, provide more time to build and maintain impactful relationships and allow more space to practice self-care throughout the weekend.

The conference will draw on the expertise of leading clinicians, researchers and policy-makers, including special guest speaker Dr Michael Mosley (UK), to explore the latest translational research and clinical application of Lifestyle Medicine; placing particular emphasis on the areas of:

- Cognition - Neuroscience, healthy ageing and dementia
- Inflammation - Immunology, allergy and autoimmune conditions
- Cardiometabolic - Obesity, CVD and metabolic conditions

In a world-class interactive and collaborative virtual setting, gain practical knowledge, tools and procedures in health behaviour change coaching, dietary approaches to chronic disease prevention and management, exercise science, physical activity, social prescribing, Indigenous health, Lifestyle Medicine in community and clinical settings, and much more. Expand your network and enhance your experience through participation in interdisciplinary collaboration sessions, virtual campfires on specific Lifestyle Medicine and topics, dedicated self-care and a fully immersive Lifestyle Medicine wellbeing hub.

**For more information and to register, click [here](#)**

### **[Putting what matters to consumers at the centre of health care - Te pou i ngā hiranga kaihoko hei poutokomanawa o ngā mahi tiaki hauora](#)**

#### **Shared decision-making and advance care planning virtual hui - 2-3 December 2020**

The Health Quality & Safety Commission is hosting a shared decision-making and advance care planning virtual hui for healthcare workers and managers. It will be an engaging and thoughtful two days of discussions and exploration about our role in making what matters most to our patients and their whānau the centre of our health care planning and delivery.

Our challenge – People’s cultural frameworks and beliefs, values, hopes, concerns and goals have not always been central to care and treatment planning. For some, this has led to inequitable access to services, unwarranted and unwanted treatments and culturally unsafe and inappropriate experiences.

Over the last decade, there has been an increase in the number of programmes in the health sector aimed at supporting patients and whānau to participate in planning care, but there is still much to do. More recently, COVID-19 has highlighted the importance of listening to what matters to people in determining what care and treatment is appropriate and best meets goals, cultural needs, values and preferences.

We will hear from those facing these challenges, the actions and innovations they have put in place, and what lessons have been learnt.

To find out more about advance care planning from the Health Quality & Safety Commission NZ, click [here](#)

### **[Nutrition for life-long health](#)**

Auckland University’s Liggins Institute provides a selection of online lectures.

These public lectures explore the importance of nutrition at every stage of life – from the health of parents prior to conception and during pregnancy, to the impact of diet and exercise on muscle health in old age.

