

Nutrition and Physical Activity



Knowledge Bulletin

Issue 1 ◆ July 1, 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.

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Diet and nutrition

[New Zealand dietary patterns in relation to bone and nutritional health status amongst post-menopausal women](#)

This cross-sectional study analyses the effect of diet on bone health status and body mass composition.

Using a food frequency questionnaire, the researchers created 32 food groups. In particular, they report that, at the extremes, a higher consumption of fruit and carbohydrates was found to be associated with lower weight status and the consumption of yoghurt, cream and coffee with increased weight status. Bone health was also positively associated with milk consumption, even if coffee was also consumed, which is known to lower bone density.

This paper was originally delivered at the 13th European Nutrition Conference (FENS, 15-18 October, 2019), *Malnutrition in an Obese World*. The proceedings are published in Volume 79, Issue OCE2, Cambridge University Press, 10 June 2020

[Food environment interventions to improve adult diet and health equity: umbrella review](#)

This review, conducted by Auckland University researchers, looks at international evidence for interventions that are effective at improving population-level diets and health outcomes.

Environmental interventions, such as taxing unhealthy food and beverages and subsidising healthy options, front-of-pack labelling, encouraging salt reduction and reducing the prevalence of fast-food outlets in lower socioeconomic areas, all show the most promise.

The researchers conclude that these interventions should be policy priorities to address public health.

[Repositioning of the global epicentre of non-optimal cholesterol](#)

This major global study on cholesterol levels is one of the largest of its kind.

The study included 1,127 population-based studies measuring high-density lipoprotein cholesterol and non-cholesterol blood lipids in 102.6 million individuals aged 18 years and older. The researchers found that trends from 1980 to 2018 indicate that high-income countries, historically exhibiting high levels of cholesterol amongst the population, such as New Zealand, are decreasing, while low- and middle-income countries, including Asia and the Pacific, are increasing in population-based cholesterol levels. This, they attribute to the behavioural changes resulting from public health policy and interventions afforded by higher-income countries. Contributing analysts include *Healthier Lives* researcher, Professor Rod Jackson and Director, Professor Jim Mann (both from

[The Science Behind Intuitive Eating](#)

The International Food Information Council Foundation (US) provides a discussion on the topic of intuitive eating; a strategy developed in the 1990's to address the rigidity of dieting and the often unsustainable results achieved by dieters.

The article looks at what defines intuitive eating and what the evidence-base is today in relation to this style of weight management.

[A review of the uses and reliability of food balance sheets in health research](#)

This review looks at the food balance sheets from a number of countries, including New Zealand, in order to assess their viability as a measure of global food composition.

The researchers report that, while these are of value to assess and compare countries' nutritional availability, diet and food sustainability, such data are only as reliable as their accurate input and comparability allows.



Physical activity, sport and recreation

[Comparing Two Treatment Approaches for Patients with Type 1 Diabetes During Aerobic Exercise: A Randomised, Crossover Study](#)

Although exercise is the best method of glycaemic control in people with type 1 diabetes, adverse effects of developing hypoglycaemia are of concern.

This pilot trial, conducted by Waikato University on a small sample of males, assessed the options of reducing insulin versus consuming carbohydrates prior to undertaking aerobic exercise as a strategy to address glycaemic control during exercise.

Participants reacted most favourably to reducing insulin, which shows promise as a successful strategy in this regard. It will, however, require further evaluation and testing across different population groups.

[Development of a Consensus Statement on the Role of the Family in the Physical Activity, Sedentary, and Sleep Behaviours of Children](#)

Few children and young people meet the Canadian 24-Hour Movement Guidelines, which are set to encourage long-term positive health outcomes.

This paper details the methodology employed to develop a Consensus Statement that defines the role of families as key influencers of children's levels of physical activity.

The final Consensus Statement: *Families can support children and youth in achieving healthy physical activity, sedentary and sleep behaviours by encouraging, facilitating, modelling, setting expectations and engaging in healthy movement behaviours with them. Other sources of influence are important (e.g., child care, school, health care, community, governments) and can support families in this pursuit*, was developed by an Expert Panel, who assessed available statistical data, literature reviews and relevant research.



Obesity and weight management

[Inside our Supermarkets 2020 – Assessment of the healthiness of Australian supermarkets](#)

This research was conducted by Deakin researchers working within the Global Obesity Centre (GLOBE), a WHO Collaborating Centre for Obesity Prevention, in the Institute for Health Transformation.

The research reviews the in-store food environment of Australia's largest supermarket chains, to assess how well they promote healthy eating, as well as whether there are disparities in relation to the socioeconomic areas in which stores are located.

These results contribute to INFORMAS (the International Network for Food and Obesity and non-communicable diseases Research, Monitoring and Action Support), a global network that seeks to monitor and benchmark public and private sector actions to create healthy food environments and reduce obesity and non-communicable diseases globally.

To watch the companion video, click [here](#).

[Telehealth is an effective intervention for maintenance of weight loss](#)

This US clinical trial found that follow-up telehealth support was a far more effective means of achieving sustained weight loss than other forms of educational support, such as the provision of written material or group counselling.

While the US healthcare system differs from the New Zealand model of care, the findings in support of this approach are said to be applicable to those unable to readily access clinical care, such as those in isolated rural communities similar to which the clinical trial was conducted in the US.

The key set-back for the New Zealand context is that, while one-on-one telephone contact was found to be optimal in motivating individuals to maintain their weight loss strategies, as clinicians are able to tailor their support to individuals' circumstances and needs, this is an expensive model of care.

Health promotion

[Health Gain, Cost Impacts, and Cost-Effectiveness of a Mass Media Campaign to Promote Smartphone Apps for Physical Activity: Modelling Study](#)

This research analysed the cost-effectiveness and potential impact of a mass-media public health campaign in New Zealand promoting physical activity using smartphone apps.

They found that health benefits were unlikely to be sustained and, therefore, such an initiative was not considered to be a cost-effective means of promoting physical activity. Rather, the researchers conclude that investment would be better spent targeting behavioural change initiatives that are proven to be more enduring.

Non-communicable diseases

[Insights on Improving Nutrition in Kaitiāia](#)

Conducted by *Healthy Families Far North*, this report looks at the kaupapa of kai.

Inspired by action taken in Kaikohe, the group set about mapping the food environment of Kaitiāia, with an aim to redesign it as 'Kai Town' to promote healthy eating.

While they acknowledge that diet is just one aspect of the prevention of chronic non-communicable diseases, this mahi is a step in the right direction to reduce the prevalence of diabetes and cardiovascular diseases in the community.

[He Pikinga Waiora: making health interventions work for Māori communities](#)

Last year, *Healthier Lives* released the first in a series of research findings briefs: *He Kupu mō ngā Kitenga Rangahau*. The briefs distil large amounts of evidence from completed research projects, convey their key findings and provide links to further information.

A new research brief, developed by *Healthier Lives*, as part of the National Science Challenge, is now available: *He Pikinga Waiora* research project, which developed and tested a framework for implementing interventions within Māori communities. Centred on kaupapa Māori and Indigenous self-determination, the framework is designed to get evidence "off the shelf and into practice".

He Pikinga Waiora Implementation Framework was used to co-design two successful interventions aimed at improving the prevention and management of diabetes and related conditions.

The following article describes one of the case studies.

[A case study of using the He Pikinga Waiora Implementation Framework: challenges and successes in implementing a twelve-week lifestyle intervention to reduce weight in Māori men at risk of diabetes, cardiovascular disease and obesity](#)

This article discusses the challenges and successes in trialing the *He Pikinga Waiora Implementation Framework* as an intervention to target diabetes and obesity in Māori men, as well as its potential for use in other indigenous communities.

The researchers conclude: “The HPW Framework appears to be well suited to advance implementation science for Indigenous communities in general and Māori in particular. The framework has promise as a policy and planning tool to evaluate and design interventions for chronic disease prevention in Indigenous communities. Despite this promise, there are structural challenges in developing and implementing interventions to address health inequities.”

[Whole-Grain Processing and Glycemic Control in Type 2 Diabetes: A Randomized Crossover Trial](#)

This trial compared the impact of consuming finely milled versus whole grain foods on the glycemic levels of people with type 2 diabetes.

The results favoured an unprocessed or less processed wholegrain dietary intake to manage glucose levels.

Contributing authors include Dr Andrew Reynolds (University of Otago) and *Healthier Lives* Director, Professor Jim Mann (University of Auckland).

Tools and resources

[The Nutrition and Physical Activity Hub](#)

The Health Promotion Agency’s hub provides a range of resources to support those working in the nutrition and physical activity space.

News

National food strategy needed to fix obesity epidemic

Faculty of Medical and Health Sciences, Auckland University, 22 June 2020

A report led by public health researchers finds that the Government has made little progress on healthy food policies.

Unhealthy diets are responsible for about one fifth of all preventable ill-health and premature deaths but, according to a new report from a panel of more than 50 independent and government experts nationwide, the Government has made virtually no progress on implementing healthy food policies in the last three years.

Dr Sally Mackay, from the School of Population Health at the University of Auckland, led the review of our food systems and nutrition. She said, “In health and environmental terms, our current food systems are our greatest liability but, with a concerted national effort, they could be our greatest asset.”

Since agriculture is by far New Zealand’s largest contributor to greenhouse gases and other environmental damage, the panel is calling for an overarching Food Systems and Nutrition Strategy to drive changes towards healthy, sustainable food systems.

The [Food-EPI study \(Healthy Food Environment Policy Index\)](#) is the latest in a series first conducted in 2014.

“Unfortunately, the Government has continued the failure of the last two terms of National-led governments to not act to introduce food policies recommended by the World Health Organisation that would turn around New Zealand’s massive obesity and diabetes problems.”

To read the full media release, click [here](#).

[Supporting communities to become food secure while addressing additional demand on foodbanks, food rescue and other community food services](#)

The Ministry for Social Development, June 2020

The Ministry is investing \$32 million over the next two years to provide support for foodbanks, food rescue and other community organisations who are distributing food.

Demand for food has significantly increased for foodbanks since COVID-19 restrictions were implemented. Increased levels of unemployment and economic hardship will result in more people vulnerable to food insecurity.

When Civil Defence Emergency Management Groups step down from supporting foodbanks, this funding ensures that there will be longer-term support.

Refugees face poverty, food insecurity

Flinders University, Australia, media release, 15 June 2020

From lamb kebabs to western fast food

The simple but important act of preparing and sharing familiar foods is one of the biggest challenges for refugees building a better and healthy new life in Australia, researchers say.

Many resettling from war zones, drought, persecution and deprivation, often after lengthy transition and racism in refugee camps, then face the daunting prospect of finding work, housing, schooling and everyday necessities, such as food, upon arriving in Australia.

A new study, by Flinders University researchers, focuses on the experience of Afghani refugees in Adelaide, finding language and cultural issues, limited income and difficulties in sourcing halal ingredients among the barriers and additional stresses in their immigration experience. Transport and shopping practices might also influence their ability to provide healthy food options for their family.

Researcher Dr Foorough Kavian says Afghanis are one of the fastest growing refugee groups in Australia, with South Australia home to about 6,000 people of Afghani ancestry – most of them refugees.

About 12,000 refugees arrive in Australia every year as part of the rising tide of global dislocation of millions of people.

“Afghan refugees to First World countries such as Australia typically migrate via countries such as Iran and Pakistan and may well come by boat,” she says. “In transition countries, food stress and poverty are often aligned with racism and lack of resources.

“Our study focused on both the transition and then destination country, where racism and access to services is followed by possible lack of income and other stressors.

“In Australia, despite social services supports, there are still difficulties in accessing appropriate food, due to significant cultural and religious differences, problems with language, housing and employment marginalisation.”

The project, focusing on the experience of 10 young Afghani refugee women in Adelaide in 2017, recommends a culturally appropriate program to assist newcomer refugees and immigrants with healthy adaptation and navigating the new food system in Australia.

“While availability of multicultural food is improving in Adelaide, we found different structural, cultural and political factors come in to play as the women learn and re-learn how to manage provision of food for themselves and their families.”

The researchers say the increasing number of Afghani refugees to Australia, as well as other minority groups, is increasing the need to address the social determinants of health, by increasing pathways to employment and financial security, to alleviate food stress and poverty.

[Migration, Stress and the Challenges of Accessing Food: An Exploratory Study of the Experience of Recent Afghan Women Refugees in Adelaide, Australia](#) by Foorough Kavian, Kaye Mehta, Eileen Willis, Lillian Mwanri, Paul Ward and Sue Booth has been published in the *International Journal of Environmental Resources and Public Health Research*, 17(4), 1379, 2020

Active travel for health and wellbeing in New Zealand communities

[Ageing Well National Science Challenge](#), Joint Funding Announcement, June 2020

As the COVID-19 pandemic lockdown or rāhui eases in New Zealand, people are gradually returning to public spaces and workplaces. This provides an opportunity to think about different transport and travel options that could benefit people, as well as the planet.

It is timely that a major new research project has been jointly funded by two of New Zealand's National Science Challenges – *Ageing Well* and *Healthier Lives* – to investigate ways of “retro-fitting” the design of our cities that will encourage more active modes of travel and reduce car dependence.

A major research collaboration, called *ACTIVATION**, led by Professor Karen Witten of Massey University and involving researchers from numerous universities and research groups across New Zealand, will investigate the impact of transport and community infrastructure on people's health and wellbeing over four years.

Active travel, such as walking, biking and using public transport, offers effective and equitable ways to increase physical activity across the whole population.

“We know physical activity has important health and wellbeing benefits, but we also know how hard it can be for people to increase their physical activity. Streetscapes that support active travel are important, but so are social and cultural environments that encourage physical activity. It is unknown what the best mix of interventions would be to increase active travel,” says Professor Witten.

“This research seeks to find what combination of interventions (or ‘sweet spots’) might trigger the uptake of active travel behaviour to enhance health and wellbeing. We'll evaluate several interventions aimed at increasing active travel.”

The *ACTIVATION* project will receive funding of \$2.443 million over four years. It is centred on two different urban sites; one in the North Island at Māngere in South Auckland and the other in the South Island at new developments in central Christchurch.

**ACTIVATION* stands for *Activating Change through InterVentions for Active Travel in our Neighbourhoods*.

To read the full announcement, click [here](#).

Upcoming events

Rethink Obesity Webinar Series

Early weight loss intervention – why is it so important? Webinar on 1 July 2020, with other webinars available throughout July and on demand

In this one hour Rethink Obesity webinar, Dr Sean Wharton, Dr Ramy Bishay, Dr Georgia Rigas and Prof Joseph Proietto discuss the importance of early weight loss to avoid wider complications, and provide their own practical experiences on how to achieve early weight loss in people living with obesity.

They consider:

- Why is early weight loss so important to overall patient management?
- What are the consequences of delaying weight loss interventions?

To select one or more of the webcasts and complete registration, click [here](#).

