

Nutrition & Health Innovation Research Institute

Annual Report 2022



Our vision

Healthy people
Healthy communities



Our mission

Reduce chronic disease by developing, translating and implementing nutrition and health innovation research

Our research themes

- Discovery and excellence
- Technology and innovation
- Real-world impact
- A sustainable future



NHIRI at a Glance



103

Total Members

47

HDR Students



4 in 10

NHIRI Publications are in the top 10% journals by citiscore

>\$4.5M

Total Grants Awarded



2,656

Total Media mentions*

4.5B

Potential media reach



113

Publications

99

Q1 Publications



* Relevant Advertising Value \$41.7M



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Director's Report

At the beginning of 2022, our Steering group, comprised of the Institute's core members and led by myself and Josh Lewis, worked to define the strategic direction for the Institute.

The development of our five-year strategic plan was conducted in tandem with a brand positioning exercise that involved extensive consultation with internal and external stakeholders.

This is the first strategic plan for the 'Nutrition & Health Innovation Research Institute'. It sets out our strategic direction and commitment to accomplish our shared purpose – 'to discover and share real-world solutions to improve health and quality of life'.

And it communicates the Institutes' strategic priorities that are driven by innovation, curiosity, and are impact focussed.

'2022 was a year of great advances at NHIRI, resulting in the development of an Institute wide strategy to guide our purpose and direction over the next five years'

I look forward to working with our Institute Steering Group, Advisory Board, other members, ECU staff and many other key stakeholders in realising our strategic commitments over the next five years, guiding the Institute's direction to create positive health impacts for all West Australians, Australians and globally.



Professor
Jonathan Hodgson
Director



A/Professor
Joshua Lewis
Research Program Lead

Highlights of 2022

Case Studies

In 2022 we released case studies on key research areas. They demonstrate the practical implications of our research and exciting potential for impact on health outcomes, public health policy and improved quality of life.

Click on the case studies below to access full size document.

Prevention is better than cure

Preventing injury in the WA Police Force

In recent years, the WA State Government has been facing an increase in WA Police Force musculoskeletal injuries. These injuries can significantly delay recovery programs underpinning by these new police recruits are often physical and mentally challenging.

It has been found that as recruits progress through their training, musculoskeletal injuries occur. These injuries can significantly delay recovery programs and can lead to ongoing or recurring injuries and possibly early career termination. These injuries represent a real potential cost to recruits and a financial cost to the WA Police Force. The attention and related healthcare treatments to a world first, the WA Police Force and ECU decided to collaborate on ground-breaking research to see how the number of musculoskeletal injuries in training recruits could be reduced or prevented. Dr. Wendy Lee, co-leader from ECU research, Dr. Wendy Lee from the foundation of new and improved physical training standards, create robust training practices and reduce the risk of injury for a diverse range of police services.

The Researcher
Dr. Wendy Lee is a professional dietitian researcher with ECU, Queen Elizabeth II Health Services, and a research fellow with ECU. She has been instrumental in the development of the WA Police Force research program. She is currently a research fellow with ECU and is also a member of the WA Police Force research team.



From an injury prevention point of view, police recruits have not been found to need a special diet.

Pathway to Impact

Research Driver

How can musculoskeletal injuries sustained in a diverse range of police recruits be reduced through tailored programs and prevention strategies?

Initial Findings

Know injuries, followed by shoulder and lower leg injuries, are the biggest problem in WA Police Force recruit training. Common types of injuries are to ligaments, joints, muscles and tendons. Most are 60% less likely to be injured than women and recruits aged under 30 years are 10% less likely to be injured than older colleagues.

Current Work

Identifying who is at risk of being injured and which activities cause injuries to diverse body parts.

Developing a new surveillance system to coordinate floor groups with Australian injury reports and medical staff, and improving WA Police Force staff.

The Next Step

Develop and pilot evidence-based injury prevention training programs for WA Police Force recruits which are tailored to their specific fitness level, age and gender.

Future Impact

This research will result in a drastic decrease in the number of injuries to diverse body parts. Australian police recruits will maintain training standards. This will lead to a healthier and more effective police force and reduce injury management costs.

4 *Understanding the number and types of injuries experienced by police recruits in training is a world first and will reduce the burden of injury for WA Police Force and its staff. The subsequent goal is to reduce police recidivism by a way that addresses systems and support a robust, healthy workforce.*



An Appetite for Change

The importance of diet in preventing falls

Did you know eating green leafy and cruciferous vegetables (like broccoli, cabbage and cauliflower) helps to keep your bones and muscles strong? Eating muscles and bones reduce the risk of falling which is particularly important for older people.

For older adults, it's not just about eating a long time to recover from. Some people develop a fear of falling and as a result are less likely to perform their daily tasks. This makes them more susceptible to falls.

As falls often signal the end of independent living of older people, it's important to be able to prevent them.

ECU's research shows eating regularly and eating vegetables rich in dietary fibre such as spinach, lettuce and broccoli and vitamin K (found in broccoli, asparagus and spinach) helps to strengthen muscles and bones.

The Researcher
Dr. Wendy Lee is a Senior Research Fellow at ECU, Queen Elizabeth II Health Services, and a research fellow with ECU. She has been instrumental in the development of the WA Police Force research program. She is currently a research fellow with ECU and is also a member of the WA Police Force research team.



Approximately 37% of Australians aged over 65 are overweight or obese. This is significantly higher than their parents and grandparents.

Pathway to Impact

Research Driver

Do diets rich in vegetables support bone and muscle health in older people?

Current Focus

A clinical trial is needed to determine the amount of Vitamin K and dietary fibre required to offer the most health benefits in terms of strong muscles for older people. Building on this, improvements will be developed to complement dietary fibre.

Future Impact

Research will help identify training methods to collect data on older people's bone and muscle health to build a database. Researchers will use artificial intelligence to look for patterns in the data to identify a person's risk of falling before it happens.

Progress
Research to date has demonstrated that Vitamin K and intake in daily green and cruciferous vegetables play a crucial role in developing and supporting strong muscles and bones.

Next Step
Researchers will help machine learning to collect data on older people's bone and muscle health to build a database. Researchers will use artificial intelligence to look for patterns in the data to identify a person's risk of falling before it happens.

4 *Stronger bones and muscles can reduce the likelihood of older people falling. This can help them live longer, safer and more active lives.*

5 *Preventing falls and fall-related injuries in an ageing population is a key concern for health professionals in the world. Dr. Wendy Lee's research into the role of a nutrient rich diet in reducing muscle and bone loss in older people has the potential to support healthier living, enable independent living for longer, and improve quality of life.*



A Recipe for Reducing Stress

Fruit and vegetables on a bed of mindfulness

Being stressed for prolonged periods of time can lead to mental and physical health conditions such as depression, anxiety, metabolic syndrome and cardiovascular disease.

When we are stressed, we are less likely to eat energy dense food which, over time, can add to our health problems.

Traditional approaches to reducing stress have focused on relaxation, meditation and exercise, but many people lack the time and energy needed to devote themselves to these activities. This lack of time and the pressure to be healthy can actually add to a person's stress level.

The ECU researchers believe a scientific eating experience that draws attention to how and what we eat, can help reduce stress levels and improve well-being.

Dr. Tessa Mandy's research has found a link between greater consumption of fruit and vegetables and reduced stress levels, which could improve mental and physical well-being.

The Researchers
Dr. Tessa Mandy is a professional dietitian researcher with ECU, Queen Elizabeth II Health Services, and a research fellow with ECU. She has been instrumental in the development of the WA Police Force research program. She is currently a research fellow with ECU and is also a member of the WA Police Force research team.



Pathway to Impact

Research Driver

Can practicing mindfulness while preparing food increase fruit and vegetable consumption and also reduce stress and improve mental and physical health?

Step 1

Confirm in a clinical trial that fruit and vegetable intake can significantly reduce stress levels and reduce mental and physical health problems.

Step 2

Build on a diet of stress-reducing fruit and vegetables and investigate ways to further reduce stress levels.

Step 3

Develop evidence and training materials for the community to help people integrate mindfulness practices in the preparation and eating of healthy meals to reduce their stress.

Future Impact

Reduced stress and improved health and well-being.

How it works

Mindful food preparation → Decreased stress → Increased healthy eating

4 *Integrating mindfulness practices into every day life, including while we eat, cook and shop, can be a valuable self-care strategy for both mental and physical well-being.*

3D Printed Food: Providing better nutrition for healthier older people

We all want our older family members and friends to live long rich lives, but as people age it can be harder for them to eat nutritious foods. They often have trouble chewing and swallowing and need to be given more (dense-modified) foods so that they can eat.

In fact, one in three people in residential aged care are on these texture-modified diets and it's not uncommon for older people to suffer from malnutrition. When research in a community consultation study they don't eat healthy fruits and vegetables, it was found that they don't normally get to those that some of Australia's most innovative ageing care providers are now pioneering with 3D printed food. The team is developing Australia's first 3D printed fruit and vegetable based foods that are nutritionally tailored for older Australians.

3D printed foods have the advantage that they can be produced anywhere from diverse ingredients. Just by using a 3D printer, you can create a wide range of textures and tastes. These foods have been shown to improve the quality of life of older people who are unable to eat solid food. They can also be used to provide a more enjoyable eating experience for older people who are unable to eat solid food.

This work is forming the foundation of helping others that struggle to have a healthy and safe, after a lifetime of illness or where they live, to have access to nutritious foods.

Associate Professor Joshua Lewis
Associate Professor Joshua Lewis is a research fellow with ECU, Queen Elizabeth II Health Services, and a research fellow with ECU. He has been instrumental in the development of the WA Police Force research program. He is currently a research fellow with ECU and is also a member of the WA Police Force research team.




RESEARCH → **3D FOOD FINISHING** → **3D PRINTING** → **PUTTING THE FOOD TO THE TEST** → **LOCAL PRODUCTION** → **NATIONAL ROLL-OUT** → **IMPACT**

4 *When we looked at why these older people weren't eating enough fruit and vegetables we were a bit overwhelmed by number of barriers that kept coming up such as cost, loss of independence to prepare and cook food, food waste when cooking for one person, loss of taste, inability to eat usual portion sizes as well as chewing and swallowing difficulties. We thought WOW, how can we overcome all these barriers, we are going to have to get creative!*

NHRI/NSA Nutrition & Innovation for Healthy Ageing 2022 Symposium

The Nutrition & Health Innovation Research Institute (NHRI) held its second Research Symposium at the Joondalup Country Club on the 7th October. The theme for this year's Symposium was Nutrition and Innovation for Healthy Ageing 2022 and was jointly hosted with The Nutrition Society of Australia (NSA). The keynote speaker, Professor Jason Wu, from the UNSW Faculty of Medicine & Health and the Head of the Nutrition Science Program at the George Institute for Global Health shared many valuable insights, including his innovative work with the 'Food is Medicine' programs.

The event provided opportunity for NHRI and NSA members, and external collaborators at various stages of their career to share their cutting-edge research findings, network with like-minded researchers, and participate in lively discussion. The program showcased a diverse offering with 18 presentations across three sessions.



Highlights of 2022 cont.

Website

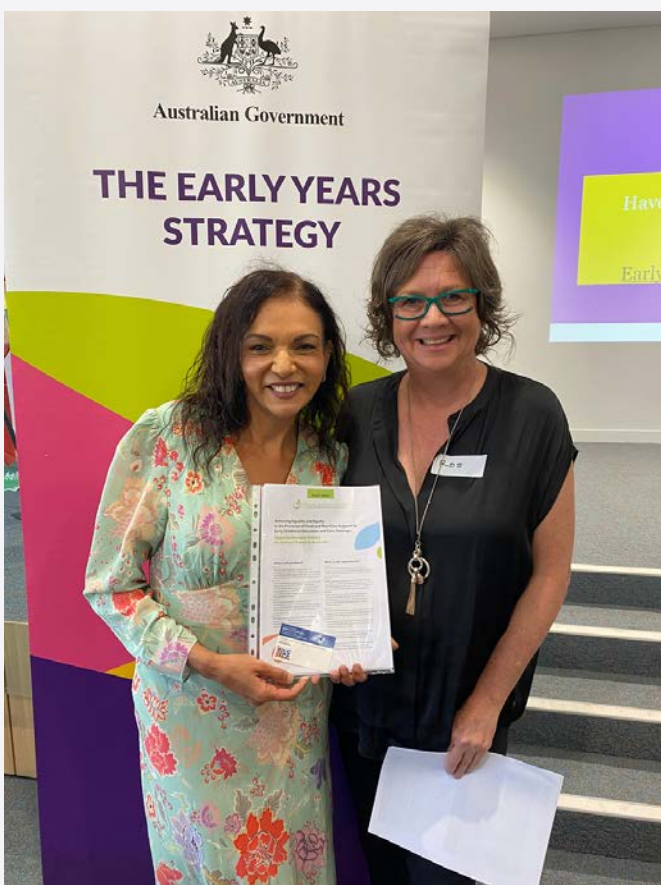
The new NHIRI website build was completed in late 2022.

The website is simple to navigate and showcases the exciting research and news in each of NHIRI's four research Themes.

National Nutrition Network

Ms Ros Sambell, NHIRI member and Chair of the National Nutrition Network-Early Childhood Education and Care (NNN) presented in October 2022 at the Inquiry into the most effective ways for Western Australia to address food insecurity for children and young people affected by poverty.

Following on from this the NNN will deliver policy and evidence briefs, as part of their translation and advocacy strategy.



Minister for Early Childhood Education Dr Anne Aly (left) and Ros Sambell (right)

It is important to enhance health literacy from a young age. "Health literacy is where people understand how to be healthy: how to tell adults when they don't feel well, when to go to the doctor, when to wash your hands and the like,"

NHIRI Researcher, Dr Ruth Wallace



'Little Aussie Bugs' Book launch

A collaborative effort between NHIRI and Channel 7/Telethon, the 'Little Aussie Bugs' series launched with four books: 'When We Are Hungry', 'When We Are Sick', 'My Healthy Tummy' and 'My Healthy Teeth'.

The books, produced by Dr Ruth Wallace and Dr Amelia Ruscoe were launched by the Minister for Early Childhood Education and Minister for Youth, Anne Aly MP and will mean kids as young as two will soon be learning how to stay healthy.

From paddocks to plates: helping create a healthier community

The Nutrition & Health Innovation Research Institute has helped the Shire of Serpentine Jarrahdale become the first local council in WA to endorse comprehensive Local Food Action Plan. Project Lead Ana Gowrea (ECU Lecturer and Masters by Research candidate) explains the plan also outlines the importance of local schools offering healthy food programs.

The three-year Local Food Action Plan was developed in partnership with ECU, the Shire, Healthway, Western Australian Local Government Association, East Metropolitan Health Service and SJ Food and Farm Alliance.

Collaborating with our stakeholders

NHIRI members continue to develop new highly productive collaborations and partnerships. 2022 continued the wide range of engagement and collaboration with industry, government, research bodies, and other stakeholders.

Invited Presentations

The Australia and New Zealand Bone and Mineral Society (ANZBMS), the Molecular & Experimental Pathology Society of Australasia (MEPSA) and the Australian & New Zealand Orthopaedic Research Society (ANZORS) joint meeting.
A/Prof Josh Lewis

The Cardiac Society of Australia and New Zealand-Australian and New Zealand Society for Sarcopenia and Frailty Research (CSANZ-ANZSSFR), Sarcopenia Frailty and Cardiovascular webinar.
A/Prof Josh Lewis

The Australia and New Zealand Bone and Mineral Society (ANZBMS), the Molecular & Experimental Pathology Society of Australasia (MEPSA) and the Australian & New Zealand Orthopaedic Research Society (ANZORS) joint meeting.
Dr Marc Sim

The Australia and New Zealand Bone and Mineral Society (ANZBMS), the Molecular & Experimental Pathology Society of Australasia (MEPSA) and the Australian & New Zealand Orthopaedic Research Society (ANZORS) joint meeting.
PhD candidate Abadi Gebre.

The American Society for Nutrition, titled "Associations of specific types of fruit and vegetables with perceived stress in adults: The AusDiab study".
Dr Simone Radavelli-Bagatini

The Australia and New Zealand Bone and Mineral Society (ANZBMS), the Molecular & Experimental Pathology Society of Australasia (MEPSA) and the Australian & New Zealand Orthopaedic Research Society (ANZORS) joint meeting.
Dr Cassandra Smith

Western Australian Cardiovascular Research Alliance (WACRA) Early and Mid-Career Researcher (EMCR) launch event 'Tips to Successful Fellowship writing' giving the Reviewer's Perspective.
A/Prof Josh Lewis

Harry Perkins Institute of Medical Research Institute "Healthy ageing: you "aorta" look at lateral spine images" at the seminar.
A/Prof Josh Lewis

ECU "Building and maintaining successful collaborations" EMCR Networking morning tea.
A/Prof Josh Lewis

Indian Ocean Defence and Security Conference.
Dr Myles Murphy



Royal Perth Hospital Research Foundation CEO, Cate Cassarchis, Chef Amanda Orchard, Dr Liezhou Zhong and Royal Perth Hospital Research Foundation Board Chair, Professor Lyn Beazley AO (left to right)

New Committee Memberships

WACRA ECR committee.

Dr Lauren Blekkenhorst and Dr Simone Radavelli Bagatini

School of Medical and Health Sciences (SMHS) EMCR committee.

Dr Simone Radavelli Bagatini

Nutrition Society of Australia (NSA) Perth Group Committee.

Dr Simone Radavelli Bagatini

Community Engagement

Inglewood Brightwater Aged-care home open day, 3D Printing showcase.

Dr Liezhou Zhong

City of Perth Library "Printing an appetite for life – Applications of 3D food printing for healthy and sustainable eating" in collaboration with Royal Perth Hospital Research Foundation.

Dr Liezhou Zhong and Amanda Orchard

ECU Spectrum Gallery, To Play & Win Exhibition, edible 3D chess pieces.

Dr Liezhou Zhong

Swan View Senior High School Career Expo.

Dr Cassandra Smith, Dr Liezhou Zhong and Dr Simone Radavelli-Bagatini

Symposiums

American College of Sports Medicine Implementation Science 101: Practical Strategies to Close the Research-to-Practice Gap in Exercise Medicine – Exercise is Medicine.

Dr Mary Kennedy

Other

Guest Editor for the British Journal of Sports Medicine.
Dr Myles Murphy

Committees & Groups

During 2022, NHIRI members NHIRI staff are members of range of International, National and State groups and committees.

Consumer and Community Involvement

We are committed to a consumer involved strategy and to do this. Dr Mary Kennedy is working with Western Australian Health Translation Network (WAHTN) on a three year plan for embedding consumer and community involvement (CCI) within NHIRI.

The CCI Program supports consumers, community members and researchers to work in partnership to inform decisions about health research priorities, policy and practice. Consumer and community involvement is about research being carried out with or by consumers and community members rather than to, about or for them, which is best practice research and improves lives by ensuring the community's voice is heard and understood in health research. Next year CCI will lead NHIRI through a research priority mapping exercise to create a consumer informed research agenda that will guide NHIRI's future research agenda

International

- Co-chair International Federation for Musculoskeletal Research Societies, Future Global Leaders Committee
- Program advisory group member, American Society for Bone and Mineral Research
- Member, American College of Sports Medicine, Moving Through Cancer Task Force
- Member, American College of Sports Medicine, Exercise is Medicine Education Committee
- Member, American Heart Association, Council on Epidemiology and Prevention (EPI)
- Member, American Heart Association, Council on Lifestyle and Cardiometabolic Health
- Member, American Society for Bone and Mineral Research
- Member, American Heart Association
- Member, American Society for Nutrition
- Member, American Society for Bone and Mineral Research
- Member, World Public Health Nutrition Association



It is essential to engage with these groups strategically, knowing what their aims and needs are and how the Institute can help achieve these

- Member, International Federation of Musculoskeletal Research Societies
- Member, International Society of Behavior, Nutrition, and Physical Activity, Scale- up and Implementation Special Interest Group
- Life member, Pakistan Engineering Council (Member of Washington Accord)
- Member, Medical Image Computing and Computer Assisted Intervention Society
- Member, Society for Implementation Research Collaboration
- Member, International Society for Nutritional Psychiatry Research
- Member, Australasian Epidemiological Association
- International Network for Child and Family Centred Care
- Cluster Leader, Early Life Origins of Health Consortium, Cardio-metabolic group
- Member, Origins Scientific Committee
- Member of Pregnancy and Childhood Epigenetics (P.A.C.E.) Consortium

National

- Member, Nutrition Society of Australia
- Member, Nutrition Australia
- Member, Australian Atherosclerosis Society
- Member, High Blood Pressure Research Council of Australia
- Australian and New Zealand Obesity Society
- Member, Australian Cardiovascular Alliance
- Council member, Australian and New Zealand Bone and Mineral Society

Committees & Groups cont.

National cont.

- Member, Australian Society for Medical Research
- Member, Australian Pattern Recognition Society
- Member, Sports Medicine Australia
- Member, Australian Physiotherapy Association
- Member, Sports Physiotherapy Australia
- Member, Australian College of Physiotherapists
- Member, Health Services Research Association of Australia & New Zealand
- Member, Australian and New Zealand Bone and Mineral Society, Early to Mid-Career Research Committee
- Member, Australia and New Zealand Society for Sarcopenia and Frailty Research Taskforce
- Member, Australia and New Zealand Society for Sarcopenia and Frailty Research
- Member, Australia and New Zealand Society for Sarcopenia and Frailty Research, Early and Mid-career Researchers Committee
- Western Australian representative, Australia and New Zealand Society for Sarcopenia and Frailty Research Council
- Member, Dietitian and Nutritionist Regulation Council, Dietitians Australia
- Member, Exercise and Sport Science Australia
- Member, Australian and New Zealand Alliance for Cardiovascular Trials
- Member, Dietitians Australia
- Member, Australian Breastfeeding Association
- Member, Australian Institute of Food Science and Technology
- Member, Raine Management Committee, Raine Genetic Subcommittee
- Member, Australia Physiological Society
- Member, Australian College of Midwives
- Member, Australian Nurses Federation
- Member, Unity of First People in Australia, Clinical Reference Group
- Member, Australian Academy of Science, National Committee of Nutrition
- Member, Physical Activity Alliance, Physical Activity Assessment, Prescription, and Referral Work Group



State

- Director, Western Australian Cardiovascular Researchers Alliance
- Chair, Nutrition Society of Australia, Perth Regional Group
- Member, Nutrition Society of Australia, Perth Regional Group
- Chair, Sports Medicine Australia, Western Australia Branch
- Member, Western Australian Bone Research Collaboration

'Little Aussie Bugs' to teach children how to be healthy

Kids as young as two will soon be learning how to stay healthy, with a new set of children's books to arrive in every WA Early Childhood Education and Care centre by the end of the year.

A collaborative effort between Edith Cowan University's Nutrition and Health Innovation Research Institute and Channel 7/Telethon, the 'Little Aussie Bugs' series has launched four books: 'When We Are Hungry', 'When We Are Sick', 'My Healthy Tummy' and 'My Healthy Teeth'.

Launch attendees include Minister for Early Childhood Education and Minister for Youth Anne Ally MP, and Member for Hillarys Caitlin Collins MLA on behalf of Ministers Amber-Jade Sanderson and Simone McGurk.

The books are aimed at two-to-four-year-old children, featuring short, simple language and characters such as 'ugly bugs' and 'power bugs' to illustrate what happens inside people's bodies and other concepts of healthy living.

Researcher Dr Ruth Wallace said it was important to enhance health literacy from a young age.

"Health literacy is where people understand how to be healthy: how to tell adults when they don't feel well, when to go to the doctor, when to wash your hands and the like," she said.

"It's multifaceted and this project aimed to start developing those health literacy skills in very young children.



"We're trying to use these books as a tool for educators to use to promote the message, using these engaging characters and catch phrases."

Despite the children's age, Dr Wallace said there was scope for promoting healthy habits in young children, even though parents ultimately make many decisions on their behalf.

"Research shows many children are at day care for maybe 10 hours a day, five days a week," she said.

"So, by not only providing them with healthy food, but getting them involved in nutrition and health education, such as getting them to serve themselves and decide when they are full at mealtimes, increases their autonomy.

"They can go home and say, 'We had a yummy pizza today', and have a recipe card of how to make it."

The books have been in trial in select centres and Dr Wallace said feedback has been encouraging.

"Some of the educators have used toy koalas and kangaroos to mimic the characters and to help tell the stories," she said.

"It's been getting a great reaction from the kids."

Following the launch, the books will be redeveloped as e-books accompanied by an online short course for educators to get the most out of the materials.



Dr Amelia Ruscoe (left) and Dr Ruth Wallace (right)

ECU part of international taskforce clarifying prevention, diagnosis and treatment of sarcopenia

An international task force has sought the expertise of Edith Cowan University (ECU) researchers to assist in developing clinical and research guidelines for a common age-related condition.

Sarcopenia is characterized by the loss of muscle mass, strength and physical performance.

The effects can be debilitating – and extremely common. An estimated 29 per cent of older adults living in the community have sarcopenia, with the number rising among those who are hospitalised, have multiple conditions, frailty or live in residential aged care facilities.

Yet despite its prevalence, there has been ambiguity regarding how sarcopenia should be defined.

There has also been a lack of updated clinical and research guidelines, including consumer perspectives specific to Australia and New Zealand – until now.

Researchers from ECU's Nutrition & Health Innovation Research Institute (NHIRI) worked with a team of experts across Australia and New Zealand to develop guidelines for sarcopenia's prevention, diagnosis and management in the two countries.

The team, known as the Sarcopenia Diagnosis and Management Task Force, sought feedback from people affected by sarcopenia, health professionals, researchers and academics to formulate 17 recommendations for sarcopenia management and research.

These include advice for clinicians on how to prevent sarcopenia, such as a healthy diet and physical activity, how to assess and monitor sarcopenia in patients, and how to define and diagnose the condition.

ECU senior research fellow Dr Marc Sim said many people were unaware of sarcopenia, despite its prevalence in the community.

"Hopefully these important findings raise the awareness of sarcopenia, and can help people impacted by the condition," he said.

"It will also allow medical professionals to provide best-practice advice to help people avoid developing it."

Associate Professor David Scott and Dr Jesse Zanker led the taskforce.

"For too long people have believed losing muscle and strength is an inevitable part of ageing," Professor Scott said.

"We can all prevent, slow and in some cases reverse loss of muscle and strength.

Dr Zanker said it's time to empower people to be in control of their independence.

"These guidelines are the first of their kind to illuminate a path forward," he said.

"This research will have a real impact on people's lives."



It's not them, it's you: why potatoes don't deserve their bad reputation

With low or no-carbohydrate diets rising in popularity in recent times, the humble potato is now regularly overlooked in favour of other vegetables. In fact, research literature has previously indicated potatoes may have a detrimental effect on health, such as possibly increasing the likelihood of developing Type 2 diabetes.

However, new Edith Cowan University (ECU) research has shown while spuds may not have all the same benefits as some other vegetables – such as lowering risk of Type 2 diabetes – health issues associated with potatoes may actually be due to how people are preparing them and what they're eating them with.

More than 54,000 people reported their dietary intake for the long-term Danish Diet, Cancer and Health study. A recent analysis of this study led by Dr Nicola Bondonno from ECU's Nutrition & Health Innovation Research Institute, found people who consumed the most vegetables were 21 per cent less likely to develop Type 2 diabetes than those who consumed the least amount of vegetables.

PhD candidate Pratik Pokharel carried out work on the analysis and said while potatoes didn't have the same impact on Type 2 diabetes, they also didn't have any negative effect.

"In previous studies, potatoes have been positively linked to incidence of diabetes, regardless of how they're prepared – but we found that's not true," Mr Pokharel said.

"In Denmark, people consume potatoes prepared in many different ways; in our study, we could distinguish between the different preparation methods.

"When we separated boiled potatoes from mashed potatoes, fries or crisps, boiled potatoes were no longer associated with a higher risk of diabetes: they had a null effect.

Mr Pokharel said underlying dietary patterns were the key.

"In our study, people who ate the most potatoes also consumed more butter, red meat and soft drink – foods known to increase your risk of Type 2 diabetes," he said.

"When you account for that, boiled potatoes are no longer associated with diabetes. It's only fries and mashed potatoes, the latter likely because it is usually made with butter, cream and the like."



Mr Pokharel said findings from the study indicate vegetables could play a key role in reducing Type 2 diabetes, as people who ate a lot of leafy greens and cruciferous vegies such as spinach, lettuce, broccoli and cauliflower had a significantly lower risk of developing the condition.

He said the relationship between vegetables and diabetes should be incorporated into public dietary guidelines – as should the benefits of eating potatoes.

"The finding that vegetables lower diabetes risk is crucial for public health recommendations, and we shouldn't ignore it," he said.

"Regarding potatoes, we can't say they have a benefit in terms of type 2 diabetes, but they also aren't bad if prepared in a healthy way." "We should separate potatoes and other vegetables in regard to messaging about disease prevention but replacing refined grains such as white rice and pasta with potatoes can improve your diet quality because of fibre and other nutrients found in potatoes."

Mr Pokharel said people should be advised to increase their vegetable intake – and they could include potatoes, so long as they left out some of the unhealthy extras such as butter, cream and oil. "Potatoes have fibre and nutrients, which are good for you," he said.

"People talk about carbs being bad, but it's more about the type of carbs you're having; compared to something like white rice, boiled potatoes are a good quality of carbohydrate." "But just take care how you prepare them: don't eat fries, or mash with extras in it all the time. "Just boil them and eat them like other greens or other foods – and you don't need to have it with red meat all the time."

'Vegetable, but not potato, intakes are associated with a lower risk of type 2 diabetes in the Danish Diet, Cancer and Health cohort' was published in Diabetes Care.

Put the kettle on! How black tea (and other favourites) may help your health later in life

A daily cup of tea could help you to enjoy better health late in life – however if you're not a tea drinker, there are other things you can add to your diet.

The key is flavonoids, which are naturally occurring substances found in many common foods and beverages such as black and green tea, apples, nuts, citrus fruit, berries and more.

They have long been known to have many health benefits – however new Edith Cowan University (ECU) research shows they may be even better for us than previously thought.

The Heart Foundation supported a study of 881 elderly women (median age of 80), which found they were far less likely to have extensive build-up of abdominal aortic calcification (AAC) if they consumed a high level of flavonoids in their diet.

AAC is the calcification of the abdominal aorta – the largest artery in the body which supplies oxygenated blood from the heart to the abdominal organs and lower limbs – and is a predictor of cardiovascular risk such as heart attack and stroke.

It has also been found to be a reliable predictor for late-life dementia.

ECU Nutrition and Health Innovation Research Institute researcher and study lead Ben Parmenter said while there were many dietary sources of flavonoids, some had particularly high amounts.

"In most populations, a small group of foods and beverages—uniquely high in flavonoids—contribute the bulk of total dietary flavonoid intake," he said.

"The main contributors are usually black or green tea, blueberries, strawberries, oranges, red wine, apples, raisins/grapes and dark chocolate."

There are many different types of flavonoids, such as flavan-3-ols and flavonols, which the study indicated appear to also have a relationship with AAC.

Study participants who had a higher intake of total flavonoids, flavan-3-ols and flavonols were 36-39 per cent less likely to have extensive AAC.

Black tea was the study cohort's main source of total flavonoids and was also associated with significantly lower odds of extensive AAC.

Compared with respondents who didn't drink tea, participants who had two-to-six cups per day had 16-42 per cent less chance of having extensive AAC. However, some other dietary sources of flavonoids such as fruit juice, red wine and chocolate, did not show a significant beneficial association with AAC.

Though black tea was the main source of flavonoids in the study – likely due to the age of the participants – Mr Parmenter said people could still benefit from flavonoids without putting the kettle on.

"Out of the women who don't drink black tea, higher total non-tea flavonoid intake also appears to protect against extensive calcification of the arteries," he said.

"This implies flavonoids from sources other than black tea may be protective against AAC when tea is not consumed."

Mr Parmenter said this was important as it allows non-tea drinkers to still benefit from flavonoids in their diet.

"In other populations or groups of people, such as young men or people from other countries, black tea might not be the main source of flavonoids," he said.

"AAC is a major predictor of vascular disease events, and this study shows intake of flavonoids, that could protect against AAC, are easily achievable in most people's diets."

'Higher habitual dietary flavonoid intake associates with less extensive abdominal aortic calcification in a cohort of older women' was published in *Arteriosclerosis, Thrombosis, and Vascular Biology*.



Catch a break: higher vitamin K intake linked to lower bone fracture risk late in life

Breaking bones can be lifechanging events – especially as we age, when hip fractures can become particularly damaging and result in disability, compromised independence and a higher mortality risk.

But research from Edith Cowan University's Nutrition & Health Innovation Research Institute has revealed there may be something you can do to help reduce your risk of fractures later in life.

In collaboration with the University of Western Australia, the study looked at the relationship between fracture-related hospitalisations and vitamin K1 intake in almost 1400 older Australian women over a 14.5-year period from the Perth Longitudinal Study of Aging Women.

It found women who ate more than 100 micrograms of vitamin K1 consumption – equivalent to about 125g of dark leafy vegetables, or one-to-two serves of vegetables – were 31 per cent less likely to have any fracture compared to participants who consumed less than 60 micrograms per day, which is the current vitamin K adequate intake guideline in Australia for women. There were even more positive results regarding hip fractures, with those who ate the most vitamin K1 cutting their risk of hospitalisation almost in half (49 per cent).

Study lead Dr Marc Sim said the results were further evidence of the benefits of vitamin K1, which has also been shown to enhance cardiovascular health.

"Our results are independent of many established factors for fracture rates, including body mass index, calcium intake, Vitamin D status and prevalent disease," he said.

"Basic studies of vitamin K1 have identified a critical role in the carboxylation of the vitamin K1-dependant bone proteins such as osteocalcin, which is believed to improve bone toughness.

"A previous ECU trial indicates dietary vitamin K1 intakes of less than 100 micrograms per day may be too low for this carboxylation.

"Vitamin K1 may also promote bone health by inhibiting various bone resorbing agents."



Dr Sim said eating more than 100 micrograms of vitamin K1 daily was ideal – and, happily, it isn't too difficult to do.

"Consuming this much daily vitamin K1 can easily be achieved by consuming between 75-150g, equivalent to one to two serves, of vegetables such as spinach, kale, broccoli and cabbage," he said.

"It's another reason to follow public health guidelines, which advocate higher vegetable intake including one to two serves of green leafy vegetables – which is in-line with our study's recommendations."

Vitamin K1-rich foods

Vegetables: Kale, spinach, broccoli, green beans

Fruits: Prunes, kiwi, avocado

'Dietary Vitamin K1 intake is associated with lower long-term fracture-related hospitalization risk: the Perth longitudinal study of ageing women' was published in Food & Function.

Predicting the future: a quick, easy scan can reveal late-life dementia risk

Late-life dementia is becoming increasingly common in people after 80 years of age.

A new long-term study has shown a simple and common scan can reveal if people are at increased risk of developing the condition late in life.

Late-life dementia develops when brain cells are damaged from several diseases, some of which cause narrowing of the blood vessels to the brain.

Edith Cowan University (ECU) researchers have discovered an important link between vascular health and late-life dementia. This link is calcification of the plaques which can build up within the abdominal aorta, which is the largest artery in the body and supplies oxygenated blood from the heart to the abdominal organs and lower limbs.

This calcium build up – known as ‘abdominal aortic calcification’, or AAC – can be very useful to predict cardiovascular disease risk such as heart attack and stroke. Researchers have now found it is also a reliable marker for late-life dementia.

Led by ECU’s Nutrition & Health Innovation Institute and Centre for Precision Health, the international team included researchers from the University of Western Australia, University of Minnesota, Sir Charles Gairdner Hospital and the Marcus Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School.

They examined the AAC results in 968 women from the late 1990s, and then followed their health status for over 15 years. They found one in two older women had medium to high levels of AAC, and these women were twice as likely to be hospitalized or die from a late-life dementia – independent of other cardiovascular factors or genetic factors.

Centre for Precision Health director Professor Simon Laws said AAC could identify dementia risk earlier in people’s life, which could prove vital in warding off the condition.

“There’s an adage in dementia research that what’s good for your heart is good for your brain,” he said. This study reaffirms this link and further adds to our understanding of late-onset dementia risk and potential preventative strategies.



“What’s come to light is the importance of modifying risk factors such as diet and physical activity in preventing dementia: you need to intervene early and hopefully this study allows for the earliest possible change and the greatest impact.

“AAC is important as it was able to identify dementia risk in people who don’t have the major genetic risk factor present in 50 per cent of people who develop Alzheimer’s disease, which is the most common form of dementia.”

Conveniently, AAC can be easily detected using lateral spine scans from bone density machines. These machines are common, with some 600,000 bone density tests performed each year in Australia to screen for osteoporosis.

ECU Associate Professor and National Heart Foundation Future Leader Fellow Joshua Lewis said an additional scan capturing lateral spine images can be performed when people undergo standard bone density tests.

“It’s generally very quick and easy to capture these scans and they are less-invasive, cheaper and miniscule in radiation exposure compared to X-rays or CT scans,” Professor Lewis said.

“We know the causes of AAC go beyond traditional cardiovascular risk factors and many of these causes overlap with late-life dementia risk factors.

“At ECU we’re also working with the computer science team automating the AAC assessments, which will make the process a lot quicker and easier rather than needing a trained imaging expert to read the scans.

“It means these scans may be a cheap, rapid and safe way to screen a large number of susceptible older Australians for higher late-life dementia risk.”

Professor Lewis said incorporating dementia risk into discussions surrounding cardiovascular health could see people make necessary lifestyle changes.

“I think the next step is telling people about their AAC and late-life dementia risk to see if this can motivate healthy diet and lifestyle behaviour changes.”

Chef's kiss: Research shows healthy home cooking equals a healthy mind

New research from Edith Cowan University (ECU) has found being confident in the kitchen is not only good for your taste buds: it's also good for your mental health.

The study follows ECU's successful partnership with The Good Foundation and Jamie's Ministry of Food initiative, with a mobile food kitchen providing cooking classes in the community as well as at the University's Perth and SW campuses, throughout 2016 to 2018.

In total, 657 participants undertook the seven-week healthy cooking course.

At the same time, ECU Nutrition & Health Innovation Research Institute academics measured the program's effect on participants' cooking confidence and self-perceived mental health, as well as their overall satisfaction around cooking and diet-related behaviours.

Researchers found those who participated in the program saw significant improvements in general health, mental health and subjective vitality immediately after the program which remained six months after completing the course, when compared to the study's control group.

Improvements in cooking confidence, the ability to easily change eating habits and overcome lifestyle barriers to healthy eating were also reported.

Lead researcher Dr Joanna Rees said the study showed the importance of diet for mental health.

"Improving people's diet quality can be a preventive strategy to halt or slow the rise in poor mental health, obesity and other metabolic health disorders," she said.

"Future health programs should continue to prioritise the barriers to healthy eating such as poor food environments and time restrictions, whilst placing greater emphasis on the value of healthy eating via quick and easy home cooked meals, rich in fruit and vegetables and avoiding ultra-processed convenience foods."



The Institute has previously found a link between eating more fruits and vegetables, and improved longer term mental health in a larger study collecting more sophisticated dietary data, implying the participants in the current study may have felt better due to improved diet.

However, the study showed participants' mental health improved despite their reported diet not being found to have changed after completing the program.

Also, the mental health benefits were equal among participants who were overweight or obese, and those in a healthy weight range.

"This suggests a link between cooking confidence and satisfaction around cooking, and mental health benefits," Dr Rees said.

The study also revealed cooking remains a highly gendered task.

At the start of the program, 77 per cent of participants who identified as female claimed to be confident about cooking, compared to just 23 per cent of those who identified as male.

But at the end of the program, cooking confidence and cooking skills were equal across both counterparts.

"This change in confidence could see change to the household food environment by reducing the gender bias and leading to a gender balance in home cooking," Dr Rees said.

"This in turn may help to overcome some of the barriers presented by not knowing how to cook, such as easing the time constraints which can lead to readymade meals which are high in energy but low in nutritional value".

'How a 7-Week Food Literacy Program Affects Cooking Confidence and Mental Health: Findings of a Quasi-Experimental Controlled Intervention Trial' was published in *Frontiers in Nutrition*.

NHIRI Grants & Awards Highlights

Promotions

Postdoctoral Research Fellow.

Simone Radavelli-Bagatini & Dr Myles Murphy

Senior Lecturer (Level C).

Dr Ruth Wallace

Awards

Fellowship of the Nutrition Society of Australia. Fellowship is awarded to members who have made contributions of special merit to the scientific study of nutrition and/or its applications to animals and humans.

Professor Jonathan Hodgson

Australian Pattern Recognition Society Early Career Researcher Award 2022, announced at The International Conference on Digital Image Computing: Techniques and Applications (DICTA).

Dr Zulqarnain Gilani

Royal Perth Hospital Research Foundation's Early-Career Researcher Best Publication Award inaugural winner for 'Abdominal aortic calcification on lateral spine images captured during bone density testing and late-life dementia risk in older women: A prospective cohort study'.

Dr Marc Sim

WACRA publication prize for the 'Best scientific paper arising from an early career cardiovascular researcher undertaken in WA'.

Dr Marc Sim.

Marc also received the People's Choice award for the best presentation on the night.



Dr Marc Sim and Dr Lauren Blekkenhorst (left to right)



Dr Myles Murphy, Dr Jack Dalla via and Dr Cassandra Smith (left to right)

ECU EMCRN Symposium, Outstanding Presentation Award.

Dr Myles Murphy

ECU EMCRN Symposium, Outstanding Presentation Award.

Dr Cassandra Smith

ECU EMCRN Symposium, Outstanding Presentation Award.

Dr Jack Dalla Via

Citation for Outstanding Contributions to Student Learning.

Dr Lesley Andrew

International Osteoporosis Foundation (IOF) and its Nutrition Academy, IOF Nutrition Award 2022.

Dr Marc Sim

Fellowship into the Australian Sports Medicine Foundation, announced at the Sports Medicine Australia conference.

Dr Myles Murphy.

Myles was nominated by Dr Andrea Mosler (La Trobe University) and Prof. Caroline Finch (ECU).



Dr Andrea Mosler, Dr Myles Murphy and Chair of the Australian Sports Medicine Federation Fellows, Mr Michael Kenihan (left to right)

NHRI Grants & Awards Highlights

Grants & Fellowships in the news

Future Health Research and Innovation Fund Emerging Leaders Fellowship. 'Preventing falls in older Australians: an appetite for change'. Awarded up to \$390,444.

Dr Marc Sim

Dr Marc Sim was one of just four WA academics to be awarded the honour.



Dr Marc Sim



Dr Zulqarnain Gilani

Defence Science Centres Collaborative Research Grant program. 'Dynamic two-way communication using gestures for human-machine teaming'. Awarded \$150,000.

Dr Zulqarnain Gilani

Raine Priming Grant. 'Explainable AI Frameworks for Automatic Detection and Localisation of Abdominal Aortic Calcification'. Awarded \$248,913.

Dr Zulqarnain Gilani

Dr Gilani was also named the Raine/Robson Fellow, deemed the highest ranked applicant among the cohort.

Medical Research Future Fund, Dementia Ageing and Aged Care Mission grant. 'Getting to the heart of healthy ageing: a behaviour change program to promote dietary pattern changes'. Awarded \$506,834.96.

Dr Catherine Bondonno

A total of 18 grants were funded from the Medical Research Future Fund and will look at new ways to extend older Australians' healthy, active, years of life.



Dr Catherine Bondonno

Student Awards

PhD Completions

Analise Nicholl

Thesis title: Investigating Cardiometabolic Health and Child-Centred Research in Young Children participating in the Milky Way Study: A Randomised Controlled Dairy Intervention
NHIRI Supervisor: A/Prof Therese O'Sullivan

Giang Truong

Thesis title: Robust fitting: assisted by semantic analysis and reinforcement learning
NHIRI Supervisors: Prof David Suter and Dr Zulqarnain Gilani

Joanna Rees

Thesis title: Diet quality and mental health: how does improved cooking confidence after a food literacy program affect mental health outcomes and associations with dietary gut biomarkers of the gut-brain axis?
NHIRI Supervisors: Prof Amanda Devine and A/Prof Josh Lewis.

Najmeh Fayyazifar

Theses title: Deep Learning and Neural Architecture Search for Cardiac Arrhythmias Classification
NHIRI Supervisor: Prof David Suter

Simone Radavelli-Bagatini

Thesis title: Diet, Cardiovascular Disease, and Mental Health
NHIRI Supervisors: A/Prof Josh Lewis, Prof Jonathan Hodgson, Dr Catherine Bondonno and Dr Marc Sim.



Simone Radavelli-Bagatini

Awards

PhD candidate Caroline Hill was awarded The Judges and People's choice awards and PhD candidate Chris Andrew received The Judges Choice runner up award at the NHIRI 2022 Research Symposium.

Callum McCaskie (PhD Candidate) won the Best Student Researcher Award at the 2022 Australian Strength and Conditioning Association Conference. His research is titled, 'No difference in tibial bone density between elite female and male Australian footballers'.
NHIRI Supervisor: Dr Marc Sim

Liam Sherwood (Masters by Research student), was awarded a \$500 travel grant from the Marcus J Rosen Fund, administered by the Australian Physiotherapy Association, to attend the Sports Medicine Australia conference and present the results of his research titled 'Quantifying Fear Avoidance Behaviours in people with mild traumatic brain injury using patient-reported outcome measures: A Systematic Review using the COSMIN Guidelines'.
NHIRI Supervisor: Dr Myles Murphy



Liam Sherwood



Chris Andrew (left) and Caroline Hill (right)

NHIRI 2022–2027

2022 saw the development of our five-year Strategic Plan. This led to an Institute-wide strategy to guide our direction and focus over the next five years.

The Institute has been very successful, building on our National and International reputation and research impact in our four research themes: Discovery and excellence, Technology and innovation, Real-world impact; and A sustainable future.

Objective 1: Support a pipeline of curiosity - driven research to improve health

Strategies & Actions:

- Use large observational data sets for new discoveries
- Conduct high - impact trials or interventions
- Develop and evaluate new research tools or resources

Objective 2: Develop and adopt new and innovative technologies to improve health and quality of life

Strategies & Actions:

- Develop 3D food printing to improve the eating experience for vulnerable communities
- Developing AI and machine learning to anticipate, understand and prevent chronic diseases
- Monitor and explore new ways to utilise technologies to improve health

Objective 3: Scale and innovate discoveries to communities in Western Australia and beyond

Strategies & Actions:

- Become a consumer-facing digital presence
- Be known as an influential stakeholder in decision making
- Design policy briefs / consensus statements or clinical practice guidelines to influence systems change

Objective 4: Connect, support and develop high - performing leaders for a sustainable future

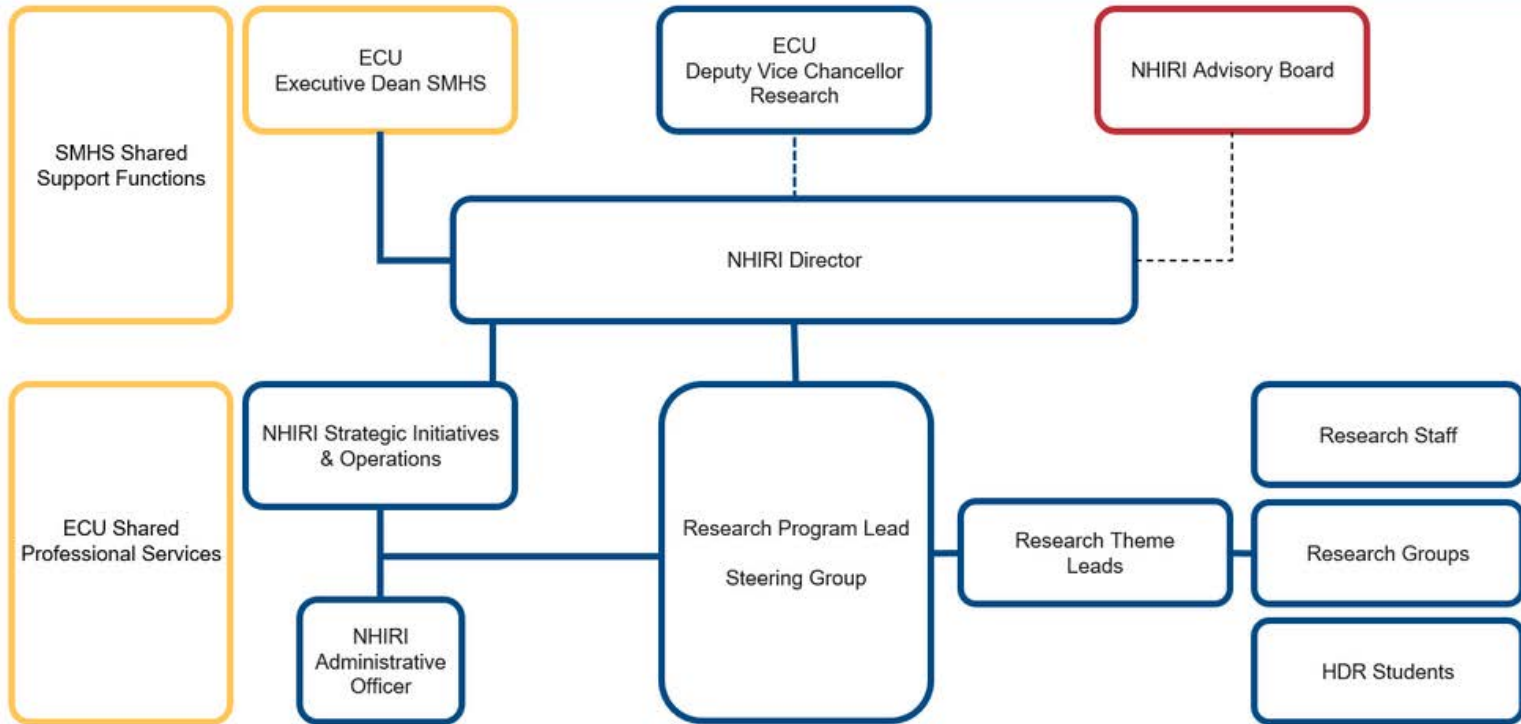
Strategies & Actions:

- Develop mechanisms for a long term view on strategic plan
- Plan and mentor for success
- Identify and develop networks outside the Institute



NHIRI Governance

NHIRI Organisational Structure



NHIRI in the media

ECU's media monitoring service recorded 2,656 media mentions for 2022, with a potential audience reach of 4.5 billion.

Media included:

- New research from Dr Joanna Rees found being confident in the kitchen is not only good for your taste buds: it's also good for your mental health.
- Professor Jonathan Hodgson was featured in online media following the Sixth International Scientific Symposium on Tea and Human Health, reporting that recent high-quality data from long-term prospective studies indicate that higher intakes of tea are associated with reduced risk of vascular dementia, and potentially Alzheimer's disease.
- In conjunction with WA Police, Dr Myles Murphy has led a world-first study to help WA Police Force recruits avoid injury.
- Dr Zulqarnain Gilani delivered a workshop to around 20 children and their parents/ carers on how AI can help predict cardiovascular diseases and Obstructive Sleep Apnea. The children loved to have their 3D photos taken during the workshop and it was fun to see their 3D scans being morphed into one another.
- A collaborative study published in The Lancet Regional Health - Western Pacific, between the Nutrition & Health Innovation Research Institute and the Centre for Precision Health, found that in community-dwelling older women, those with more advanced Abdominal Aortic Calcification (AAC) had higher risk of late-life dementia. The study was led by Dr Marc Sim and Dr Tenielle Porter (CPH), and included Associate Professor Josh Lewis, Professor Simon Laws (CPH), Dr Catherine Bondonno and Professor Jonathan Hodgson.



Late-life dementia test for women

Medical Forum • June 30, 2022

Medical Forum Weekly 2 Min Read



Improving heart health is as easy as popping the kettle on

HELENA VIOLA

And now, through this Heart Foundation-supported research led by ECU's Ben Parminter and his team, including Heart Foundation Future Leadership Fellow Josh Lewis, we better understand that there is an association between a higher intake of flavonoids and less vascular calcification in older women.

Why tea? Well, the study revealed that of the dietary sources of flavonoids tested, people who consumed black tea displayed significantly lower vascular calcification. The benefits seemed to increase with greater tea consumption.

But what if you don't like tea? Those people who chose not to drink black tea still appeared to benefit from consuming other flavonoid-rich foods.

In fact, participants with the highest flavonoid intake sources in their diet, such as fruit, nuts and vegetables. As an added bonus for your heart, these foods contain numerous other nutrients that contribute to overall health and

are part of a heart-healthy eating pattern.

What about red wine and chocolate? A quick Google search will reveal that some of these favourite indulgences contain flavonoids, too. However, we need to consider the overall nutritional value of the food.

The truth is, too much alcohol and chocolate could increase your chances of heart disease among other chronic diseases.

As always, the Heart Foundation recommends limiting alcohol and chocolate foods as part of a heart-healthy eating pattern.

Back on the home front, this WA research is a win for homegrown researchers, and a good example of why we need a ongoing and greater investment in local cardiovascular research.

This research may have been born locally, but it will have a global impact as it has been published in the top-tier American Heart Association

Journal Arteriosclerosis, Thrombosis, and Vascular Biology. It has unlocked a door to greater understanding of heart health, and we look forward to seeing more research in this space.

A Deloitte Access Economics report from 2016 shows that for every dollar invested in R&D returned through productivity. Not despite this, it remains a fact in 2022 that the Australian research funding space is a highly competitive into the cardiovascular research sector is not commensurate with the disease burden.

The good news is we can solve this. With heart disease death, we call on governments, business, and everyday Australians to invest more in research to help save more lives.

To learn more, why not put the kettle on and check out the

Heart Foundation website for more information about healthy eating, physical activity, and how you can donate to life-saving cardiovascular research to help keep Australian families together.

And if you're aged 45 or over (or 30 and over if First Nations), now is a really good time to start a conversation with your GP about having a heart health check.

This 20-minute non-invasive test involves a blood pressure, blood sugar and cholesterol check that will help your GP determine your risk of having a heart attack or stroke within the next five years.

This will help determine the need for additional assessment, and measures that can be adopted to reduce your risk, which may include modifications to your lifestyle, such as physical activity and dietary intake.

Dr Helena Viola is general manager at Heart Foundation WA.



Helping police recruits avoid injury



Home > Health > One cup of nitrate-rich vegetables a day keep heart disease at bay

Heart Health Nutrition

One cup of nitrate-rich vegetables a day keep heart disease at bay

By Knowledge - October 21, 2022



Credit: Natalia Fogarty/ Unsplash



NHIRI in the media cont.

- NHIRI member Ana Gowrea has helped the Shire of Serpentine Jarrahdale become the first local council in WA to endorse comprehensive Local Food Action Plan. The three-year Local Food Action Plan was developed in partnership with ECU, the Shire, Healthway, Western Australian Local Government Association, East Metropolitan Health Service and SJ Food and Farm Alliance.
- An new educational app has proved equally as effective teaching high school students about Meningococcal Disease as classroom-led programs. MIApp was developed by experts including Professor Amanda Devine, Dr Julie Boston, Margaret Miller and Dr Lesley Andrew and other School of Medical & Health Sciences, School of Education and School of Science researchers in collaboration with The Amanda Young Foundation.
- A recent analysis of the Danish Diet, Cancer and Health Study by Dr Nicola Bondonno and PhD Candidate Pratik Pokharel found that potatoes aren't the problem, it's how we prepare them and what we eat them with.
- A study led by PhD candidate Ben Parmenter, found that those with high level of dietary flavonoids were far less likely to have extensive build-up of abdominal aortic calcification, which is a predictor of cardiovascular risk such as heart attack and stroke.
- Researchers from ECU including NHIRI Senior Research Fellow Dr Marc Sim and Research Program Lead A/Prof Josh Lewis, worked with a team of experts across Australia and New Zealand to develop guidelines for sarcopenia's prevention, diagnosis and management in the two countries.
- Research from the NHIRI Team in collaboration with the University of Western Australia has revealed that vitamin K1 may help reduce your risk of fractures later in life.

Why you need vitamin K ... as in 'kale' and other leafy greens



Vitamin D tends to get all the publicity about improving and protecting your bones. But there's increasing evidence that the lesser-known K plays a significant role in promoting bone density and lessening of fractures.

Vitamin K is more often discussed in terms of blood clotting, wh...

Don't be a tater hater

MEGAN FRENCH

The rise in no or low-carb diet culture has at times portrayed potatoes to be public enemy number one.

An Edith Cowan University study has shown that it's not the humble potato putting our health at risk, it's us.

The study led by Nicola Bondonno from ECU's Nutrition and Health Innovation Research Institute has shown health issues associated with potatoes may be due to how people are prepared.

and what with. In positively of diabetes, they're pre- that's not te Pratik

and boiled potatoes, potatoes and with a hey had s have



Put the kettle on! How black tea (and other favourites) may help your health later in life

Publicly released: Tue 22 Nov 2022 at 12:19 AEDT | 14:19 NZDT

KNOWLEDGE SCIENCE REPORT

Home Science Health Mind Earth Space

Home > Heart Health > Vitamin K could benefit your heart health, study finds

Heart Health Vitamins

Vitamin K could benefit your heart health, study finds

By Knowledge - August 14, 2022



Credit: CC0 Public Domain

Scientists from Edith Cowan University found that in vitamin K have

WA researchers discover common bone density scan can indicate dementia risk



John Flint | The West Australian
Tue, 28 June 2022 9:29PM | Comments

Our researchers contribute to Medical Forum magazine, Western Australia's monthly publication for general practitioners and medical specialists, key government people, hospital trainees and corporate subscribers.

BACK TO CONTENTS

Fruit and veg may improve mental wellbeing

By Dr Simone Radavelli-Bagatini, School of Medical & Health Sciences, ECU

Stress is part of our daily lives and can be considered normal to some extent. The stress we feel when we have a work deadline or a competition, for example, prepares our body to react and perform better. However, prolonged or chronic stress can increase the risk of mental and physical health issues such as depression and cardiovascular diseases.

The COVID-19 pandemic has further exacerbated chronic stress and increased physical activity levels, with people reporting increases in tension, being impatient, having an unbalanced mood, or yelling at a loved one more often.

Proven approaches to reduce stress include relaxation, meditation and increased physical activity. New stress busting strategies are also needed. Typically, when stressed, people reach for the so-called comfort foods, (eg, sweets, fatty food, sugary drinks and alcoholic beverages) to attempt to compensate for negative mood and stress. My research focuses on whether diet can be used to reduce chronic stress.

Fruit and vegetables (FV) are considered a cornerstone of a healthy diet. Yet only 50% of Australians eat the recommended two serves of fruit and two serves of vegetables a day. The physical health benefits of FV intake are well known, but remarkably little is known about their mental wellbeing benefits.

Key messages

- Stress is a major health issue and has been exacerbated by the pandemic.
- Diet may be an additional option in stress management.

A short-term (14-day) randomised controlled trial (RCT) has shown that increasing FV intake can improve psychological well-being, while consumption of FV has been associated with lower stress in young people (18-30 years).

However, it is unclear whether these short-term effects may lead to longer-term benefits and whether these benefits are similar to those seen in older adults. To address these gaps, data was used from over 8,000 Australian adults aged and ranging from 25-92 years with dietary and mental wellbeing outcomes including a 30-item perceived stress scale and 10-item depression symptom questionnaire.

Results

In my first study, a higher FV intake was associated with 10% less stress, independent of other lifestyle factors, such as physical activity. These findings indicate the potential benefits of FV intake for stress across the adult lifespan.

The second study explored the relation of specific FV types with perceived stress. We found that a higher consumption of apples

and pears, oranges and other citrus, and bananas, as well as cruciferous, yellow/orange/red, and legume vegetables were associated with 24-31% lower odds of having high perceived stress (highest 25% of the population by age and gender). These findings suggest that eating a 'rainbow' may be more beneficial.

The third study found that greater FV intake was associated with lower odds (16-30%) of tension, worry, and lack of joy/stress reaction. These findings suggest that FV can help alleviate different types of stress, which may be important to tackle specific stressors such as anxiety and lack of joy.

In my fourth study we found a FV-rich diet, consisting of a diverse range of vegetables, particularly yellow/orange/red and leafy green vegetables may help to lower depressive symptoms.

Limitations of this series of studies are that these were observational, which does not allow for causality, we could not determine whether it is the nutrients (eg, vitamins, minerals) or psychological effects of eating brightly coloured FV, or the tasks of preparing and cooking the foods (mindfulness) that may relax individuals and reduce stress.

Taken together, these studies provide further evidence that while we eat may alleviate stress and potentially improve mental wellbeing. Longer-term studies are needed to strengthen current evidence from observational studies and short-term RCTs on the beneficial effects of FV for stress. Results from these studies could be used to refine current guidelines and public health messages.

- References available on request
The author is a research fellow at the Australian & Health Innovation Research Institute and was involved in studies discussed.

CLINICAL UPDATE

Message from the heart: Abdominal aortic calcification for CV risk detection

By A/Prof Joshua Lewis & Dr Cassandra Smith, ECU

Abdominal aortic calcification or AAC is the deposition of calcium within the intimal or medial layers of the aortic wall. The presence of AAC is evidence of cardiovascular disease and has been shown to be a marker of generalized atherosclerosis at peripheral arteries, such as coronary and carotid arteries, and in certain clinical populations and advanced age.

Unlike coronary artery calcifications (CAC), AAC appears to be driven to a lesser extent by traditional atherosclerotic cardiovascular risk factors such as lipids. Instead, low muscle and bone mass and chronic kidney disease appear to be important drivers of higher prevalence and extent of AAC.

AAC can be assessed by repeat readers on the lateral thoracoabdominal aortic view from some assessment images from some aortic machine learning algorithms have been developed to automate this process.

Is AAC normal, and how does it affect the function of the aorta?

A healthy aorta is able to stretch and expand to allow for increased cardiac output. Calcification of the aorta stiffens the vessel wall and reduces its ability to expand, which can lead to increased blood pressure and an increased risk of aortic dissection.

While AAC is common in older people, it is not considered a strength or health marker. In older people, it is not clear what pressure or stressor remains under

Key messages

- Abdominal aortic calcification can be assessed on thoracoabdominal aortic view or bone density assessment.
- AAC is related to higher rates of cardiovascular disease.
- Its findings can assist with reinforcing lifestyle advice to patients.

higher cardiovascular disease (CVD) risk and poorer long-term prognosis in the general population and in people with chronic kidney disease.

AAC is also associated with increased risk of CVD events in increased men and women without CAC. Importantly, AAC also predicts coronary heart disease events in addition to and independent of CAC and is more strongly related to CVD and atherosclerosis.

Taken together, this emerging research suggests assessing AAC may be an opportunity to identify people at risk of CVD events, often before the overt presence of CAC and provides additional prognostic information to CAC.

With regards to other health outcomes, low muscle and bone mass and chronic kidney disease are associated with low bone mineral density and increased risk of osteoporotic fractures.

AAC is inversely related to poorer cognitive function and more frailty. Moderate to severe AAC has been associated with a higher risk of developing dementia in older women. The exact mechanisms remain unclear.

CLINICAL UPDATE



So, what to tell patients if AAC is seen on these images?

Providing feedback to individuals, particularly those with moderate to severe AAC, may be an opportunity to reinforce healthy lifestyle recommendations that improve CVD risk factor control. For example, dietary factors (such as fruit and vegetables) may help to reduce the progression of AAC and the development of clinical CVD.

Multidisciplinary approaches incorporating diet and lifestyle advice and exercise physiologists may be encouraged to help support patients with making these lifestyle changes.

Dr A/Prof Lewis is a senior Foundation Future Leader Fellow and board member of the National Cardiovascular Research Alliance. Dr Smith is an associate professor of geriatrics and postdoctoral research fellow at ECU.

Both authors are members of the Australia Health Innovation Research Institute at ECU.

Author competing interests - ECU has funded a grant for advanced assessment of abdominal aortic calcification. Dr A/Prof Lewis is one of the named members on this patent.

CLINICAL UPDATE

Resistance exercise: frontline defence against sarcopenia

By Dr Cassandra Smith, Exercise Physiologist, & Dr Marc Sim, Nutritionist, ECU

Sarcopenia is the loss of muscle mass in conjunction with a reduction in strength and/or physical performance. Since 2019, sarcopenia was recognised as a disease with its own International Classification of Diseases (ICD-10) secondary to chronic disease (eg, cardiovascular disease and diabetes).

At least five definitions for its clinical identification exist, most include three themes - low muscle mass, strength and physical performance.

Currently, no pharmacological treatment exists for sarcopenia. The most effective intervention to improve muscle mass, strength and such as progressive resistance training combined with a healthy diet that includes adequate dietary protein and energy intake.

The resistance exercise prescription can be summarised as follows: at least three days a week of strength training that includes lower body exercises (squat and lunges) and using a repetition range that can be completed using effort that is heavy to very heavy.

For adults over 65, the general recommendation for daily protein for those undergoing resistance training is 1.2 to 1.5g/kg/day, even more and for those with sarcopenia the requirement may increase to 1.5 to 1.8g/kg/day.

Diet rich in vegetables, providing a plethora of nutrients including vitamins A and E, and fibre to support mucosal health. A daily 75g serve of green leafy and/or cruciferous vegetables (eg, broccoli, cauliflower, cabbage) would represent rich sources for these nutrients.

Most important, including clinical nutrition expertise in the management of chronic disease including sarcopenia should be

Key messages

- Sarcopenia is common in older adults and associated with falls, fractures and cardiovascular disease.
- 30% of older adults are not meeting recommended physical activity guidelines.
- The only intervention consistently shown to improve muscle mass, strength, and physical function in older adults is resistance exercise combined with a balanced diet.

actively promoted to patients as part of their treatment plan.

A surprisingly low number of older adults currently meet exercise guidelines, with only one in four active. Low physical activity and sedentary behaviour are significant risk factors for sarcopenia and other chronic diseases.

Based on official guidelines, adults aged over 65 years should be completing at least 30 minutes a day of physical activity on most days of the week, incorporating activities such as fitness, strength, any physical activity that increases heart rate and steady state activities include weight bearing.

The biggest barrier to exercise participation in older adults is poor health or injury. Yet, resistance training choices (eg, inactivity) greatly to compromised health. Inactivity begins to impact physical health, setting back progress with an individual to first-degree and second-degree disability to improve their physical activity levels.

In our clinical experience many older adults, including those with chronic disease, are under-prescribed exercise by their doctors. We have advised that exercise participation may be unsafe due to



sign or chronic conditions.

It is important to differentiate between physical activity and exercise. Physical activity refers to any movement that uses energy. Exercise is a part of physical activity that is planned, structured, and repetitive. There are many opportunities to be physically active every day, and this should be encouraged for all older adults.

Some easy to implement examples:

- Walk or ride to work
- Stand on the car at the back of the grocery shop
- Walking every block to the supermarket
- Choosing the stairs instead of the lift

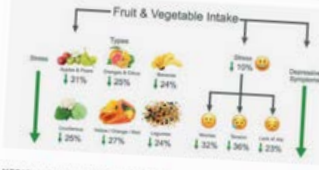
Completing 30 minutes of physical activity in one session is not achieved in smaller increments (eg, three sessions of 10 minutes).

Exercise is more structured and focused approach usually performed for a particular duration of time and is often supervised by an individual and prescribed within a medical plan who has complex exercises prescribed by an accredited exercise physiologist. Appropriate modifications and individualisation can still occur enabling safe exercise participation.

For those with sarcopenia traits, a stronger exercise routine is always recommended that includes resistance training for a general health to refer to an exercise specialist, an individual who can provide a professional opinion on taking into account the patient's medical history, motivation, risk factors and goals.

Dr D Smith is a postdoctoral research fellow and associate exercise physiologist and Dr Marc Sim is a Senior Research Fellow (Nutrition) both at ECU.

Author competing interest - nil



MEDICAL FORUM | MENTAL HEALTH

CLINICAL UPDATE

ACL Rehab - is it all in your head?

By Dr Casey White, Sport and Exercise Physician, Subiaco

An anterior cruciate ligament (ACL) injury presents short and long-term challenges to the patient and the health system.

In Australia, ACL rupture is a surgical priority treatment with a surgical reconstruction (ACL-R) with an annual incidence of 100,000 procedures (2018). This is a 43% increase since 2000 and a more than 700% increase in ACL-R procedures. ACL-R is a 34% increase in ACL-R procedures since 2015 and is the most common ACL-R procedure. ACL-R is the most common ACL-R procedure in males and females. ACL-R is the most common ACL-R procedure in males and females.

Short-term challenges are highlighted by return to sport rates with only 82% of patients returning to some kind of sport and 41% returning to competitive level. Long-term, an increased risk of knee osteoarthritis (OA) (between 10% and 20%) after ACL injury is well established.

ACL injury induces central nervous system adaptation, which may adversely influence rehabilitation outcomes. Psychological factors such as fear-avoidance behaviours and lack of confidence are common and can hinder rehabilitation progress. ACL injury may also influence neurophysiological and neuromuscular adaptation and neuromuscular activation, which may further influence rehabilitation outcomes.

Rehabilitation should incorporate techniques that can manage fear-avoidance behaviours and enhance neuromuscular activation. ACL injury may also influence neurophysiological and neuromuscular adaptation and neuromuscular activation, which may further influence rehabilitation outcomes.

ACL injury may also influence neurophysiological and neuromuscular adaptation and neuromuscular activation, which may further influence rehabilitation outcomes.



Key messages

- ACL injury induces central nervous system adaptation, which may adversely influence rehabilitation outcomes.
- Psychological factors such as fear-avoidance behaviours and lack of confidence are common and can hinder rehabilitation progress.
- ACL injury may also influence neurophysiological and neuromuscular adaptation and neuromuscular activation, which may further influence rehabilitation outcomes.

Rehabilitation should incorporate techniques that can manage fear-avoidance behaviours and enhance neuromuscular activation.

ACL injury may also influence neurophysiological and neuromuscular adaptation and neuromuscular activation, which may further influence rehabilitation outcomes.

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54 | AUGUST 2022

MEDICAL FORUM | CANCER CARE

New Core Members

We would like to welcome our new Core Members who joined us in 2022.



"I'm an accredited exercise physiologist who is passionate about helping older Australians with chronic diseases to create healthy lifestyle habits"

Dr Cassandra Smith

"My focus is on evidence-based practice to develop contemporary clinical practice guidelines and policy that support evidence-informed care"



Dr Annie De Leo

NHIRI Advisory Board

We would like to thank our Advisory Board members who volunteer their time. Their skills and experience are invaluable and help support NHIRI in achieving its purpose and strategic performance.



Professor Moira Sim MBBS, FRACGP, FACHAM, GDipAlcDrugAbStud, GAICD (Chair)

Professor Moira Sim (MBBS, FRACGP, FACHAM, GDipAlcDrugAbStud, GAICD) is the Executive Dean of the School of Medical and Health Sciences at Edith Cowan University, where she leads a multidisciplinary health school. Moira has a broad health and education background as a general practitioner with over 30 years of practice in the community, a specialist addiction medicine physician and an academic with particular expertise in communication in healthcare and interprofessional learning. She is an established leader, educator, innovator and change agent in the health sector and has served on boards of governance for general practice organisations at national, state and local levels. Moira heads a team of medical advisors to the Health and Disability Services Complaints Office and is part of the core education team for Medical Defence Australia National.

Dr Gina Trapp

Dr Gina Trapp is an ARC DECRA Fellow at The University of Western Australia and Head of Food and Nutrition at the Telethon Kids Institute (14 staff/students). She has a Bachelor of Health Science (Nutrition and Psychology) with First Class Honours and a PhD in Public Health. She is also a Registered Public Health Nutritionist recognised by the Nutrition Society of Australia and a former NHMRC Early Career Research Fellow.

With expertise in public health nutrition, nutritional epidemiology and built environments, Dr Trapp leads a multidisciplinary research program helping to understand how the environments within which children live, play and go to school influence the types of foods they eat, their physical activity levels and their weight status (120+ publications). She currently leads seven ARC, Healthway, National Heart Foundation, Cancer Council WA and WA Health Department-funded projects focussing on improving school, community, consumer and cultural food environments to support access to healthy foods in collaboration with key stakeholders and the community (\$8.88M in research funding).

The quality and impact of her research has been formally recognised through a total of 36 awards/prizes at the local, national and international level, including, a West Australian Young Tall Poppy Science Award, recognising her as, "One of Western Australia's most outstanding young scientists".



NHIRI Advisory Board cont.



Dr Joe Kosterich M.B.B.S (WA) 1985

GP, speaker, author, and health industry consultant, Joe is a regular in the media and is often called to give opinions in medico legal cases. He is WA State Medical Director for IPN, Clinical editor of Medical Forum Magazine, Medical Advisor to Medicinal Cannabis company Little Green Pharma, and HIF Insurance. Joe is chairman of the Australian Tobacco Harm Reduction Association, teaches students at both UWA and Curtin Medical schools and has been involved in post graduate education for over 20 years.

Previously Joe held senior positions in the Australian Medical Association and sat on numerous industry and government boards.

Professor Kadambot H.M Siddique

Over 30 years' experience in agricultural research, teaching and management in both Australia and overseas. He has developed a national and international reputation in agricultural science especially in the fields of crop physiology, production agronomy, farming systems, genetic resources, breeding research in cereal, grain and pasture legumes and oilseed crops.

He has published >800 scientific papers, books and book chapters. Professor Siddique was the Highly Cited Researcher in Agricultural Science in 2018, 2019, 2020, 2021 and 2022. He is the Highly Cited Researcher (Hi Ci) in 2021 and 2022 in two categories: (i) Agricultural Sciences (ii) Plant and Animal Science (Thomson Reuters/ Clarivate Analytics). Google Scholar h-index: 102 and citations: 39,533 (11 February 2023).

Fellow of the Australian Academy of Technological Sciences and Engineering, Australian Agricultural Institute, Indian National Academy of Agricultural Sciences, Foreign Fellow of the Pakistan Academy of Sciences and Fellow of African Academy of Sciences (first Australian to be elected to the Academy). Professor Siddique was designated by United National FAO as Special Ambassador for the International Year of Pulses 2016.

Professor Siddique is the recipient of national and international awards including: Urrbrae Memorial Award, Member of the Order of Australia (AM), 2014 Western Australian Year of the Award (CitWA), the Dunhunag Award by China's Gansu Provincial Government. He received the Friendship Award from the Chinese Central Government (the highest award for a foreign expert) in recognition of his outstanding contributions to agricultural science and education in China over the years and was the Western Australian Indian of the Year 2021. Professor Siddique was one of the three finalists for the Western Australian Scientist of the Year 2022 Award.

Professor Siddique has also trained numerous Honours, MSc and PhD students. He has developed an extensive network of scientists within Australia and has also established a diverse range of overseas (China, India, Turkey, Syria, Iraq, Iran, Saudi Arabia, Oman, Malaysia, East Timor, Nepal, Bangladesh, Pakistan, Europe, Canada, USA) collaborative research and educational projects. He holds a number of national and international committee positions.



NHIRI Advisory Board cont.



Professor Jason Wu, PhD, FAHA

Professor Jason Wu is a Professor in the UNSW Faculty of Medicine & Health and the Head of the Nutrition Science Program at the George Institute for Global Health. His research focuses on improving health and wellbeing through developing innovative 'Food is Medicine' programs, evaluation of population food policies, and figuring out how dietary factors drive or prevent diseases. Jason's research has shaped nutrition guidelines and policies in Australia and globally, featuring in the likes of British Medical Journal and American Journal of Clinical Nutrition.

Professor Robin Daly, PhD, FASMF, FASBMR

Professor Robin Daly, PhD, FASMF, FASBMR, holds the position of Chair in Exercise and Ageing, co-leads the Preventing and Managing Chronic Diseases research domain and is Head of the Musculoskeletal Health and Mobility group within the Institute for Physical Activity and Nutrition at Deakin University, Melbourne, Australia. He has 25 years of experience in conducting clinical, translational and implementation trials to understand how exercise and nutritional approaches can prevent and manage diseases, particularly osteoporosis, sarcopenia, falls and fractures, type 2 diabetes and cognitive related disorders. His work has led to the implementation of evidence-based, community exercise programs and nutritional products to optimise musculoskeletal health and body composition. He has published (co-edited) 3 books and over 235 peer-reviewed articles and 2021-22 was ranked in the top 2% of cited researchers in the field of Endocrinology and Metabolism. He is immediate-Past President of the Australian and New Zealand Society for Sarcopenia and Frailty Research (ANZSSFR), a member of the medical and scientific advisory committee of Healthy Bones Australia, a council member of the International Federation of Musculoskeletal Research Societies (IFMRS) and a past (2014-19) council member of the Australian and New Zealand Society for Bone and Mineral Research (ANZBMS). He is also a Fellow of Sports Medicine Australia and the American Society for Bone and Mineral Research (ASBMR).



Angela Boothroyd

Angela Boothroyd qualified with a BSc majoring in microbiology and genetics and then went on to do a MSc Engineering with a focus on microbiologically induced corrosion. She worked as a researcher and then as a partner in a consulting laboratory dealing mainly with biodeterioration. An inherited retinal degenerative condition, resulting in visual impairment, eventually forced her out of this work. Angela is now convenor of the Perth group of Retina Australia and a consumer member of Lions Eye Institute Consumer and Community Advisory Panel. She is passionate about healthy mind and body through good nutrition and exercise.

NHIRI Advisory Board cont.



Dr Phil Dolan SF Fin FAICD

Phil Dolan is an active angel investor with a focus on female founded startups. He is also an adjunct professor at the La Trobe University Business School, where he teaches Creative Problem Solving. He has also taught Portfolio Management at Masters level. He was previously Dean of the Business School at the University of Western Australia, and before entering academia worked for over a decade in the Investment Management arm of Macquarie Bank. His education includes degrees in Mathematics, IT, Business and a PhD in Finance from Stanford University. He has been a member of a number of Investment Committees and Boards of educational institutions, and is a member of FINSIA's Victorian Regional Council. He is a Senior Fellow of FINSIA, and a Fellow of the Australian Institute of Company Directors.

Prof Kevin D Croft, PhD FRSC

PhD, University of Western Australia, 1978
Fellow of the Royal Society of Chemistry

Prof Kevin Croft is a Professorial Fellow and Head of Division of Cardiovascular Science in the School of Biomedical Science at the University of Western Australia. He has research interests in nutritional biochemistry, biomarkers of oxidative damage, atherosclerosis and the mechanism of vascular protection by dietary polyphenols. He has served as the Editor-in-Chief of the Royal Society of Chemistry journal Food and Function from 2013-2017. He has over 300 peer reviewed publications. He was on the advisory group that put together the National Heart Foundation of Australia position statement on "Antioxidants in foods, drinks and supplements for cardiovascular health".



Professor Peter Thompson

Professor Peter Thompson graduated from Medicine and did his postgraduate degree in Medicine at the University of Western Australia. He trained in cardiology at Royal Melbourne Hospital and the Brigham and Women's Hospital and Harvard University in Boston. Professor Thompson is skilled in project management and team management, assisted by his completion of MBA qualifications in 2000. At Sir Charles Gairdner Hospital he was Director of the Coronary Care Unit from 1975 to 2005, Head of Cardiovascular Medicine from 1995 to 2005 and Director of Research from 2005 to 2015. He is currently Consultant Cardiologist and Head of the Heart Research Institute at Sir Charles Gairdner Hospital, Clinical Professor of Medicine, University of Western Australia. He is also Deputy Director of the Harry Perkins Institute of Medical Research.

NHIRI Advisory Board cont.



Rohan Prince

Rohan Prince has 22-year experience working in State Government in various roles and since 2017 has been the Director of Horticulture and Irrigated Agriculture at the Department of Primary Industries and Regional Development. He is an enthusiastic result driven, leader and manager with a broad range of experience in agricultural research, development, and extension. His current role leads Fruit Vegetable and Northern Irrigated Cropping R&D Program with oversight of activities and staff from Albany to Kununurra.

Rohan was the 2011 Winner, Industry Impact Award, AUSVEG National Awards for Excellence, and a finalist for the 2010 and 2011 for Researcher of the Year, AUSVEG National Awards for Excellence, Finalist 2012 Australian Water Association WA State Water Awards – Young Professional of the Year.

Prof Moira Clay

Professor Moira Clay is one of Australia's foremost experts in research strategy. She is a transformational leader and a highly experienced facilitator, with an extensive knowledge of the changing research agenda. She has a reputation for professionalism and integrity and is known for her collaborative and inclusive approach. Moira has extensive senior executive experience in research institutes in Victoria, NSW and WA - including 6 months as Acting Director of the Telethon Kids Institute. She was President of two peak bodies – the Australian Society for Medical Research (2003) and Australasian Research Management Society (ARMS) (2013), leading significant public, political and scientific advocacy initiatives. In 2018, she was nominated as a Fellow of ARMS, acknowledging her enduring and substantial contributions to research management, and her active philanthropic involvement was profiled in a TEDx Fremantle talk. In 2011, she completed the Eureka Institute International Certificate in Translational Medicine. She is currently the Chair of the Advisory Board of the Menzies Institute.

Moira founded Moira Clay Consulting in 2013, propelled by her drive to help Australian health and medical research leaders achieve transformative health benefits for the community. MCC has built a strong reputation for adding value to health and medical research organisations (including medical research institute's; hospitals, funding bodies; universities; peak bodies and major initiatives) across Australia.



NHIRI Team



Professor
Jonathan Hodgson



Associate Professor
Josh Lewis



Professor
Amanda Devine



Cheryl Croce



Dr Lauren Blekkenhorst



Dr Catherine Bondonno



Associate Professor
Therese O'Sullivan



Dr Marc Sim



Dr Mary Kennedy



Dr Liezhou Zhong



Dr Nicola Bondonno



Professor David Suter



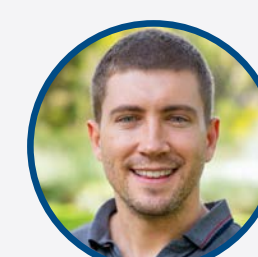
Dr Jack Dalla Via



Associate Professor
Rae-Chi Huang



Dr Zulqarnain Gilani



Dr Myles Murphy



Dr Simone Radavelli-Bagatini



Dr Cassandra Smith



Dr Annie De Leo



Bianca Lovi

Externally funded research projects and fellowships active in 2022

Projects

Research Team	Project Title	Funding Scheme
Bondonno, C., Hodgson, J., Dimmock, J., Lewis, J., Schousboe, J., Whitehead, L., Sim, M.G-B, Dalla Via, J., Bondonno, N., Bucks, R., Sim, M., Schultz, C., Kennedy, M., Laws, S., Woodman, R.	Getting to the heart of healthy aging: a behaviour change program to promote dietary pattern changes	National Health and Medical Research Council, MRFF - Dementia, Ageing and Aged Care Mission
Bondonno, C., Christophersen, C., Hodgson, J., Bondonno, N., Schultz, C., Croft, K.	Pardon the vegetables: how nitrate source determines health impact	Royal Perth Hospital Medical Research Foundation, Springboard Grants
Devine, A., Marino, M., Lewis, J., Prince, R., Miller, M., Boston, J., Tay, G., Forlano, R., Hill, J.	Investing in your bones: supporting lifelong health and performance	Arthritis Foundation of WA, Grant
Murphy, M., Lewis, J., McCaskie, C., Hart, N., Mosler, A.	Improving the health and performance of Western Australian Police Force recruits by developing an injury and physical performance surveillance system and quantifying the financial burden of injury	WA Police, Grant
Wallace, R.	Little Aussie Bugs Educational book set	Channel 7 Telethon Trust, Grant
Bondonno, C.	Nitrate and human health – villain or superhero?	Department of Health WA, Near Miss Merit Awards
Fayyazifar, N., Suter, D., Maiorana, A., Masek, M.	Developing a novel deep learning architecture for automatic cardiac arrhythmia detection and classification	Department of Jobs, Tourism, Science and Innovation, WA Science Industry PhD Fellowship Program

Externally funded Research projects and fellowships active in 2022 cont.

Projects cont.

Research Team	Project Title	Funding Scheme
Bondonno, C.	Nitrate: the Dr. Jekyll and Mr. Hyde of human health?	Department of Health WA, WA Near-miss Awards: Ideas
Suter, D., Mehizadeh, M., Hiew, J., Vignarajan, J., Wood, F., Hamilton, E., Ritter, J., Goodred, C., Manning, L., McLeod, G., Hendrie, D., Gupta, A., Islam, S.M.S., O'Hanlon, S.-M., Gibson, D., Saha, S., Berghuber, A., Masek, M., Abu-Khalaf, J.M., Abela, B.	Better and faster than the human eye: artificial intelligence and computational radiomics for foot x-rays in patients with diabetes-related foot infections	Department of Health WA, Research Translation Projects
Gilani, S.Z., Carter, O., Markovic, C., von Mollendorf, D., Lloyd, A., Howard, Z., Hong, J.	Dynamic two-way communication using gestures for human-machine teaming	Department of Jobs, Tourism, Science and Innovation, Defence Science Collaborative Research Grants
Sim, M.	A novel machine-learning approach to reduce falls in older community-dwelling Australians	Department of Health WA, WA Near-miss Awards: Ideas
Zhong, L.	Three-dimensional fruit and vegetable-based texture modified food printing in Australian residential aged care: A proof-of-concept study	Department of Health WA, WA Near-miss Awards: Ideas
Andrew, L. Wallace, R., Estai, M.	Primary carers' knowledge and practices of infant oral health promotion	Alliance for a Cavity-Free Future
Huang, R-C.	Early Life Prevention of Childhood Obesity and Lifelong Non-Communicable Diseases	Department of Health WA, WA Near-miss Awards: Emerging Leaders Program
Huang, R-C.	Lifecycle – Early Life Stressors and LifeCycle Health	National Health and Medical Research Council, European Union Collaborative Research Grants

Externally funded Research projects and fellowships active in 2022 cont.

Projects cont.

Research Team	Project Title	Funding Scheme
Blekkenhorst, L.	Dietary nitrate intake and its associations with cardiometabolic, cognitive and mental health outcomes	Raine Medical Research Foundation, 2021 Healy Research Collaboration Awards
Murphy, M., Rio, E., D'Allesandro, P., Whife, C.	The efficacy of Transcranial direct current stimulation during rehabilitation following Anterior Cruciate Ligament (ACL) reconstruction on functional outcomes and return to play timelines. A double-blind randomised controlled trial (The TACL study)	Orthopaedic Research Foundation of WA, Grant
Bellinge, J., Hillis, G., Schultz, C., Hodgson, J.	Prevention of Aortic Stenosis progression Phylloquinone Ossification Reduction Trial (PASSPORT)	Heart Foundation, NHF - Vanguard Grants
Blangero, J., Brennecke, S., Beilin, L., Hui, J., Melton, P., Huang, R-C	Epigenetic Biomarker Discovery for Cardiovascular Disease Risk Stratification of Women Following Preeclampsia	National Health and Medical Research Council, Ideas grants
Sambell, R., Prideaux, S., Devine, A., Goodwin, S.	Local Eats	Healthway (WA Health Promotion Foundation), Healthy Communities Grant
Hodgson, J., Lewis, J., Devine, A., Schousboe, J., Woodman, R., Jackson, B., Dimmock, J.	Developing a novel approach to improve diet and lifestyle	National Health and Medical Research Council, MRFF Preventive and Public Health
Hodgson, J.	Medical and Health Research Infrastructure Fund (MHRIF) 2021	Department of Health WA, Medical and Health Research Infrastructure
Verhasselt, V., O'Sullivan, T., Cooper, M., Finlay-Jones, A., Srinivasjois, R., Conolly, L.	Colostrum, the missing link for healthy children in Western Australia	Channel 7 Telethon Trust, Grant
Bondonno, N., Hodgson, J., Tjonneland, A. Kyro, C.	Is the source of dietary nitrate a determinant of its impact on cancer risk?	Raine Medical Research Foundation, Raine/Robson Fellow Travel Award

Externally funded Research projects and fellowships active in 2022 cont.

Projects cont.

Research Team	Project Title	Funding Scheme
Bondonno, N., Hodgson, J., Gislason, G., Murray, K., Bondonno, C., Dalgaard, F.	Investigating the Relationship between Dietary Components and Cardiometabolic Disease	Raine Medical Research Foundation, 2020 Healy Research Collaboration Award
Suter, D., Schousboe, J., Cootes, T., Prince, R., Harvey, N., Kiel, D., Islam, S.M.S	Automated methods for evaluating structural vascular disease	National Health and Medical Research Council, Ideas grants
Lewis, J., Suter, D., Schousboe, J., Cootes, T., Prince, R., Harvey, N., Kiel, D., Islam, S.M.S.	Predicting falls in the elderly: A novel machine learning approach	Edith Cowan University, Australia-Germany JRC Scheme (UA-DAAD)
Lewis, J.	Perth Longitudinal Study of Ageing Women	Department of Health WA, Future Health Research and Innovation Fund – Biobank Interim Support Program 2021
Lewis, J.	A novel machine-learning approach to reducing falls and their burden in older Australians	Department of Health WA, Near Miss Merit Awards
Lewis, J.	Bone tired: Better understanding of vascular-bone ageing	Rebecca L Cooper Medical Research Foundation Ltd, Grant
Lewis, J.	A change of heart: developing a novel tool to alter the course of cardiovascular disease	Department of Health WA, Near Miss Merit Awards
Bloomfield, L.E., Westphal, D., Barwood, D.M., Miller, M.R., Boston, J., Howell, D., Andrew, L.J., Devine, A., Masek, M.	Meningococcal Infection, Awareness Prevention and Protection (Mlapp) – Improving and evaluating adolescent access to meningococcal education through the use of an app	Lotterywest, Grant

Externally funded Research projects and fellowships active in 2022 cont.

Projects cont.

Research Team	Project Title	Funding Scheme
Byrne, M.F., Partington, G.P., Anderson, K.L., Shaw, T., Miller, M.R., Lester, L., Gower, G.C., Cross, D., Devine, A.	Evaluation of Foodbank WA s School Breakfast and Food Nutrition Program (01/2015FBWA)	Foodbank, Grant
Miller, M.R., Waters, S.K., Lombardi, K.L., Cross, D.S., Pearce, N.L., Baker, S.L., Jung, J.H., Medley, S., Devine, A., Hearn, L.A., Fletcher, A.C.	Request for food and nutrition curriculum support materials as part of the WA Healthy Children Program – K-10 School Food and Nutrition Curriculum Support Materials	Department of Health WA, WA Healthy Children Program
Gilani, S.Z., Carter, O., Markovic, C., von Mollendorf, D., Lloyd, A., Howard, Z., Hong, J.	Dynamic two-way communication using gestures for human-machine teaming	Department of Jobs, Tourism, Science and Innovation, Defence Science Centre DaRT Seed Grant
Fortington, L.V., Allen, G., Murphy, M.C., Hart, N.H	Injury epidemiology in Western Australia Police recruits: A retrospective cohort study	WA Police, Grant
Sim, M	Reducing falls and their burden in older Australians	Department of Health WA, Near Miss Merit Awards
Blekkhorst, L.	Vegetable types and their bioactives: Growing the evidence for cardiovascular benefits	National Health and Medical Research Council, Investigator grants
Giglia, R., Cooper, M., Binns, C., O'Sullivan, T., Silva, D., Moorhead, A.	Helping new mums to be better breastfeeders – before their babies are even born	Department of Health WA, Near Miss Merit Awards
O'Sullivan, T., Moorhead, A., Binns, C., Silva, D., Demirci, J.R., Cooper, M., Giglia, R.	Helping new mums to be better breastfeeders – before their babies are even born	Stan Perron Charitable Trust, New Child Health Research Grant
Miller, M.R., Devine, A.	What motivates and supports primary school teachers to teach nutrition?	Healthway (WA Health Promotion Foundation), Healthway – Scholarship

Externally funded Research projects and fellowships active in 2022 cont.

Projects cont.

Research Team	Project Title	Funding Scheme
Latino, C. Christophersen, C.T. Mehta, S., Gianatti, E., Devine, A., Lo, J.S.H.	The Effect of Dietary Resistant Starch on Maternal Glycaemia and the Gut Microbiome in Gestational Diabetes	Spinnaker Health Research Foundation, Edith Cowan University Spinnaker Explorers Grant
Christophersen, C.T., Grosse, C., Devine, A.	Application of a plant based diet in active Ulcerative Colitis (UC)	St John of God Health Care, Scholarships to support Industry Engagement PhD Projects
Abbiss, C. Christophersen, C.T., H.J., Devine, A.	Influence of Enzyme Rich Malt Extract on gut health symptoms of irritable bowel syndrome and endurance exercise performance	Ateria Health Australia Pty Ltd, Grant
Cruickshank, T., Ciccone, N.A., Blacker, D., Stanley, M.J., Turner, M., Van Der Groen, O.L., Learmonth, Y., Bartlett, D.M., Devine, A., Laws, S., Lo, J.S.H.	The feasibility and therapeutic utility of a 12-week telehealth delivered environmental enrichment program for young stroke survivors experiencing cognitive impairment	Perron Institute for Neurological and Translational Science, Neurotrauma Research Program
Gowrea, A.M., Godrich, S., Sambell, R., Andrew, L.J., Devine, A., Masek, M., Trent, A.M.	Pathway to healthy food environments: a guide for local governments in Western Australia	Healthway (WA Health Promotion Foundation), Healthway - Grant
Sim, M.G.B., Abbiss, C., Ciccone, N.A., Newton, R., Edwards, D., Cruickshank, T., Stanley, M.J., Boxall, K., Van Der Groen, O., Devine, A., Laws, S.	Develop a systematic profiling of neurological conditions that will facilitate personalised treatment and streamline service delivery	Multiple Sclerosis Society of Western Australia, MS WA - Research funding for social and applied research
Godrich, S., Humphreys, E., Zivkovic, S., Stoneham, M., Devine, A., Bernhagen, M.	Food Community: A systemic approach to support healthy food availability, access and use across regional Western Australia	Healthway (WA Health Promotion Foundation), Health Promotion Project Grant
Newton, R., Christophersen, C.T., Galvao, D. A., Taaffe, D.R., Broadhurst, D.I., Hart, N. H., Devine, A., Spry, N.A.	An exploratory study to determine if exercise can impact the gut microbiota composition of men receiving androgen suppression therapy for prostate cancer	Prostate Cancer Foundation of Australia, Grant

Externally funded Research projects and fellowships active in 2022 cont.

Projects cont.

Research Team	Project Title	Funding Scheme
Galvao, D.A., Hayne, D., Newton, R., Joseph, D., Tang, C., Taaffe, D.R., Chambers, S., Devine, A., Lopez Da Cruz, P., Spry, N.A.	Weight loss for overweight and obese prostate cancer patients: a randomised trial of a clinic-based versus telehealth delivered exercise and nutrition intervention	Cancer Council of WA Inc, Prostate Cancer Research Initiative
Seet, P.-S., Dowse, A.E., Klarin, A., Suter, D., Sharafizad, J., Duczynski, G.A., Johnstone, M.N., Marceddo, A.D., Cripps, H.D., Jones, J.	Investigating the opportunities and challenges posed by disruptive and converging technologies in Cyber, IoT, AI/ autonomous technologies to the mission, design, structure, operations and future roles and planning of Defence and the Australian Defence Force	Department of Defence, Strategic Policy Grants Program
Suter, D.	Tensor and Hypergraph Methods in Fitting Visual Data	Australian Research Council, Grant - Discovery Projects
Abu-Khalaf, J.M., Suter, D., Shitov, D.	Developing a Framework for Speech Recognition and understanding in digital learning contexts	Science and Industry Endowment Fund, SIEF - Ross Metcalf Stem Business Fellowship

Externally funded Research projects and fellowships active in 2022 cont.









Fellowships

Member	Project Title	Funding Scheme
Dr Mary Kennedy	Exploring the gap in supportive cancer care in rural and remote WA	Department of Health WA, Future Health Research and Innovation Fund - Implementation Science Fellowship
Dr Catherine Bondonno	Nitrate and human health - villain or superhero?	Royal Perth Hospital Medical Research Foundation, Career Advancement Fellowship
Dr Lauren Blekkenhorst	Stronger evidence for the cardiovascular health benefits of specific vegetables and their bioactive compounds	Heart Foundation, NHF - Postdoctoral Fellowships
A/Prof Josh Lewis	Developing & evaluating a novel tool for primary prevention of clinical cardiovascular disease	Heart Foundation, NHF - Future Leader Fellowships
Dr Nicola Bondonno	Variations in flavonoid metabolism as an explanation for inter-individual differences in physiological responses to flavonoid-rich foods	National Health and Medical Research Council, Early Career Fellowship
Dr Marc Sim	Novel strategies to reduce the risk of falls and associated injury in older Australian	Royal Perth Hospital Medical Research Foundation, Career Advancement Fellowship
Dr Marc Sim	Preventing falls in older Australians: an appetite for change	Department of Health WA, WA Near-miss Awards: Emerging Leaders Program










2022 Publications

	Title	Q1 Journal	Impact Factor
1	Adu, M. D., Bondonno, C. P., Parmenter, B. H., Sim, M., Davey, R. J., Murray, K., Radavelli-Bagatini, S., Magliano, D. J., Daly, R. M., Shaw, J. E., Lewis, J. R., Hodgson, J. M., & Bondonno, N. P. (2022). Association between non-tea flavonoid intake and risk of type 2 diabetes: the Australian diabetes, obesity and lifestyle study. <i>Food and Function</i> , 13(8), 4459–4468. https://doi.org/10.1039/d1fo04209b		6.317
2	Alcala, K., Mariosa, D., Smith-Byrne, K., Nasrollahzadeh Nesheli, D., Carreras-Torres, R., Ardanaz Aicua, E., Bondonno, N., Bonet, C., Brunström, M., Bueno-De-Mesquita, B., Chirlaque, M., Christakoudi, S., Heath, A., Kaaks, R., Katzke, V., Krogh, V., Ljungberg, B., Martin, R., May, A., Melander, O., Palli, D., Rodriguez-Barranco, M., Sacerdote, C., Stocks, T., Tjønneland, A., Travis, R., Vermeulen, R., Chanock, S., Purdue, M., Weiderpass, E., Muller, D., Brennan, P., Johansson, M. (2022). The relationship between blood pressure and risk of renal cell carcinoma. <i>International Journal of Epidemiology</i> , 51(4), 1317–1327. https://doi.org/10.1093/ije/dyac042 .		9.685
3	Andrew, L., Barwood, D., Boston, J., Masek, M., Bloomfield, L., & Devine, A. (2022). Serious games for health promotion in adolescents – a systematic scoping review. <i>Education and Information Technologies</i> . https://doi.org/10.1007/s10639-022-11414-9		3.666
4	Anokye, R., Jackson, B., Dimmock, J., Dickson, J. M., Blekkenhorst, L. C., Hodgson, J. M., Lewis, J. R., & Stanley, M. (2022). Psychological distress and quality of life in asymptomatic adults following provision of imaging results for prevention of cardiovascular disease events: a scoping review. <i>European Journal of Cardiovascular Nursing</i> . https://doi.org/10.1093/eurjcn/zvac047		3.593
5	Barden, A. E., Huang, R. C., Beilin, L. J., Rauschert, S., Tsai, I. J., Oddy, W. H., & Mori, T. A. (2022). Identifying young adults at high risk of cardiometabolic disease using cluster analysis and the Framingham 30-yr risk score. <i>Nutrition, metabolism, and cardiovascular diseases : NMCD</i> , 32(2), 429–435. https://doi.org/10.1016/j.numecd.2021.10.006		4.666
6	Bauer, C., Tacey, A., Garnham, A., Smith, C., Woessner, M.N., Lin, X., Zarekookandeh, N., Hare, D.L., Lewis, J.R., Parker, L. and Levinger, I. (2022), The Effects of Acute High-Intensity Interval Exercise and Hyperinsulinemic-Euglycemic Clamp on Osteoglycin Levels in Young and Middle-Aged Men. <i>JBMR Plus</i> , 6: e10667. https://doi.org/10.1002/jbm4.10667		3.500
7	Bellinge, J. W., Francis, R. J., Lee, S. C., Bondonno, N. P., Sim, M., Lewis, J. R., Watts, G. F., & Schultz, C. J. (2022). The effect of vitamin K1 on arterial calcification activity in subjects with diabetes mellitus: a post hoc analysis of a double-blind, randomized, placebo-controlled trial. <i>American Journal of Clinical Nutrition</i> , 115(1), 45–52. https://doi.org/10.1093/ajcn/nqab306		8.472
8	Bellinge, J. W., Francis, R. J., Lee, S. C., Vickery, A., Macdonald, W., Gan, S. K., Chew, G. T., Phillips, M., Lewis, J. R., Watts, G. F., & Schultz, C. J. (2022). The effect of Vitamin-K1 and Colchicine on Vascular Calcification Activity in subjects with Diabetes Mellitus (ViKCoVaC): A double-blind 2x2 factorial randomized controlled trial. <i>Journal of nuclear cardiology : official publication of the American Society of Nuclear Cardiology</i> , 29(4), 1855–1866. https://doi.org/10.1007/s12350-021-02589-8		3.872









2022 Publications cont.

	Title	Q1 Journal	Impact Factor
9	Berman, Y. E., Doherty, D. A., Mori, T. A., Beilin, L. J., Ayonrinde, O. T., Adams, L. A., Huang, R. C., Olynyk, J. K., Keelan, J. A., Newnham, J. P., & Hart, R. J. (2022). Associations between Prenatal Exposure to Phthalates and Features of the Metabolic Syndrome in Males from Childhood into Adulthood. <i>International Journal of Environmental Research and Public Health</i> , 19(22). https://doi.org/10.3390/ijerph192215244		4.614
10	Bernier-Jean, A., Beruni, N. A., Bondonno, N. P., Williams, G., Teixeira-Pinto, A., Craig, J. C., & Wong, G. (2022). Exercise training for adults undergoing maintenance dialysis. <i>Cochrane Database of Systematic Reviews</i> , 2022(1). https://doi.org/10.1002/14651858.CD014653		11.874
11	Blekkhorst, L., Ride, K., Wallace, R., Eades, S., McAullay, D., Godrich, S. (2022). Healthy lifestyle initiatives for increasing fruit and vegetable intake among Aboriginal and Torres Strait Islander peoples: a rapid review. <i>Applied Physiology, Nutrition and Metabolism</i> , 47(2), 115-123. https://doi.org/https://doi.org/10.1139/apnm-2021-0076		3.016
12	Bondonno, N., Parmenter, B., Dalgaard, F., Murray, K., Rasmussen, D., Kyrø, C., Cassidy, A., Bondonno, C., Lewis, J., Croft, K., Gislason, G., Scalbert, A., Tjønneland, A., Overvad, K., Olsen, A., Hodgson, J. (2022). Flavonoid intakes inversely associate with chronic obstructive pulmonary disease in smokers. <i>European Respiratory Journal</i> , 60(2), article number 2102604. https://doi.org/10.1183/13993003.02604-2021		9.553
13	Chapman, N., Thomas, E. E., Tan, J. T. M., Inglis, S. C., Wu, J. H. Y., Climie, R. E., Picone, D. S., Blekkhorst, L. C., Wise, S. G., Mirabito Colafella, K. M., Calkin, A. C., & Marques, F. Z. (2022). A roadmap of strategies to support cardiovascular researchers: from policy to practice. <i>Nature Reviews Cardiology</i> . https://doi.org/10.1038/s41569-022-00700-1		49.421
14	Charng, J., Ansari, A. S., Bondonno, N. P., Hunter, M. L., O'Sullivan, T. A., Louca, P., Hammond, C. J., & Mackey, D. A. (2022). Association between dietary niacin and retinal nerve fibre layer thickness in healthy eyes of different ages. <i>Clinical & experimental ophthalmology</i> , 50(7), 736-744. https://doi.org/10.1111/ceo.14120		4.383
15	Chuah, W., Tennakoon, R., Hoseinnezhad, R., Bab-Hadiashar, A., & Suter, D. (2022). ITSA: An Information-Theoretic Approach to Automatic Shortcut Avoidance and Domain Generalization in Stereo Matching Networks. <i>IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)</i> , pp. 13012-13022, doi: 10.1109/CVPR52688.2022.01268.		NA
16	Chuah, W., Tennakoon, R., Hoseinnezhad, R., Suter, D., Bab-Hadiashar, A. (2022). Semantic Guided Long Range Stereo Depth Estimation for Safer Autonomous Vehicle Applications. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 1(1), 1. https://doi.org/10.1109/TITS.2022.3170870 .		4.777
17	Dalla Via, J., Sim, M., Schousboe, JT., Kiel, DP., Zhu, K., Hodgson, J., Gebre, A., Daly, RM., Prince, RL., Lewis, J. (2022). Association of abdominal aortic calcification with peripheral quantitative computed tomography bone measures in older women: The Perth Longitudinal Study of Ageing Women. <i>Calcified Tissue International</i> , 111(2022), 485-494. https://doi.org/10.1007/s00223-022-01016-5 .		4.227





2022 Publications cont.

	Title	Q1 Journal	Impact Factor
18	Dimou, N., Omiyale, W., Biessy, C., Viallon, V., Kaaks, R., O'Mara, T.A., Aglago, E.K., Ardanaz, E., Bergmann, M.M., Bondonno, N.P., Braaten, T., Colorado-Yohar, S.M., Crous-Bou, M., Dahm, C.C., Fortner, R.T., Gram, I.T., Harlid, S., Heath, A.K., Idahl, A. (2022) Cigarette Smoking and Endometrial Cancer Risk: Observational and Mendelian Randomization Analyses, <i>Cancer Epidemiology Biomarkers and Prevention</i> , 31 (9), pp. 1839 - 1848.		4.090
19	Doan, A.D., Sasdelli, M., Suter, D., & Chin, T-J. (2022). A Hybrid Quantum-Classical Algorithm for Robust Fitting. <i>IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)</i> . pp. 417-427, doi: 10.1109/CVPR52688.2022.00051.		NA
20	Ferreira, M., Cronjé, H., Van Zyl, T., Bondonno, N., & Pieters, M. (2022). The association between an energy-adjusted dietary inflammatory index and inflammation in rural and urban Black South Africans. <i>Public Health Nutrition</i> , 25(12), 3432-3444. doi:10.1017/S136898002100505X		4.777
21	Fraser, S. F., Gardner, J. R., Dalla Via, J., & Daly, R. M. (2022). The Effect of Exercise Training on Lean Body Mass in Breast Cancer Patients: A Systematic Review and Meta-analysis. <i>Medicine and science in sports and exercise</i> , 54(2), 211-219. https://doi.org/10.1249/MSS.0000000000002792		6.289
22	Fyfe, JJ., Dalla Via, J., Jansons, P., Scott, D., Daly, RM. (2022). Feasibility and acceptability of a remotely delivered, home-based, pragmatic resistance 'exercise snacking' intervention in communitydwelling older adults: a pilot randomised controlled trial. <i>BMC Geriatrics</i> , 22(1), 521. https://doi.org/10.1186/s12877-022-03207-z .		4.076
23	Galvão, D. A., Taaffe, D. R., Hayne, D., Lopez, P., Lyons-Wall, P., Tang, C. I., Chambers, S. K., Devine, A., Spry, N., Jeffery, E., Kudiarasu, C., Joseph, D., & Newton, R. U. (2022). Weight loss for overweight and obese patients with prostate cancer: a study protocol of a randomised trial comparing clinic-based versus Telehealth delivered EXercise and nutrition intervention (the TeLEX trial). <i>BMJ Open</i> , 12(6), e058899. https://doi.org/10.1136/bmjopen-2021-058899		3.007
24	Gebre, A. K., Lewis, J. R., Leow, K., Szulc, P., Scott, D., Ebeling, P. R., Sim, M., Wong, G., Lim, W. H., Schousboe, J. T., Kiel, D. P., Prince, R. L., & Rodríguez, A. J. (2022). Abdominal Aortic Calcification, Bone Mineral Density, and Fractures: A Systematic Review and Meta-analysis of Observational Studies. <i>The Journals of Gerontology: Series A</i> . https://doi.org/10.1093/gerona/glac171		6.591
25	Gebre, A. K., Prince, R. L., Schousboe, J. T., Kiel, D. P., Thompson, P. L., Zhu, K., Lim, W. H., Sim, M., & Lewis, J. R. (2022). Calcaneal quantitative ultrasound is associated with all-cause and cardiovascular disease mortality independent of hip bone mineral density. <i>Osteoporosis International</i> , 33(7), 1557-1567. https://doi.org/10.1007/s00198-022-06317-x		5.071
26	Gebre, A., Sim, M., Dalla Via, J., Rodríguez, A.J., Hodgson, J., Bondonno, C., Thompson, P.L., Prince, R.L., Lewis, J. (2022). Measures of carotid atherosclerosis and fall-related hospitalization risk: The Perth Longitudinal Study of Ageing Women. <i>Nutrition Metabolism and Cardiovascular Diseases</i> , -(), -. https://doi.org/10.1016/j.numecd.2022.10.003 .		4.666

2022 Publications cont.

	Title	Q1 Journal	Impact Factor
27	Gilani, S. Z., Sharif, N., Suter, D., Schousboe, J. T., Reid, S., Leslie, W. D., & Lewis, J. R. (2022). Show, attend and detect: Towards fine-grained assessment of abdominal aortic calcification on vertebral fracture assessment scans. In International Conference on Medical Image Computing and Computer-Assisted Intervention (pp. 439-450). Springer, Cham. Advance online publication. https://doi.org/10.1007/978-3-031-16437-8_42		NA
28	Godrich, S., Lo, J., Kent, K., Macau, F., Devine, A. (2022). A mixed-methods study to determine the impact of COVID-19 on food security, food access and supply in regional Australia for consumers and food supply stakeholders. <i>Nutrition Journal</i> , 21(17), 1-10. https://doi.org/10.1186/s12937-022-00770-4		4.344
29	Godrich, S., Romero Macau, F., Kent, K., Lo, J., Devine, A. (2022). Food Supply Impacts and Solutions Associated with the COVID-19 Pandemic: A Regional Australian Case Study. <i>International Journal of Environmental Research and Public Health</i> , 19(7), 1-16. https://doi.org/10.3390/ijerph19074116 .		4.614
30	Grävare Silbernagel, K., Malliaras, P., de Vos, R.-J., Hanlon, S., Molenaar, M., Alfredson, H., van den Akker-Scheek, I., Antflick, J., van Ark, M., Färnqvist, K., Haleem, Z., Kaux, J.-F., Kirwan, P., Kumar, B., Lewis, T., Mallows, A., Masci, L., Morrissey, D., Murphy, M., Newsham-West, R., Norris, R., O'Neill, S., Peers, K., Sancho, I., Seymore, K., Vallance, P., van der Vlist, A., & Vicenzino, B. (2022). ICON 2020—International Scientific Tendinopathy Symposium Consensus: A Systematic Review of Outcome Measures Reported in Clinical Trials of Achilles Tendinopathy. <i>Sports Medicine</i> , 52(3), 613-641. https://doi.org/10.1007/s40279-021-01588-6		11.928
31	Harris, S. A., Dempsey, A. R., Mackie, K., King, D., Hecimovich, M., & Murphy, M. C. (2022). Do Sideline Tests of Vestibular and Oculomotor Function Accurately Diagnose Sports-Related Concussion in Adults? A Systematic Review and Meta-analysis. <i>The American journal of sports medicine</i> , 50(9), 2542-2551. https://doi.org/10.1177/03635465211027946		7.010
32	Hecimovich, M., Murphy, M., Chivers, P., & Stock, P. (2022). Evaluation and Utility of the King-Devick With Integrated Eye Tracking as a Diagnostic Tool for Sport-Related Concussion. <i>Orthop J Sports Med</i> , 10(12), 23259671221142255. https://doi.org/10.1177/23259671221142255		3.401
33	Hecimovich, M., King, D., Murphy, M., & Koyama, K. (2022). An investigation into the measurement properties of the King-Devick Eye Tracking system. <i>Journal of Concussion</i> , 6, 20597002221082865. https://doi.org/10.1177/20597002221082865		NA
34	Hill, C. R., Shafaei, A., Balmer, L., Lewis, J. R., Hodgson, J. M., Millar, A. H., & Blekkenhorst, L. C. (2022). Sulfur compounds: From plants to humans and their role in chronic disease prevention. <i>Critical Reviews in Food Science and Nutrition</i> , 1-23. https://doi.org/10.1080/10408398.2022.2057915		11.208
35	Hoyne, Z., Cripps, A., Mosler, A., Joyce, C., Chivers, P., Chipchase, R., Murphy, M. (2022). Self-reported throwing volumes are not a valid tool for monitoring throwing loads in elite Australian Cricket players: an observational cohort study. <i>Journal of Science and Medicine in Sport</i> , 25(10), 845-849. https://doi.org/10.1016/j.jsams.2022.06.008 .		4.597










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	Title	Q1 Journal	Impact Factor
36	Huang, R. C., Melton, P. E., Burton, M. A., Beilin, L. J., Clarke-Harris, R., Cook, E., Godfrey, K. M., Burdge, G. C., Mori, T. A., Anderson, D., Rauschert, S., Craig, J. M., Kobor, M. S., Maclsaac, J. L., Morin, A. M., Oddy, W. H., Pennell, C. E., Holbrook, J. D., & Lillycrop, K. A. (2022). Adiposity associated DNA methylation signatures in adolescents are related to leptin and perinatal factors. <i>Epigenetics</i> , 17(8), 819–836. https://doi.org/10.1080/15592294.2021.1876297		4.861
37	Jansons, P., Dalla Via, J., Daly, R. M., Fyfe, J. J., Gvozdenko, E., & Scott, D. (2022). Delivery of home-based exercise interventions in older adults facilitated by amazon alexa: A 12-week feasibility trial. <i>Journal of Nutrition, Health and Aging</i> , 26(1), 96-102. https://doi.org/10.1007/s12603-021-1717-0		5.285
38	Jansons, P., Fyfe, J., Dalla Via, J., Daly, R., Gvozdenko, E., Scott, D. (2022). Barriers and enablers for older adults participating in a home-based pragmatic exercise program delivered and monitored by Amazon Alexa: A qualitative study. <i>BMC Geriatrics</i> , 22(1), 248. https://doi.org/10.1186/s12877-022-02963-2 .		4.076
39	Kennedy, M. A., Bayes, S., Newton, R. U., Zissiadis, Y., Spry, N. A., Taaffe, D. R., Hart, N. H., & Galvão, D. A. (2022). Implementation barriers to integrating exercise as medicine in oncology: an ecological scoping review. <i>Journal of cancer survivorship : research and practice</i> , 16(4), 865–881. https://doi.org/10.1007/s11764-021-01080-0		4.062
40	Kennedy, M., Bayes, S., Newton, R., Zissiadis, Y., Spry, N., Taaffe, D., Hart, N., Galvao, D. (2022). Building the plane while it's flying: implementation lessons from integrating a co-located exercise clinic into oncology care. <i>BMC Health Services Research</i> , 22(1), article number 1235. https://doi.org/10.1186/s12913-022-08607-w .		2.908
41	Lanuzza, F., Bondonno, N. P., Zamora-Ros, R., Rostgaard-Hansen, A. L., Tjønneland, A., Landberg, R., Halkjær, J., & Andres-Lacueva, C. (2022). Comparison of Flavonoid Intake Assessment Methods Using USDA and Phenol Explorer Databases: Subcohort Diet, Cancer and Health-Next Generations-MAX Study. <i>Frontiers in Nutrition</i> , 9, 873774. https://doi.org/10.3389/fnut.2022.873774		6.590
42	Latino, C., Gianatti, E. J., Mehta, S., Lo, J., Devine, A., & Christophersen, C. (2022). Does a high dietary intake of resistant starch affect glycaemic control and alter the gut microbiome in women with gestational diabetes? A randomised control trial protocol. <i>BMC pregnancy and childbirth</i> , 22(1), 46. https://doi.org/10.1186/s12884-021-04366-4		3.105
43	Lee, J., Yadav, A., Mori, T., Huang, R.-C., Adams, L., Beilin, L., McKinnon, E., Olynyk, J., & Ayonrinde, O. (2022). The relationship between foetal head circumference growth trajectories and nonalcoholic fatty liver disease in adolescents. <i>Journal of Hepatology</i> , 77, S440. https://doi.org/10.1016/S0168-8278(22)01216-8		30.083
44	Lundy, B., McKay, A. K. A., Fensham, N. C., Tee, N., Anderson, B., Morabito, A., Ross, M. L. R., Sim, M., Ackerman, K. E., & Burke, L. M. (2022). The Impact of Acute Calcium Intake on Bone Turnover Markers during a Training Day in Elite Male Rowers. <i>Medicine and science in sports and exercise</i> . https://doi.org/10.1249/mss.0000000000003022		6.289








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	Title	Q1 Journal	Impact Factor
45	Maisey, G., Cattani, M., Devine, A., & Dunican, I. C. (2022). Fatigue Risk Management Systems Diagnostic Tool: Validation of an Organizational Assessment Tool for Shift Work Organizations. <i>Safety and Health at Work</i> , 13(4), 408–414. https://doi.org/https://doi.org/10.1016/j.shaw.2022.08.002		4.045
46	Maisey, G., Cattani, M., Devine, A., Lo, J., Fu, S. C., & Dunican, I. C. (2022). Digging for data: How sleep is losing out to roster design, sleep disorders, and lifestyle factors. <i>Applied Ergonomics</i> , 99, 103617. https://doi.org/https://doi.org/10.1016/j.apergo.2021.103617		3.94
47	Malekpour, P., Devine, A., Dare, J., Costello, L. (2022). Investigating the perspectives of older adults in residential aged care on oral health-related quality of life. <i>Gerodontology: an international journal</i> , epub ahead of print(May), 11p.. https://doi.org/10.1111/ger.12636 .		2.750
48	Mavropalias, G., Sim, M., Taaffe, D. R., Galvão, D. A., Spry, N., Kraemer, W. J., Häkkinen, K., & Newton, R. U. (2022). Exercise medicine for cancer cachexia: targeted exercise to counteract mechanisms and treatment side effects. <i>Journal of Cancer Research and Clinical Oncology</i> , 148(6), 1389–1406. https://doi.org/10.1007/s00432-022-03927-0		4.322
49	McCaskie, C. J., Sim, M., Newton, R. U., Heasman, J., Rogalski, B., & Hart, N. H. (2022). Characterising lower-body musculoskeletal morphology and whole-body composition of elite female and male Australian Football players. <i>BMC Sports Science, Medicine and Rehabilitation</i> , 14(1), 168. https://doi.org/10.1186/s13102-022-00561-8		2.367
50	McCaskie, C. J., Sim, M., Newton, R. U., Heasman, J., Rogalski, B., & Hart, N. H. (2022). Pre-season body composition has minimal influence on in-season match availability, and match performance in female Australian Football League (AFLW) players [Original Research]. <i>Frontiers in Sports and Active Living</i> , 4. https://doi.org/10.3389/fspor.2022.963946		NA
51	McCaskie, C. J., Sim, M., Newton, R., Heasman, J., Rogalski, B., & Hart, N. (2022). Pre-season body composition is associated with in-season player availability in elite male Australian footballers. <i>Journal of Strength and Conditioning Research</i> . https://doi.org/10.1519/JSC.0000000000004368		4.415
52	McGrattan, A., Stephan, B., Shannon, O., Mazidi, M., Gilchrist, M., Smallwood, M., Winyard, P., McMahon, N., Blekkenhorst, L., Mohan, D., Bandinelli, S., Robinson, L., Ferrucci, L., Siervo, M. (2022). Independent and interactive associations of dietary nitrate and salt intake with blood pressure and cognitive function: a cross-sectional analysis in the InCHIANTI study. <i>International Journal of Food Sciences and Nutrition</i> , 73(4), 491–502. https://doi.org/10.1080/09637486.2021.1993157 .		4.444
53	McKay, A. K. A., Sim, M., Moretti, D., Hall, R., Stellingwerff, T., Burden, R. J., & Peeling, P. (2022). Methodological Considerations for Investigating Iron Status and Regulation in Exercise and Sport Science Studies. <i>International journal of sport nutrition and exercise metabolism</i> , 32(5), 359–370. https://doi.org/10.1123/ijsnem.2021-0343		4.420








2022 Publications cont.

	Title	Q1 Journal	Impact Factor
54	McLeod, G., Murphy, M., Gianotti, S., Orchard, J. W., & Fortington, L. V. (2022). Cricket injury in New Zealand: a study of injury insurance claims from 2008 to 2018. <i>J Sci Med Sport</i> . https://doi.org/10.1016/j.jsams.2022.12.001		4.597
55	Merrick, N., Hart, N., Mosler, A., Allen, G., Murphy, M. (2022). Injury profiles of police recruits undergoing basic physical training: a prospective cohort study. <i>Journal of Occupational Rehabilitation</i> , 2022(article in press), 1-9. https://doi.org/10.1007/s10926-022-10059-2 .		3.314
56	Middeke, J., Palmer, K., Lövestam, E., Vivanti, A., Orrevall, Y., Steiber, A., Lyons-Wall, P., Lo, J., Devine, A., Lieffers, J., Papoutsakis, C., Lang, N. R., Thoresen, L., Lloyd, L., O'Sullivan, T. A., & INIS Consortium (2022). Predictors of nutrition care process knowledge and use among dietitians internationally. <i>Journal of human nutrition and dietetics : the official journal of the British Dietetic Association</i> , 35(3), 466-478. https://doi.org/10.1111/jhn.12961		2.995
57	Mundell, N. L., Owen, P. J., Dalla Via, J., Macpherson, H., Daly, R. M., Livingston, P. M., Rantalainen, T., Foulkes, S. J., Millar, J. L., Murphy, D. G., & Fraser, S. F. (2022). Effects of a multicomponent resistance-based exercise program with protein, vitamin D and calcium supplementation on cognition in men with prostate cancer treated with ADT: secondary analysis of a 12-month randomised controlled trial. <i>BMJ Open</i> , 12(6), e060189. https://doi.org/10.1136/bmjopen-2021-060189		3.007
58	Murphy, M. C., & Mosler, A. B. (2022). Physical activity: short-term pain with so much to gain! <i>British Journal of Sports Medicine</i> , 56(16), 895. https://doi.org/10.1136/bjsports-2022-106029		18.473
59	Murphy, K., Dyer, K., Hyde, B., Davis, C., Bracci, E., Woodman, R., Hodgson, J. (2022). Long-Term Adherence to a Mediterranean Diet 1-Year after Completion of the MedLey Study. <i>Nutrients</i> , 14(15), article number 3098. https://doi.org/10.3390/nu14153098 .		6.706
60	Murphy, M. C. (2022). Exercise rehabilitation for mid-portion Achilles tendinopathy: a critique of evidence and assumptions (PhD Academy Award). <i>British Journal of Sports Medicine</i> , <i>bjsports-2022-106024</i> . https://doi.org/10.1136/bjsports-2022-106024		18.473
61	Murphy, M. C., Debenham, J., Bulsara, C., Chivers, P., Rio, E. K., Docking, S., Travers, M., & Gibson, W. (2022). Assessment and monitoring of Achilles tendinopathy in clinical practice: a qualitative descriptive exploration of the barriers clinicians face. <i>BMJ Open Sport & Exercise Medicine</i> , 8(2), e001355. https://doi.org/10.1136/bmjsem-2022-001355		3.007
62	Murphy, M. C., George, H.-A., Naqi, M., Owen, P. J., Chivers, P., & Hart, N. H. (2022). Musculoskeletal injury epidemiology in law enforcement and firefighter recruits during physical training: a systematic review. <i>BMJ Open Sport & Exercise Medicine</i> , 8(1), e001289. https://doi.org/10.1136/bmjsem-2021-001289		3.007
63	Murphy, M. C., Merrick, N., Mosler, A. B., Allen, G., Chivers, P., & Hart, N. H. (2022). Cardiorespiratory fitness is a risk factor for lower-limb and back injury in law enforcement officers commencing their basic training: a prospective cohort study. <i>Research in Sports Medicine</i> , 1-13. https://doi.org/10.1080/15438627.2022.2139618		3.661



2022 Publications cont.

	Title	Q1 Journal	Impact Factor
64	Ng, C. A., Scott, D., Sim, M., Zhu, K., Siafarikas, A., Hart, N. H., Tan, J., & Chivers, P. (2022). Physical activity estimated by osteogenic potential and energy expenditure has differing associations with bone mass in young adults: the raine study. <i>Archives of osteoporosis</i> , 17(1), 67. https://doi.org/10.1007/s11657-022-01100-1		2.879
65	O'Bryan, S. J., Giuliano, C., Woessner, M. N., Vogrin, S., Smith, C., Duque, G., & Levinger, I. (2022). Progressive resistance training for concomitant increases in muscle strength and bone mineral density in older adults: A systematic review and meta-analysis. <i>Sports Medicine</i> , 52(8), 1939-1960. doi:10.1007/s40279-022-01675-2		11.928
66	Parmenter, B. H., Bondonno, C. P., Murray, K., Schousboe, J. T., Croft, K., Prince, R. L., Hodgson, J. M., Bondonno, N. P., & Lewis, J. R. (2022). Higher Habitual Dietary Flavonoid Intake Associates With Less Extensive Abdominal Aortic Calcification in a Cohort of Older Women. <i>Arteriosclerosis, thrombosis, and vascular biology</i> , 42(12), 1482-1494. https://doi.org/10.1161/ATVBAHA.122.318408		10.514
67	Parmenter, B. H., Dalgaard, F., Murray, K., Marquis-Gravel, G., Cassidy, A., Bondonno, C. P., Lewis, J. R., Croft, K. D., Kyrø, C., Gislason, G., Scalbert, A., Tjønneland, A., Overvad, K., Hodgson, J. M., & Bondonno, N. P. (2022). Intake of dietary flavonoids and incidence of ischemic heart disease in the Danish Diet, Cancer, and Health cohort. <i>European journal of clinical nutrition</i> , 10.1038/s41430-022-01226-y. Advance online publication. https://doi.org/10.1038/s41430-022-01226-y		4.884
68	Patten, R. K., Tacey, A., Bourke, M., Smith, C., Pascoe, M., Vogrin, S., Parker, A., McKenna, M. J., Tran, P., De Gori, M., Said, C. M., Apostolopoulos, V., Lane, R., Woessner, M. N., & Levinger, I. (2022). The impact of waiting time for orthopaedic consultation on pain levels in individuals with osteoarthritis: a systematic review and meta-analysis. <i>Osteoarthritis and Cartilage</i> , 30(12), 1561-1574. https://doi.org/10.1016/j.joca.2022.07.007		7.507
69	Pinot de Moira, A., Strandberg-Larsen, K., Bishop, T., Pedersen, M., Avraam, D., Cadman, T., Calas, L., Casas, M., Guillain, B., Elhakeem, A., Esplugues, A., Estarlich, M., Foong, R., Haakma, S., Harris, J., Huang, R.-C., Inskip, H., Lertxundi, A., Mensink-Bout, S., & Andersen, A. M. (2022). Associations of early-life pet ownership with asthma and allergic sensitization: a meta-analysis of >77,000 children from the EU Child Cohort Network. <i>Journal of Allergy and Clinical Immunology</i> , 150. https://doi.org/10.1016/j.jaci.2022.01.023		14.290
70	Pokharel, P., Kyrø, C., Olsen, A., Tjønneland, A., Murray, K., Blekkenhorst, L. C., Bondonno, C. P., Hodgson, J. M., & Bondonno, N. P. (2022). Vegetable, But Not Potato, Intake is Associated With a Lower Risk of Type 2 Diabetes in the Danish Diet, Cancer and Health Cohort. <i>Diabetes care</i> , dc220974. Advance online publication. https://doi.org/10.2337/dc22-0974		17.152
71	Porter, T., Sim, M., Prince, R. L., Schousboe, J. T., Bondonno, C., Lim, W. H., Zhu, K., Kiel, D. P., Hodgson, J. M., Laws, S. M., & Lewis, J. R. (2022). Abdominal aortic calcification on lateral spine images captured during bone density testing and late-life dementia risk in older women: A prospective cohort study. <i>The Lancet Regional Health - Western Pacific</i> , 26. https://doi.org/10.1016/j.lanwpc.2022.100502		8.559









2022 Publications cont.

	Title	Q1 Journal	Impact Factor
72	Radavelli-Bagatini, S., Sim, M., Blekkenhorst, L. C., Bondonno, N. P., Bondonno, C. P., Woodman, R., Dickson, J. M., Magliano, D. J., Shaw, J. E., Daly, R. M., Hodgson, J. M., & Lewis, J. R. (2022). Associations of specific types of fruit and vegetables with perceived stress in adults: the AusDiab study. <i>European journal of nutrition</i> , 61(6), 2929–2938. https://doi.org/10.1007/s00394-022-02848-5		4.865
73	Radavelli-Bagatini, S., Gebre, A. K., Kennedy, M. A., Sim, M., Blekkenhorst, L. C., Bondonno, C. P., Jackson, B., Dimmock, J., Schlaich, M. P., Hodgson, J. M., & Lewis, J. R. (2022). Provision of non-invasive coronary and carotid vascular imaging results on changes in diet and physical activity in asymptomatic adults: A scoping review. <i>Frontiers in nutrition</i> , 9, 946378. https://doi.org/10.3389/fnut.2022.946378		6.590
74	Radavelli-Bagatini, S., Sim, M., Blekkenhorst, L. C., Bondonno, N. P., Bondonno, C. P., Woodman, R., Dickson, J. M., Harms, C., Magliano, D. J., Shaw, J. E., Daly, R. M., Hodgson, J. M., & Lewis, J. R. (2022). Higher Consumption of Fruit and Vegetables Is Associated With Lower Worries, Tension and Lack of Joy Across the Lifespan [Original Research]. <i>Frontiers in Nutrition</i> , 9. https://doi.org/10.3389/fnut.2022.837066		6.590
75	Rajendra, A., Bondonno, N. P., Rainey-Smith, S. R., Gardener, S. L., Hodgson, J. M., & Bondonno, C. P. (2022). Potential role of dietary nitrate in relation to cardiovascular and cerebrovascular health, cognition, cognitive decline and dementia: a review. <i>Food & Function</i> . https://doi.org/10.1039/D2FO02427F		6.317
76	Raubenheimer, K., Liu, A., Koch, H., Bosio, E., Bondonno, N., Matthews, V.B., Sim, M., Blekkenhorst, L., Woodman, R.J., Murray, K., Croft, K., Neubauer, O., Hodgson, J. & Bondonno, C. (2022). Increased nitrate intake from beetroot juice does not alter soluble cellular adhesion molecules and circulating inflammatory cytokines in treated hypertensive individuals: a randomised, controlled trial. <i>Food & Function</i> . https://doi.org/10.1039/D2FO02403A .		6.317
77	Rees, J., Fu, S.C., Lo, J., Sambell, R., Lewis, J., Christophersen, C., Byrne, M., Newton, R., Boyle, S., Devine, A. (2022). How a 7-Week Food Literacy Cooking Program Affects Cooking Confidence and Mental Health: Findings of a Quasi-Experimental Controlled Intervention Trial. <i>Frontiers in Nutrition</i> , 9(March 2022), Article number 802940. https://doi.org/10.3389/fnut.2022.802940		6.590
78	Rewa, J., Devine, A., & Godrich, S. (2022). Evaluating the impact of a community-based food security project: The value in facilitating collaboration and understanding. <i>Health promotion journal of Australia : official journal of Australian Association of Health Promotion Professionals</i> , 33(2), 346–349. https://doi.org/10.1002/hpja.502		2.033
79	Ronkainen, J., Heiskala, A., Vehmeijer, F. O. L., Lowry, E., Caramaschi, D., Estrada Gutierrez, G., Heiss, J. A., Hummel, N., Keikkala, E., Kvist, T., Kupsco, A., Melton, P. E., Pesce, G., Soomro, M. H., Vives-Usano, M., Baiz, N., Binder, E., Czamara, D., Guxens, M., Mustaniemi, S., London, S. J., Rauschert, S., Väärasmäki, M., Vrijheid, M., Ziegler, A. G., Annesi-Maesano, I., Bustamante, M., Huang, R. C., Hummel, S., Just, A. C., Kajantie, E., Lahti, J., Lawlor, D., Räikkönen, K., Järvelin, M. R., Felix, J. F., & Sebert, S. (2022). Maternal haemoglobin levels in pregnancy and child DNA methylation: a study in the pregnancy and childhood epigenetics consortium. <i>Epigenetics</i> , 17(1), 19–31. https://doi.org/10.1080/15592294.2020.1864171		4.861










2022 Publications cont.

	Title	Q1 Journal	Impact Factor
80	Sim, M., Strydom, A., Blekkenhorst, L. C., Bondonno, N. P., McCormick, R., Lim, W. H., Zhu, K., Byrnes, E., Hodgson, J. M., Lewis, J. R., & Prince, R. L. (2022). Dietary Vitamin K1 intake is associated with lower long-term fracture-related hospitalization risk: the Perth longitudinal study of ageing women. <i>Food & Function</i> , 13(20), 10642–10650. https://doi.org/10.1039/d2fo02494b		6.317
81	Smith, C., Hiam, D., Tacey, A., Lin, X., Woessner, M., Zarekookandeh, N., Garnham, A., Chubb, P., Lewis, J., Sim, M., Herrmann, M., Duque, G., Levinger, I. (2022). Higher bone remodeling biomarkers are related to a higher muscle function in older adults: Effects of acute exercise. <i>Bone</i> , 165(2022), article number 116545. https://doi.org/10.1016/j.bone.2022.116545 .		4.626
82	Smith, C., Woessner, M. N., Sim, M., & Levinger, I. (2022). Sarcopenia definition: Does it really matter? Implications for resistance training. <i>Ageing Research Reviews</i> , 78, 101617. https://doi.org/https://doi.org/10.1016/j.arr.2022.101617		11.788
83	Špacířová, Z., Kaptoge, S., García-Mochón, L., Rodríguez Barranco, M., Sánchez Pérez, M. J., Bondonno, N. P., Tjønneland, A., Weiderpass, E., Grioni, S., Espin, J., Sacerdote, C., Schiborn, C., Masala, G., Colorado-Yohar, S. M., Kim, L., Moons, K. G. M., Engström, G., Schulze, M. B., Bresson, L., Moreno-Iribas, C., & Epstein, D. (2022). The cost-effectiveness of a uniform versus age-based threshold for one-off screening for prevention of cardiovascular disease. <i>The European journal of health economics</i> . https://doi.org/10.1007/s10198-022-01533-y		5.271
84	Tan, D. W., Gilani, S. Z., Alvares, G. A., Mian, A., Whitehouse, A., & Maybery, M. T. (2022). An investigation of a novel broad autism phenotype: increased facial masculinity among parents of children on the autism spectrum. <i>Proceedings. Biological sciences</i> , 289(1971), 20220143. https://doi.org/10.1098/rspb.2022.0143		5.530
85	Tan, J., Murphy, M., Hart, N., Rantalainen, T., Bhojroo, R., Chivers, P. (2022). Association of developmental coordination disorder and low motor competence with impaired bone health: A systematic review. <i>Research in Developmental Disabilities</i> , 129(2022), article number 104324. https://doi.org/10.1016/j.ridd.2022.104324 .		3.000
86	Tang, D., Tran, Y., Lewis, J. R., Bondonno, N. P., Bondonno, C. P., Hodgson, J. M., Domingo, D., McAlpine, D., Burlutsky, G., Mitchell, P., Shekawat, G. S., & Gopinath, B. (2022). Associations between intake of dietary flavonoids and the 10-year incidence of tinnitus in older adults. <i>European journal of nutrition</i> , 61(4), 1957–1964. https://doi.org/10.1007/s00394-021-02784-w		4.865
87	Teh, R., Prince, R. L., Sim, M., Schousboe, J. T., Raymond, W. D., Szulc, P., Lim, W., Hodgson, J. M., Zhu, K., Kiel, D. P., Schultz, C., Thompson, P. L., & Lewis, J. R. (2022). Abdominal aortic calcification, cardiac troponin I and atherosclerotic vascular disease mortality in older women. <i>Heart (British Cardiac Society)</i> , 108(16), 1274–1280. https://doi.org/10.1136/heartjnl-2021-319879		7.369






2022 Publications cont.

	Title	Q1 Journal	Impact Factor
88	Trapp, G. S. A., Hooper, P., Billingham, W., Thornton, L., Sartori, A., Kennington, K., Devine, A., Godrich, S., Sambell, R., Howard, J., & Bivoltsis, A. (2022). Would you like fries with that? Investigating fast-food outlet availability near schools in Perth, Western Australia. <i>Health Promotion Journal of Australia</i> . https://doi.org/10.1002/hpja.682		2.033
89	Truong, G., Le, H., Zhang, E., Suter, D., Gilani, Z. (2022). Unsupervised Learning for Maximum Consensus Robust Fitting: A Reinforcement Learning Approach. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 1(1), 1. https://doi.org/10.1109/TPAMI.2022.3178442 .		24.314
90	Vergroesen, J. E., de Crom, T., Blekkenhorst, L. C., Klaver, C., Voortman, T., & Ramdas, W. D. (2022). Dietary Nitrate Intake Is Associated with Decreased Incidence of Open-Angle Glaucoma: The Rotterdam Study. <i>Nutrients</i> , 14(12), 2490. https://doi.org/10.3390/nu14122490		6.706
91	Wan, F., Pan, F., Ayonrinde, O., Adams, L. A., Mori, T. A., Beilin, L. J., O'Sullivan, T. A., Olynyk, J. K., & Oddy, W. H. (2022). Prospective dietary polyunsaturated fatty acid intake is associated with trajectories of fatty liver disease: an 8 year follow-up study from adolescence to young adulthood. <i>European Journal of Nutrition</i> , 61(8), 3987–4000. https://doi.org/10.1007/s00394-022-02934-8		4.865
92	Wan, F., Pan, F., Mori, T. A., O'Sullivan, T. A., Beilin, L. J., & Oddy, W. H. (2022). Relationship between dietary intake and erythrocyte PUFA in adolescents from a Western Australian cohort. <i>European Journal of Clinical Nutrition</i> . https://doi.org/10.1038/s41430-022-01219-x		4.884
93	Wijs, L. A., Doherty, D. A., Keelan, J. A., Burton, P., Yovich, J. L., Beilin, L., Mori, T. A., Huang, R. C., Adams, L. A., Olynyk, J. K., Ayonrinde, O. T., Penova-Veselinovic, B., & Hart, R. J. (2022). Comparison of the cardiometabolic profiles of adolescents conceived through ART with those of a non-ART cohort. <i>Human Reproduction</i> , 37(8), 1880–1895. https://doi.org/10.1093/humrep/deac122		6.353
94	Yadav, A., Beilin, L. J., Huang, R. C., Vlaskovsky, P., Newnham, J. P., White, S. W., & Mori, T. A. (2022). The relationship between intrauterine foetal growth trajectories and blood pressure in young adults. <i>Journal of hypertension</i> , 40(3), 478–489. https://doi.org/10.1097/HJH.0000000000003035		4.776
95	Yadav, A., Beilin, L. J., Huang, R.-C., Vlaskovsky, P., Newnham, J. P., White, S. W., & Mori, T. A. (2022). Relationships between intrauterine fetal growth trajectories and markers of adiposity and inflammation in young adults. <i>International Journal of Obesity</i> , 46(10), 1925–1935. https://doi.org/10.1038/s41366-022-01203-2		5.551
96	Yang, C. H., Ann-Onda, D., Lin, X., Fynch, S., Nadarajah, S., Pappas, E. G., Liu, X., Scott, J. W., Oakhill, J. S., Galic, S., Shi, Y., Moreno-Asso, A., Smith, C., Loudovaris, T., Levinger, I., Eizirik, D. L., Laybutt, D. R., Herzog, H., Thomas, H. E., & Loh, K. (2022). Neuropeptide Y1 receptor antagonism protects β -cells and improves glycemc control in type 2 diabetes. <i>Molecular metabolism</i> , 55, 101413. https://doi.org/10.1016/j.molmet.2021.101413		8.568

2022 Publications cont.

	Title	Q1 Journal	Impact Factor
97	Zanker, J., Sim, M., Anderson, K., Balogun, S., Brennan-Olsen, S. L., Dent, E., Duque, G., Girgis, C. M., Grossmann, M., Hayes, A., Henwood, T., Hirani, V., Inderjeeth, C., Iuliano, S., Keogh, J., Lewis, J. R., Lynch, G. S., Pasco, J. A., Phu, S., Reijnierse, E. M., Russell, N., Vlietstra, L., Visvanathan, R., Walker, T., Waters, D. L., Yu, S., Maier, A. B., Daly, R. M., & Scott, D. (2022). Consensus guidelines for sarcopenia prevention, diagnosis and management in Australia and New Zealand. <i>J Cachexia Sarcopenia Muscle</i> . https://doi.org/10.1002/jcsm.13115		12.063
98	Zengin, A., Shore-Lorenti, C., Sim, M., Maple-Brown, L., Brennan-Olsen, S. L., Lewis, J. R., Ockwell, J., Walker, T., Scott, D., & Ebeling, P. (2022). Why Aboriginal and Torres Strait Islander Australians fall and fracture: the codesigned Study of Indigenous Muscle and Bone Ageing (SIMBA) protocol. <i>BMJ open</i> , 12(4), e056589. https://doi.org/10.1136/bmjopen-2021-056589		3.007
99	Zhang, E., Suter, D., Tennakoon, R., Chin, T-J., Bab-Hadiashar, A., Truong, G., Gilani, S.Z. (2022). Maximum Consensus by Weighted Influences of Monotone Boolean Functions. <i>IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)</i> . pp. 8954-8962, doi: 10.1109/CVPR52688.2022.00876.		NA
100	Zhong, L., Blekkenhorst, L. C., Bondonno, N. P., Sim, M., Woodman, R. J., Croft, K. D., Lewis, J. R., Hodgson, J. M., & Bondonno, C. P. (2022). A food composition database for assessing nitrate intake from plant-based foods. <i>Food Chemistry</i> , 394, 133411. https://doi.org/https://doi.org/10.1016/j.foodchem.2022.133411		9.231
101	Zhong, L., Liu, A., Blekkenhorst, L., Bondonno, N., Sim, M., Woodman, R., Croft, K., Lewis, J., Hodgson, J., Bondonno, C. (2022). Development of a food composition database for assessing nitrate and nitrite intake from animal-based foods. <i>Molecular Nutrition and Food Research</i> , 66(1), Article number 2100272. https://doi.org/10.1002/mnfr.202100272		6.575
102	Wisseemann, K., Bloxsome, D., De Leo, A., & Bayes, S. (2022). What are the benefits and challenges of mentoring in midwifery? An integrative review. <i>Women's health (London, England)</i> , 18, 17455057221110141. https://doi.org/10.1177/17455057221110141		3.890
103	Baguley, B. J., Dalla Via, J., Fraser, S. F., Daly, R. M., & Kiss, N. (2022). Effectiveness of combined nutrition and exercise interventions on body weight, lean mass, and fat mass in adults diagnosed with cancer: a systematic review and meta-analysis. <i>Nutr Rev</i> . https://doi.org/10.1093/nutrit/nuac079		6.846
104	Seeto, A. H., Tadrous, M., Gebre, A. K., Lewis, J. R., Fink, H. A., Ebeling, P. R., & Rodriguez, A. J. (2022). Evidence for the cardiovascular effects of osteoporosis treatments in randomized trials of post-menopausal women: A systematic review and Bayesian network meta-analysis. <i>Bone</i> , 167, 116610. https://doi.org/10.1016/j.bone.2022.116610		4.626
105	Gray, M., Baker, M., & De Leo, A. (2022). What do we know about midwives' transition from clinical practice to higher education teaching roles? A scoping review. <i>Nurse Educ Pract</i> , 67, 103531. https://doi.org/10.1016/j.nepr.2022.103531		3.430

2022 Publications cont.

	Title	Q1 Journal	Impact Factor
106	Lawlis, T., Bowden, M., Lo, J., & Devine, A. (2022). Dietary intake of women from two Australian cities living in poverty. <i>Journal of Hunger and Environmental Nutrition</i> , doi:10.1080/19320248.2022.2150532		1.772
107	Gebre, A. K., Sim, M., Dalla Via, J., Rodríguez, A. J., Zhu, K., Schousboe, J. T., Hodgson, J. M., Bondonno, C. P., Prince, R. L., & Lewis, J. R. (2022). Cardiovascular disease, muscle function, and long-term falls risk: The Perth Longitudinal Study of Ageing Women. <i>Arch Gerontol Geriatr</i> , 107, 104911. https://doi.org/10.1016/j.archger.2022.104911		4.163
108	McCaskie, C., Siafarikas, A., Cochrane Wilkie, J., Sutton, V., Chivers, P., Hart, N. H., & Murphy, M. C. (2022). The Benefits to Bone Health in Children and Pre-School Children with Additional Exercise Interventions: A Systematic Review and Meta-Analysis. <i>Nutrients</i> , 15(1). https://doi.org/10.3390/nu15010127		6.706
109	Woessner, M. N., Hiam, D., Smith, C., Lin, X., Zarekookandeh, N., Tacey, A., Parker, L., Landen, S., Jacques, M., Lewis, J. R., Brennan-Speranza, T., Voisin, S., Duque, G., Eynon, N., & Levinger, I. (2022). Osteoglycin Across the Adult Lifespan. <i>J Clin Endocrinol Metab</i> , 107(4), e1426-e1433. https://doi.org/10.1210/clinem/dgab861		6.134
110	Ong, S., Bondonno, N. P., Downey, L. A., Scholey, A., Smith, M. A., Stough, C., Blekkenhorst, L. C., Woodman, R., Croft, K. D., Hodgson, J. M., & Bondonno, C. P. (2022). Effects of Chewing Gum on Nitric Oxide Metabolism, Markers of Cardiovascular Health and Neurocognitive Performance after a Nitrate-Rich Meal. <i>Journal of the American Nutrition Association</i> , 41(2), 178-190. https://doi.org/10.1080/07315724.2020.1869119		3.571
111	Sim, M., Dalla Via, J., Scott, D., Lim, W. H., Hodgson, J. M., Zhu, K., Daly, R. M., Duque, G., Prince, R. L., & Lewis, J. R. (2022). Creatinine to Cystatin C Ratio, a Biomarker of Sarcopenia Measures and Falls Risk in Community-Dwelling Older Women. <i>J Gerontol A Biol Sci Med Sci</i> , 77(7), 1389-1397. https://doi.org/10.1093/gerona/glab369		6.591
112	Parmenter, B., Croft, K., Cribb, L., Cooke, M., Bondonno, C., Lea, A., McPhee, G., Komanduri, M., Nolidin, K., Savage, K., Pase, M., Hodgson, J., Stough, C., Bondonno, N. (2022). Higher habitual dietary flavonoid intake associates with lower central blood pressure and arterial stiffness in healthy older adults. <i>British Journal of Nutrition</i> , 128(2), 279-289. https://doi.org/10.1017/S000711452100324X .		4.125
113	Zanker, J., Sim, M., Anderson, K., Balogun, S., Brennan-Olsen, S. L., Dent, E., Duque, G., Girgis, C. M., Grossmann, M., Hayes, A., Henwood, T., Hirani, V., Inderjeeth, C., Iuliano, S., Keogh, J., Lewis, J. R., Lynch, G. S., Pasco, J. A., Phu, S., Reijnierse, E. M., Russell, N., Vlietstra, L., Visvanathan, R., Walker, T., Waters, D. L., Yu, S., Maier, A. B., Daly, R. M., & Scott, D. (2022). The Australian and New Zealand Society for Sarcopenia and Frailty Research (ANZSSFR) sarcopenia diagnosis and management task force: Findings from the consumer expert Delphi process. <i>Australas J Ageing</i> . https://doi.org/10.1111/ajag.13164		1.876



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