



School of Exercise and Nutrition Sciences

2025 Honours Projects

Bachelor of Food and Nutrition Sciences (Honours) (H418)

Bachelor of Exercise and Sport Science (Honours) (H442)

deakin.edu.au

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TEDDY ANG

Bachelor of Food and Nutrition Sciences (Honours)

Former Honours & PhD student in Physiology and Metabolism at Deakin University

Honours Topic: Effects of omega-3 docosapentaenoic acid supplementation on oral glucose tolerance in an animal model of diet-induced glucose intolerance

Honours was undoubtedly the most challenging year of my undergraduate studies but also the most enriching. This is something you will hear from any Honours survivor, but the skills, experience and memories that you will acquire, if not embedded, during this 8-month roller coaster ride will be invaluable regardless of your future endeavours. For me, it was being able to work closely with a supervisory team and receive the hands-on laboratory training that I am truly grateful for, and not to mention, your very own unique masterpiece they call the 'Thesis' produced at the end. Honours is not simply another year of mundane coursework study, it is an opportunity to become part of something bigger and let it be known that the inevitable pain and struggle that accompanies it will be worth the blood, sweat and tears.

Honours Overview

The honours program in the School of Exercise and Nutrition Sciences (SENS) builds upon the foundations provided by a three-year undergraduate degree. The aim of the program is to provide students with the necessary knowledge and skills to enable them to undertake higher degree studies and advance their professional training.

The School offers the following Honours degrees:

- Bachelor of Food and Nutrition Sciences (Honours) H418
- Bachelor of Exercise and Sport Science (Honours) H442

All honours programs in the School have common features, specifically:

- Coursework units and a written thesis
- Undertaken over two semesters within a single year full time (~9 months total)
- Allocation of a supervisor and co-supervisor

New in 2025: Our honours courses are now able to commence in either Semester 1 or Semester 2 – so students may now consider a mid-year start date!

Why do Honours with SENS?

- ✓ Our teaching facilities are outstanding
- ✓ We have strong industry partnerships/relations with over 150 sporting, government, community, health and food industry organisations
- ✓ Our students get 'hands-on' experience
- ✓ We provide a high-level of support and resources to assist students with their projects

You will learn to:

- ✓ Critically evaluate existing research
- ✓ Identify questions/hypotheses worth researching
- ✓ Understand and apply correct research methods to the collection and/or analysis of data
- ✓ Interpret study findings
- ✓ Understand strengths and limitations of research

Benefits of Learning Research

- ✓ Increased employability, skills transferable to many jobs/disciplines
- ✓ Learning & collaborative opportunities
- ✓ Independence to drive your ideas
- ✓ Opportunity to contribute to knowledge in your specialised area
- ✓ Gain important research skills and practical research experience

What are the career pathways after Honours?

Entry into Research/Research Degrees

Deakin University is interested in providing you with a fulfilling research experience in honours so that you will consider returning to complete a research masters or doctorate. These post-graduate research degrees allow you to further investigate in an area of interest to you and open up a range of career options; in academia, and as a leader in industry. The completion of Honours also opens up opportunities for employment in a research role within the School or other universities.

Careers

There are a range of careers that you can follow after gaining research experience in an Honours year. Aside from continuing to work in research, you can gain employment in industry such as in physiology, nutrition, fitness, and in government posts. In sport, you can work in player and team management, sports administration and development, strength and conditioning, sports science, and in coaching. The Honours degree allows you to gain some specialist knowledge in one of these areas and apply that knowledge.

KEREN BEST

Bachelor of Food and Nutrition Sciences (Honours)

Project manager at IPAN, Deakin University

Honours Topic: Parental predictors of maintenance of physical activity over three years in children

Undertaking honours was both challenging and rewarding. Honours allows you to immerse yourself in the research world and gain a range of skills in a short amount of time. The analytical writing, research processes and data management skills developed have been invaluable in enhancing my project management career.

What types of Honours projects can I do in SENS?

Food and Nutrition Sciences

- Nutrition choices and eating patterns;
- Salt, appetite control and blood pressure regulation;
- Fatty acids, inflammation, cognition and blood pressure regulation;
- Proteins, sport performance and muscle gain;
- Nutrition and ageing;
- Health effects of phytochemicals and minerals;
- Nutrition and gut bacteria;
- Food choice and perceptions;
- Food policy and safety;
- Early childhood influences on eating;
- Plus more!

Exercise and Sport Science

- Health and injury in work and sport;
- Physical activity;
- Obesity prevention;
- Coaching practices;
- Exercise physiology;
- Women's health;
- Behavioural aspects of sport;
- Skill acquisition;
- Motor control and motor learning;
- Biomechanics and performance analysis,
- Strength and conditioning;
- Sports management
- Sports marketing;
- Plus more!

*****Refer to the back of this handbook for the 2025 Honours projects*****

Who supervises Honours projects?

Supervisors closely guide you through this first experience of research. They will assist you in planning your research, data collection and analysis and writing it in thesis format. In addition, they will offer you support in the planning and presentation of your oral assessments. All supervisors are experienced researchers who understand the rigours and requirements of your project and have knowledge of your topic area.

How do I choose a topic?

Each year the School provides a list of projects for you to peruse and choose those that interest you. We then advise that you speak to supervisors of these projects to gauge your interest and then to nominate your preferred projects during the application process. We aim to provide you with one of your preferences.

Can I develop my own project?

You are best to take a directed project in this first year of exposure to research, as it allows for the supervisor to direct the research in an area they know well. If you have a passion for something you may be able to tailor your Honours project to fulfil your interest or use that idea for a further degree; Honours is about research training.

*****Refer to the back of this handbook for the 2025 Honours projects*****

LILIA CONVIT

Bachelor in Exercise and Sports Sciences (Honours)

Current PhD Student in Female Exercise Physiology/Research Assistant/Casual Academic

Honours Topic: Sodium bicarbonate and sodium citrate as acute hyperhydration agents: indices of hydration status, buffering measures and gastrointestinal symptoms

The honours years was a wonderful experience, full of new challenges. COVID-19 allowed me to understand how resilient we can be. We had to reinvent the project, work with secondary data, learn and present our findings through Zoom. We were able to move this great learning experience to online mode and survive. I met great people and did a lot of networking. Honours allowed me to continue my career pathway with a PhD (with a scholarship), to start a research assistant role at Deakin and continue as a casual academic, while juggling with my private practice as a sports dietitian and my personal life as a wife and mum of two. The best advice I can give to anyone thinking about enrolling in an Honours year will be to go for it! If it is not now, when? Just be as organised as possible and plan ahead. Unexpected changes are always around the corner.

What happens in the Honours year?

Honours is an intense year and you will need to commit ~35 hours a week (if studying full-time). Your Honours degree is mostly assessed on research but there is also a coursework component. Both parts count towards your final mark. The coursework is directed towards giving you the necessary research skills to complete your research project and provides you with research training.

For full-time students:

- *Semester 1:* Research Methods (unit code HBS400) and Developing Research Skills (HSE401). They have classes and assignments to complete that incorporate aspects of your project.
- *Semester 2:* Honours Research Project – Part A (HSE403) and Honours Research Project – Part B (HSE404) where you will complete your data collection, analyse the data and write a thesis.

For part-time students:

- *Semester 1, Year 1:* Research Methods (unit code HBS400) where you will have classes and assignments to complete related to research skills and methods.
- *Semester 2, Year 1:* Developing Research Skills (HSE401) which also has classes and assignments related to your research project.
- *Semester 1, Year 2:* Honours Research Project – Part A (HSE403) where you will mostly complete data collection and analysis related to your project.
- *Semester 2, Year 2:* Honours Research Project – Part B (HSE404) where you will complete any aspects of your research project and write a thesis.

Research Methods (HBS400; cloud-based unit)

This unit examines the ethics of research, critiquing research and an elective. It is directed towards your research and you can choose to take the quantitative (cloud), qualitative (cloud) or lab-based (on-campus, Burwood) stream. This unit is designed to help you develop the skills and knowledge needed to develop the methods for your research project.

Developing Research Skills (HSE401)

In this unit your primary task is to write a literature review and research proposal related to your topic. You are asked to read and review the previously published research (i.e. the literature) in the area of your project, find aspects that have not been fully investigated and then propose your research that will answer a specific research question. This will provide you with a thorough understanding of your area of research, form the introduction to your thesis and allow you to understand how your research project fits within the current research literature. You will also present your literature review and research proposal to your peers as an oral presentation.

Honours Research Project – Part A & B (HSE403 & HSE404)

After you have planned your research and received ethics approval (if required), you are ready to collect and analyse your data. The final step is to analyse and write your research in a thesis format. This thesis (up to 10,000 words) is set out in chapters and describes the existing research literature, your research methods, the results of your research and then discussion of your findings. You will then present your

findings at the School of Exercise and Nutrition Sciences Annual Research Symposium at the end of the year.

Timelines

The year (if studying full-time) or two-years (if studying part time) is short and intense, beginning with an orientation session in February and finishing with your oral presentation of your research in October. In between, there is plenty to keep you busy.

What are the admission requirements?

Bachelor Degree or major in a related discipline with a WAM of at least 65 in all level 3 and level 4 Deakin units (or in final year units for awards from other providers). Eligible students with degrees from other universities are welcome to complete their Honours year at Deakin University.

How do I apply for Honours?

To apply for Honours in the School of Exercise and Nutrition Sciences there are three steps:

1. Submit a Course Application

- You will need to submit a course application via the [Deakin applicant portal](#) by Sunday November 24th 2024 and submit your project preferences (see below) in addition to your other supporting documents. Supporting documents can include academic transcripts (for non-Deakin students), personal statement, course completion certificates etc.
- Applications for the degree will remain open across December, however the first round of project allocations will occur in early December – so it is beneficial to get your applications in by the above-mentioned date.
- If you are unable to upload your documents or have any questions about the application portal, please email enquire@deakin.edu.au or call (03) 9244 6333

2. Review Project Offerings and Complete Your Project Preference Form

- Please review carefully the list of Honours research projects that the School is offering in 2025 (see the back of this booklet).
- When you have selected the project(s) you are interested in, it is very important that you contact the named Supervisor (contact details are provided with each project) to discuss the proposed project(s). This will allow you to determine whether the project meets your career goals and allows the supervisor to determine whether you have the appropriate academic background to complete the research project.
- Once you have contacted the Supervisors of the projects that interest you, please complete the [online project preference form](#). Please direct queries related to the project preference selection to Dr Aaron Fox at sens_honours@deakin.edu.au

How are projects allocated?

Projects are allocated based on a combination of student project preferences, supervisor's student preferences and WAM. Students are advised that allocation to research projects is a competitive process and a student cannot be assured of being assigned to their choice of research project.

The list of available research projects reflects research being undertaken by Deakin staff and the availability of resources at the date of publication. It is the nature of research that projects change focus and direction over time and the final project therefore may not be exactly as described.

In rare cases, research staff and resources may become unavailable during the period when the project is being undertaken. If this occurs, the School will offer the student the best available alternative which will provide the opportunity to satisfy course requirements.

When do I find out if I have been accepted?

It is anticipated that successful candidates will be advised of their offer mid-December 2024 / early-January 2025.

Additional Information

You can also contact the Honours Coordinator on the contact details provided below:

Dr Aaron Fox

Email: sens_honours@deakin.edu.au

Honours Projects for 2025

The following pages provide a description of honours projects on offer within the school for 2025. Each project contains a project number, which you will need to provide when submitting your project preference form.

The primary supervisor contact details are provided for each project. It is strongly advised that you contact and discuss the project with the supervisor before including it on your preference list. These discussions will also allow you to obtain further information about the project and how it aligns to your interests. Some of the projects listed in this booklet are also broad and encompass multiple potential projects. Discussions with the listed supervisor(s) will provide more details about the possibilities within these broad areas. Each primary supervisor's name is linked to their profile at the end of this booklet, so please click these for more information on each supervisor.

Each project also has a location listed for where the project can be conducted. Please note that projects listed with an 'overseas or remotely' location are advisable for international applicants. These projects that can be completed remotely are, however, not limited to off-campus students and could also be completed by local students at the Melbourne Burwood or Waurin Ponds campuses.

Projects are grouped into the broad disciplines of Biomedicine, Exercise and Health or Disease, Food or Nutrition Science, Health or Food Behaviours, Public Health or Health Promotion, Sports Management and Marketing, and Sports Sciences. Specific research topic area(s) are also provided with each project.

Biomedicine	9
Exercise and Health or Disease	12
Food or Nutrition Science	19
Health or Food Behaviours	23
Public Health or Health Promotion	25
Sports Management and Marketing	31
Sports Sciences	32

HONOURS PROJECTS 2025: BIOMEDICINE

Mitochondrial small genes - novel therapeutics for the failing heart?

Project Number: ESS_1

Primary Supervisor: Bianca Bernardo

E-mail: bianca.bernardo@deakin.edu.au

Co-Supervisor(s): Glenn Wadley

Research Mentor(s):

Topic Area(s): Exercise physiology; Molecular Biology

Project Location: Melbourne Burwood campus

Project Description: Heart failure is a long-term condition where the heart cannot pump enough blood around the body and there is no cure. The heart is an organ with high energy demands, and most of this energy is produced the mitochondria. Non-coding RNAs (ncRNAs), which are pivotal for many cell functions, can localise to the mitochondria. This project will isolate and identify which ncRNAs reside in the mitochondria of healthy and diseased heart tissue. Since dysfunctioning mitochondria is a key feature of the failing heart, this will provide potential therapeutic targets to treat heart failure. This project will use well-established mouse models of cardiac health (exercise training) and disease (experimental hypertension). All laboratory techniques will be taught to the student as part of the honours training. By completing this project, students will become proficient at laboratory techniques, particularly mitochondria isolation, RNA extraction, qPCR and develop expertise in cardiac physiology.

Skills/Attributes Required: Knowledge and background in anatomy and/or physiology

Skills Developed: Primary data collection skills; Laboratory techniques; Quantitative analysis (statistics); Molecular biology techniques (RNA extraction, qPCR, mitochondria isolation), Bioinformatics.

Assessing the effect of exercising skeletal muscle secretions on breast cancer cells

Project Number: ESS_2

Primary Supervisor: Jeremy Drake

E-mail: j.drake@deakin.edu.au

Co-Supervisor(s): Glenn Wadley

Research Mentor(s):

Topic Area(s):

Project Location: Melbourne Burwood campus

Project Description: BACKGROUND: Emerging evidence suggests that exercise is beneficial for people who are diagnosed with cancer. Interestingly, specific factors secreted by exercising skeletal muscle (termed myokines) have been shown to have anti-cancer properties. AIM: To assess whether myokines released from skeletal muscle during exercise reduce the growth and proliferation of breast cancer cells. SKILLS: Students involved with this project will gain valuable laboratory experience and learn useful experimental techniques that include – supervising and assisting with a clinical exercise protocol, handling human biospecimens, growing human cells in culture, operation of laboratory machinery, as well as RNA and protein extraction from human tissue. These skills will be useful for anyone considering further education involving quantitative research, a career path involving laboratory-based work or a future pathway into post-graduate medicine.

Skills/Attributes Required: Knowledge and background in anatomy and/or physiology

Skills Developed: Primary data collection skills; Ability to work with blood and/or muscle biopsy samples; Laboratory techniques; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: BIOMEDICINE

Effects of meal ingestion on the skeletal muscle phosphoproteome

Project Number: FN_1

Primary Supervisor: Shaun Mason

E-mail: s.mason@deakin.edu.au

Co-Supervisor(s):

Research Mentor(s):

Topic Area(s):

Project Location: Melbourne Burwood campus

Project Description: Skeletal muscle is a metabolic tissue that is highly responsive to nutrient ingestion. Understanding normal and pathological signalling responses in skeletal muscle in the postprandial state helps us to better understand the pathogenesis of diseases such as type 2 diabetes. Phosphoproteomics is a powerful tool that can assist in understanding and characterizing signalling networks in tissues like skeletal muscle in the postprandial state, with relevance to health and disease states. Currently the skeletal muscle phosphoproteome has not been well studied in the postprandial state. Thus, this study aims to undertake a phosphoproteomics analysis of skeletal muscle samples of participants who have consumed a meal using state of the art liquid chromatography-mass spectrometry techniques.

Skills/Attributes Required: Knowledge and background in anatomy and/or physiology; Ability to learn relevant software programs (e.g. Excel, statistical software program)

Skills Developed: Ability to work with blood and/or muscle biopsy samples; Laboratory techniques; Quantitative analysis (statistics)

Understanding metabolic health of young, non-obese individuals

Project Number: ESS_3

Primary Supervisor: Chris Shaw

E-mail: chris.shaw@deakin.edu.au

Co-Supervisor(s): Chris Shaw; Clinton Bruce

Research Mentor(s):

Topic Area(s): Human Physiology/Metabolism

Project Location: Either Burwood or Waurn Ponds Campuses

Project Description: Insulin resistance is characterized by high insulin concentrations (termed hyperinsulinemia) and is a condition that precedes the development of metabolic disease (such as type 2 diabetes). While commonly thought of as a condition linked to overweight and obesity, surprisingly, we have found a significant proportion of young, non-obese individuals are hyperinsulinemic and insulin resistant. There is very little understanding of what causes these conditions in normal weight individuals. We have a number of projects examining mechanisms of metabolism and metabolic health. These projects will use human metabolic experiments incorporating feeding interventions, blood samples and metabolic tracers alongside body composition and dietary analysis to assess the underlying causes of insulin resistance and hyperinsulinemia in young, healthy individuals.

Skills/Attributes Required: Knowledge and background in anatomy and/or physiology; Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to work with blood and/or muscle biopsy samples; Laboratory techniques

HONOURS PROJECTS 2025: BIOMEDICINE

Are mitochondria secreted by contracting skeletal muscle?

Project Number: ESS_4

Primary Supervisor: Glenn Wadley

E-mail: glenn.wadley@deakin.edu.au

Co-Supervisor(s): Dr Bianca Bernardo; Dr Shaun Mason

Research Mentor(s):

Topic Area(s): Exercise physiology

Project Location: Melbourne Burwood campus

Project Description: Mitochondria are secreted into the circulation by tissues or cells and it is postulated that they may play a role in the adaptive response or contribute to cross-talk between tissues. However, it is unknown if the secretion of mitochondria are altered by stressors such as muscle contraction. Skeletal muscle cells will be grown in cell culture and then stimulated to contract. The media will be collected and examined for any mitochondria that may have been secreted. The abundance of all proteins in the mitochondria will be measured (proteomics) using mass spectrometry. All laboratory techniques will be taught to the student as part of the honours training. By completing this project, students will become proficient at laboratory techniques, particularly mass spectrometry, cell culture and develop expertise in muscle physiology.

Skills/Attributes Required: Knowledge and background in anatomy and/or physiology

Skills Developed: Primary data collection skills; Ability to work with blood and/or muscle biopsy samples; Laboratory techniques; Quantitative analysis (statistics)

Quantifying oxidative stress in skeletal muscle following endurance exercise

Project Number: ESS_5

Primary Supervisor: Glenn Wadley

E-mail: glenn.wadley@deakin.edu.au

Co-Supervisor(s): Dr Shaun Mason

Research Mentor(s):

Topic Area(s): Exercise physiology; Clinical exercise

Project Location: Melbourne Burwood campus

Project Description: Oxidative stress during exercise is due to increased production of reactive oxygen species (ROS) in the contracting skeletal muscle. The increased ROS is thought to be one of the mechanisms that stimulates muscle to adapt to exercise training. This project will use mass spectrometry to identify for the first time all the proteins that are altered in human skeletal muscle by ROS during a bout of endurance exercise. All laboratory techniques will be taught to the student as part of the honours training. By completing this project, students will become proficient at laboratory techniques that are common in physiology and biomedical research and also learn cutting-edge techniques utilizing mass spectrometry.

Skills/Attributes Required: Knowledge and background in anatomy and/or physiology

Skills Developed: Ability to work with blood and/or muscle biopsy samples; Laboratory techniques; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: EXERCISE AND HEALTH OR DISEASE

Exploring the career pathways of Paralympics Australia coaches

Project Number: ESS_6

Primary Supervisor: Helen Brown

E-mail: h.brown@deakin.edu.au

Co-Supervisor(s): Zoe Avner

Research Mentor(s):

Topic Area(s): Sports coaching

Project Location: Melbourne Burwood campus

Project Description: This project aims to explore the career pathways of Paralympic Australia coaches to inform future strategies to recruit and retain coaches in high performance sport. The project involves interviews with high performance coaches of para-athletes to examine their retrospective reflections of career decisions, opportunities and strategic personal development over their career to date. Students will gain valuable experience in qualitative methodology as well as skills in translating research findings into policy and practice to directly inform and support para-sport coaching.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Qualitative analysis; research translation

Exercise Intervention to Enhance Cardiorespiratory Fitness and Clinical Outcomes During Chemotherapy

Project Number: ESS_7

Primary Supervisor: Declan Hennessy

E-mail: declan.hennessy@deakin.edu.au

Co-Supervisor(s): A/Prof Steve Fraser

Research Mentor(s):

Topic Area(s): Sport / exercise psychology; Exercise physiology; Clinical exercise

Project Location: Melbourne Burwood campus

Project Description: Cancer treatment, particularly chemotherapy, often leads to a decline in cardiorespiratory fitness (CRF), increasing fatigue, complications, and hospital stays. Recent studies suggest targeted exercise can mitigate these effects, improving CRF and patient resilience. This project investigates an 8-week structured exercise program's impact on CRF and clinical outcomes in chemotherapy patients. Aims: Evaluate the effect of a tailored exercise intervention on VO₂peak, ventilatory threshold (VT), and anaerobic threshold (AT) in chemotherapy patients. Assess if improved CRF correlates with reduced complications, shorter hospital stays, and better quality of life (QoL). Methodology: A randomised controlled trial will compare an exercise group with a standard care control. Tailored aerobic and resistance training will be provided, with assessments every two weeks. Ethical considerations include offering the exercise program to control participants post-study.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Knowledge and background in anatomy and/or physiology; Basic familiarisation with laboratory techniques; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; Ability to travel to offsite for data collection and other projected related tasks

Skills Developed: Recruitment of participants; Primary data collection skills; Laboratory techniques; Exercise prescription and monitoring; Quantitative analysis (statistics); Qualitative analysis

HONOURS PROJECTS 2025: EXERCISE AND HEALTH OR DISEASE

Wearable devices and physical activity for improving blood pressure

Project Number: ESS_8

Primary Supervisor: Shariful Islam

E-mail: shariful.islam@deakin.edu.au

Co-Supervisor(s): Professor Ralph Maddison

Research Mentor(s):

Topic Area(s): Exercise; sport science; Applied Sports Science; Sport / exercise psychology; Exercise physiology; Clinical exercise; Physical activity; Digital Health

Project Location: Online or remotely

Project Description: High blood pressure is a leading cause of heart disease. Recent advances in digital technologies, such as wearable devices with artificial intelligence, offer promising ways to monitor blood pressure and physical activity, supporting better management of heart health. We have developed a wearable system that uses a wearable device and app to monitor blood pressure and encourage physical activity. This project aims to explore the use of these wearable devices for collecting health information from people with cardiovascular disease and diabetes, understand their health needs and support physical activity. The selected student will have the opportunity to test a prototype wearable device system in a Lab and community settings, exploring how data is collected and used to enhance physical exercise. The student will develop skills in wearable device data collection, Lab testing, data analysis, and scientific writing, contributing to the development of this innovative project.

Skills/Attributes Required: Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Laboratory techniques; Survey development; Quantitative analysis (statistics); Qualitative analysis

Characterizing the plasma 'omics profile of hyperinsulinaemia

Project Number: ESS_9

Primary Supervisor: Shaun Mason

E-mail: s.mason@deakin.edu.au

Co-Supervisor(s): Clinton Bruce

Research Mentor(s):

Topic Area(s): Physiology of health/disease

Project Location: Melbourne Burwood campus

Project Description: Hyperinsulinaemia is an early defect in the pathophysiology of type 2 diabetes. Identifying novel biomarkers of detection of early hyperinsulinaemic states may be of potential clinical value for diabetes prevention and management. We have collected a large number of plasma samples from individuals across the spectrum from normo- to hyper-insulinaemia (basal and/or postprandial) and are looking to characterize proteomic and/or lipidomic profiles of hyperinsulinaemia. There is potential for interested students to take a more focused or broader 'omics investigation of samples using state-of-the art liquid chromatography-mass spectrometry methodologies.

Skills/Attributes Required: Knowledge and background in anatomy and/or physiology; Ability to learn relevant software programs (e.g. Excel, statistical software program)

Skills Developed: Ability to work with blood and/or muscle biopsy samples; Laboratory techniques; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: EXERCISE AND HEALTH OR DISEASE

Physical activity advice for non-urgent musculoskeletal patients in the emergency department

Project Number: ESS_10

Primary Supervisor: Niamh Mundell

E-mail: niamh.mundell@deakin.edu.au

Co-Supervisor(s):

Research Mentor(s): Claire Samanna

Topic Area(s): Exercise; sport science; Exercise physiology; Clinical exercise; Physical activity; Health promotion (including policy)

Project Location: Online or remotely

Project Description: The burden of musculoskeletal pain is one of the largest examples of the gap between population needs and our healthcare system service provision. In 2022, musculoskeletal conditions constituted the majority of >800,000 non-urgent ED presentations. However, up to 43% of cases presenting to the emergency department are non-urgent, with musculoskeletal disorders being among the top reasons for these visits. Guidelines recommended treatment while in the emergency department includes advice or education provided around levels of physical activity and return to work, but over capacity issues contribute to lack of adherence to guidelines and poorer health outcomes for patients. This project will examine existing data on advice provided by clinicians in an emergency department for non-urgent patients with musculoskeletal complaints. Outcomes may contribute to guidelines for referring such patients to an exercise or sports science professional for management.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Knowledge and background in anatomy and/or physiology; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Quantitative analysis (statistics); Qualitative analysis

Running and chronic non-specific low back pain

Project Number: ESS_11

Primary Supervisor: Niamh Mundell

E-mail: niamh.mundell@deakin.edu.au

Co-Supervisor(s): Niamh Mundell; Jamie Tait

Research Mentor(s): Claire Samanna

Topic Area(s): Exercise; sport science; Exercise physiology; Clinical exercise

Project Location: Online or remotely

Project Description: In adults with chronic, non-specific low back pain, exercise is recommended as a core component of evidence-based treatment. This study will use secondary data (quality of life, pain self-efficacy, kinesiophobia, muscle mass, social support) from a randomised controlled trial involving a 12-week, exercise physiologist led walk-run intervention in adults with chronic non-specific low back pain. Outcomes may contribute to guidelines for evidence-based care in this population. Study protocol: DOI: 10.1136/bmjsem-2022-001524

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Knowledge and background in anatomy and/or physiology; Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Exercise prescription and monitoring; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: EXERCISE AND HEALTH OR DISEASE

Research to real world: designing strategies to implement exercise telerehabilitation in practice

Project Number: ESS_12

Primary Supervisor: Jonathan Rawstorn

E-mail: jonathan.rawstorn@deakin.edu.au

Co-Supervisor(s): Dr Jiani Ma

Research Mentor(s):

Topic Area(s): Exercise; sport science; Clinical exercise; implementation science

Project Location: Either Burwood or Waurn Ponds Campuses

Project Description: If you're interested in how research leads to changes in real world practice, this could be the project for you. The project will building on previous research that explored requirements for translating a cutting edge exercise telerehabilitation program into clinical practice at four Victorian hospitals. By analysing existing data from co-design workshops, you'll develop a practical toolkit of fit-for-purpose strategies that can help hospitals and other exercise rehabilitation providers to successfully implement telerehabilitation in routine practice. You will learn about digital health, implementation science, co-design and qualitative research methods, and science communication. If you're interested in research that can lead to positive changes in the real world, let's chat.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability to work as a team member

Skills Developed: Qualitative analysis; science communication

Real-time remote coaching of resistance exercise training

Project Number: ESS_13

Primary Supervisor: Jonathan Rawstorn

E-mail: jonathan.rawstorn@deakin.edu.au

Co-Supervisor(s): Prof Ralph Maddison; Dr Yuxin Zhang

Research Mentor(s):

Topic Area(s): Exercise; sport science; Applied Sports Science; Strength; Conditioning; Clinical exercise; digital health

Project Location: Either Burwood or Waurn Ponds Campuses

Project Description: If you're interested in using digital technologies to improve exercise training and performance, this could be the project for you. To help us create a digital technology for real-time remote monitoring and coaching of resistance training, you'll follow a well-established design framework (IDEAS) to 1) work with exercise professionals to explore design requirements, 2) conceptualise potential solutions, 3) create digital prototypes of the most promising solutions, and 4) evaluate your prototypes via user feedback. You'll have opportunities to develop expertise in co-design methods, qualitative and quantitative data collection and analysis, and user experience/user interface design. If you're creative and interested in working at the forefront of digital health research, let's chat.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Image and/or video analysis; Quantitative analysis (statistics); Qualitative analysis; user experience design

HONOURS PROJECTS 2025: EXERCISE AND HEALTH OR DISEASE

Blood flow restriction exercise training - examining home-based/remote delivery

Project Number: ESS_14

Primary Supervisor: Stuart Warmington

E-mail: stuart.warmington@deakin.edu.au

Co-Supervisor(s):

Research Mentor(s):

Topic Area(s): Exercise; sport science; Applied Sports Science; Strength; Conditioning; Exercise physiology; Clinical exercise

Project Location: Either Burwood or Waurn Ponds Campuses

Project Description: Blood flow restriction (BFR) exercise is a training method that amazingly delivers outcomes similar to traditional strength training, but with only light training loads. This even includes light aerobic exercise (e.g. walking) and light resistance exercise (~20% max). Therefore, the versatility of this training method is extremely diverse, with relevance to athletes, clinical rehab, ageing, people unaccustomed to exercise, or players returning from injury. Our globally recognized team focused on BFR exercise can tailor projects to suit students interested in this novel, high-potential technique. These may be focused on the application of BFR to areas such as: * S * Clinical health * Physiology of muscle (performance/growth) * ...and more. While we are currently interested in home-based/remote BFR prescription using emerging device technologies, the best option to explore what we can offer is to get in touch to learn more, and to talk about your interests and what's possible.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Knowledge and background in anatomy and/or physiology; Basic familiarisation with laboratory techniques; Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Exercise prescription and monitoring; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: FOOD OR NUTRITION SCIENCE

How and when do children develop eating behaviours, and how are these related to health outcomes?

Project Number: FN_2

Primary Supervisor: Alissa Burnett

E-mail: a.burnett@deakin.edu.au

Co-Supervisor(s): Dr Jazzmin Zhang

Research Mentor(s):

Topic Area(s): Public health nutrition

Project Location: Online or remotely

Project Description: We will have data from parents of babies aged 0-12 months exploring the children's eating behaviours, weight, and dietary intake, as well as the parent's feeding practices. This secondary data analysis will draw on this data, the research question can be informed by the student's interests and could include: - Understanding the development of children's eating behaviours (food avoidance and food approach); what influences the development of children's eating behaviours, and when do they develop? - Understanding parental feeding practices and how these influence children's eating behaviours, dietary intake and weight. - Examining the influences on child dietary intake and weight; is it the parents or eating behaviours?

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects)

Skills Developed: Quantitative analysis (statistics)

Enhancing the Nutrient Profile of Plant-Based Milks

Project Number: FN_3

Primary Supervisor: Andrew Costanzo

E-mail: andrew.costanzo@deakin.edu.au

Co-Supervisor(s):

Research Mentor(s): Bharti Sharma

Topic Area(s): Sensory; consumer science; Public health nutrition

Project Location: Melbourne Burwood campus

Project Description: Plant-based milks (PBM) are an increasingly popular alternative to dairy milk amongst Australian consumers. However, PBMs are lacking in nutrients (e.g., protein and calcium) compared to dairy milk. Enhancing the nutrient profile of PBMs is critical to ensuring that they are meeting the nutritional requirements of the population consuming them. However, simply adding these nutrients can cause quality issues, such as poor solubility or flavour, that make the product unpalatable. We currently have several projects exploring the different issues associated with enhancing nutrients in PBMs. We encourage students who are interested in the food science of PBMs to reach out to the supervisory team to discuss potential project aims to find one that suits their interests.

Skills/Attributes Required: Knowledge and background in a sensory or consumer science; Basic familiarisation with laboratory techniques

Skills Developed: Primary data collection skills; Laboratory techniques; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: FOOD OR NUTRITION SCIENCE

Diving Deep: Harnessing the Sea to Alleviate Food Spoilage and Wastage

Project Number: FN_4

Primary Supervisor: Dan Dias **E-mail:** dan.dias@deakin.edu.au

Co-Supervisor(s): Snehal Jadhav; Yada Nolvachai

Research Mentor(s): Hemavaruni Nisansala Fernando

Topic Area(s): Natural Products

Project Location: Melbourne Burwood campus

Project Description: Food waste due to microbial spoilage is a major hindrance for food sustainability. Food spoilage and pathogenic microbes can proliferate in a range of different foods ranging from fresh produce to ready-to-eat food products and bring about chemical changes in the food rendering it unsuitable or unsafe for consumption. One strategy to alleviate microbial spoilage is to explore the marine environment for anti-microbial agents given that less than 10% of the world's biodiversity has been evaluated for biological activities, the challenge is to access this natural chemical diversity for the development of potential nutraceutical, pharmaceutical and agrochemical agents. This project aims to identify anti-microbial agents from the marine environment which potentially can mitigate microbial spoilage in perishable foods. This project will include training for industry relevant basic and advanced food microbiology and analytical chemistry skills in the laboratory.

Skills/Attributes Required: Basic familiarisation with laboratory techniques; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Primary data collection skills; Laboratory techniques; transferable analytical laboratory techniques

Evaluating Natural Product Extracts to Combat Food Spoilage and Pathogenic Microbes

Project Number: FN_5

Primary Supervisor: Dan Dias **E-mail:** dan.dias@deakin.edu.au

Co-Supervisor(s): Dr Snehal Jadhav; Dr Yada Nolvachai

Research Mentor(s): Miss Hemavaruni Nisansala Fernando

Topic Area(s): Natural Products

Project Location: Melbourne Burwood campus

Project Description: Microbial spoilage significantly hampers food sustainability by causing food spoilage and subsequent wastage. Pathogenic microbes and spoilage can affect a wide variety of foods, from fresh produce to ready-to-eat products, leading to chemical changes that make the food unsuitable or unsafe for consumption. We are working with The Product Makers (TPM), an international flavour company that develops, supports and innovates across the food and beverage market. Their team also creates natural flavours plus a range of healthy bioactive ingredients. This project aims to assess the anti-microbial properties using several unique natural extracts which potentially can mitigate microbial spoilage in perishable foods. This project will include training for industry relevant basic and advanced food microbiology and analytical chemistry skills in the laboratory.

Skills/Attributes Required: Basic familiarisation with laboratory techniques; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Primary data collection skills; Laboratory techniques; transferable analytical laboratory techniques

HONOURS PROJECTS 2025: FOOD OR NUTRITION SCIENCE

Are dietary patterns related to blood pressure in Australian children?

Project Number: FN_6

Primary Supervisor: Carley Grimes

E-mail: carley.grimes@deakin.edu.au

Co-Supervisor(s): A/Prof Ewa Szymlek-Gay; A/Prof Kristy Bolton

Research Mentor(s):

Topic Area(s): Dietetics; Public health nutrition

Project Location: Can also be online or remotely

Project Description: This project will use data collected within the most recent national nutrition survey conducted in the pediatric population, 2011-12 National Nutrition and Physical Activity Survey. This was a large nationally representative cross-sectional study which collected dietary recall data, blood pressure and anthropometric measurements in \approx 1000 children aged 5-17 years. The dietary data will be used to create dietary index scores, e.g. Healthy Eating Index and dietary patterns, e.g. Dietary Approaches to Stop Hypertension. The association between these dietary patterns and blood pressure will be explored. Few studies within the Australian pediatric population have examined the relationship between dietary patterns and blood pressure within large nationally representative samples of children. The findings from this project will provide valuable insights into how dietary intake during early life impacts blood pressure.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Ability to work as a team member

Skills Developed: Quantitative analysis (statistics); The student will develop in-depth knowledge of children's dietary intakes and dietary index scores as well as skills in data management, advanced statistical analyses and communicating research findings to target audiences.

Dietary risk factors associated with diabetes and heart diseases in Australia.

Project Number: FN_7

Primary Supervisor: Shariful Islam

E-mail: shariful.islam@deakin.edu.au

Co-Supervisor(s): Professor Ralph Maddison; Dr Teketo Tegegne

Research Mentor(s):

Topic Area(s): Dietetics; Public health nutrition; Health promotion (including policy); Burden of Diseases

Project Location: Online or remotely

Project Description: Diabetes and heart diseases are leading causes of premature death, disability and poor health globally and in Australia. Dietary factors significantly contribute to these conditions, but the changes in dietary patterns over time and their link to the burden of diabetes and heart disease in Australia remain unclear. This project aims to explore the prevalence and trends of dietary risk factors and their impact on diabetes and heart disease in Australia. The student will analyse the Global Burden of Disease data on dietary risk factors, such as diets low in fruits, vegetables, whole grains, nuts and seeds, milk, and high in sugar-sweetened beverages. The study will examine changes in dietary patterns from 1990 to 2021 by age group and gender, and their association with trends in diabetes and heart disease in Australia. The student will also assess age-specific prevalence, deaths, disability-adjusted life years, years of life lost, and years lived with disability attributable to diet.

Skills/Attributes Required: Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Quantitative analysis (statistics); Exploring datasets and secondary analysis

HONOURS PROJECTS 2025: FOOD OR NUTRITION SCIENCE

Plant-based antimicrobials for alleviating microbial spoilage in foods

Project Number: FN_8

Primary Supervisor: Snehal Jadhav

E-mail: snehal.jadhav@deakin.edu.au

Co-Supervisor(s): Dr Agnes Mukurumbira; Dr Dan Dias

Research Mentor(s):

Topic Area(s): Food Safety

Project Location: Melbourne Burwood campus

Project Description: Project Description: Have you wondered why you see several plant-based essential oils like tea tree oil or lemon myrtle used in commercial antiseptics and cleaning agents? The reason is that they are very potent in inhibiting the growth of microorganisms. Now imagine if we could use these to inhibit the growth of spoilage or pathogenic microbes from food or food surfaces, to stop food from spoiling quickly, thus reducing food waste and avoiding the use of synthetic preservatives. However there are several challenges in adapting these oils for commercial use, including their susceptibility to degradation and investigating the best way to deliver these in complex matrices such as food. The current project will focus on alleviating some of these concerns around the use of previously characterised antimicrobial, Australian native essential oils in foods/food packaging. The project will develop laboratory skills in basic and advanced food microbiology, food chemistry and nanosciences.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Basic familiarisation with laboratory techniques; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability to work as a team member

Skills Developed: Laboratory techniques; Quantitative analysis (statistics); Qualitative analysis

Understanding the contextual influences on eating behaviour

Project Number: FN_9

Primary Supervisor: Rebecca Leech

E-mail: rebecca.leech@deakin.edu.au

Co-Supervisor(s): Dr Georgie Russell

Research Mentor(s): Binyam Girma

Topic Area(s): Public health nutrition; Nutritional Epidemiology

Project Location: Online or remotely

Project Description: What, when and how people eat is affected by a range of contextual factors and this can affect overall diet quality and health. However, the influence of different types of contextual factors on eating remains poorly described. The overall aim of this project is to understand the contextual influences on food choices at meals and snacks. The contextual influences on eating that may be examined include intrapersonal and extra personal factors. Intrapersonal factors relate to factors experienced internally such as mood, hunger, stress, and emotional wellbeing. Extra personal factors involve the external environment and include factors such as social settings and the built food environment. This project will involve secondary analysis of data collected in adults (18-65 years). Potential datasets include the EverydayLife Study (ARC DP170100544) and Eating in Context Study (NHMRC APP1175250). Both datasets contain unique and rich information on food intakes and eating contextual factors.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects)

Skills Developed: Quantitative analysis (statistics)

HONOURS PROJECTS 2025: FOOD OR NUTRITION SCIENCE

Consumer acceptance of cell cultivated meat

Project Number: FN_10

Primary Supervisor: Gie Liem **E-mail:** gie.liem@deakin.edu.au

Co-Supervisor(s): TBD

Research Mentor(s):

Topic Area(s):

Project Location: Melbourne Burwood campus

Project Description: This study aims to explore the factors influencing consumer acceptance of cell-cultivated meat in Australia. As the global demand for sustainable and ethical food sources increases, cell-cultivated meat presents a promising alternative to traditional animal farming. The research will employ a mixed-methods approach, combining quantitative surveys and qualitative focus groups, to gather comprehensive insights into consumer perceptions, attitudes, and willingness to adopt cell-cultivated meat. Key variables such as environmental concerns, health benefits, sensory attributes, and ethical considerations will be examined. The findings will provide valuable information for policymakers, food producers, and marketers to develop strategies that enhance consumer acceptance and promote the adoption of cell-cultivated meat in the Australian market.

Skills/Attributes Required: Knowledge and background in a sensory or consumer science

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Survey development; Quantitative analysis (statistics)

Drivers and Barriers to Vegetable Consumption Among Older Adults in Australia

Project Number: FN_11

Primary Supervisor: Gie Liem **E-mail:** gie.liem@deakin.edu.au

Co-Supervisor(s): TBD

Research Mentor(s):

Topic Area(s): Sensory; consumer science

Project Location: Online or remotely

Project Description: This study aims to investigate the factors influencing vegetable consumption among older Australians. As the population ages, ensuring adequate vegetable intake is crucial for maintaining health and preventing chronic diseases. The research will employ a cross-sectional survey design to gather data from a representative sample of older adults across Australia. The survey will explore various barriers to vegetable consumption, such as accessibility, affordability, taste preferences, and knowledge about nutritional benefits. Additionally, the study will identify key drivers that encourage vegetable consumption, including health motivations, social influences, and cultural factors. The findings will provide valuable insights for public health initiatives, policymakers, and healthcare providers to develop targeted strategies that promote vegetable consumption and improve the dietary habits of older Australians.

Skills/Attributes Required: Knowledge and background in a sensory or consumer science

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Survey development; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: FOOD OR NUTRITION SCIENCE

What do we know about dietary protein and health as we age?

Project Number: FN_12

Primary Supervisor: Catherine Milte

E-mail: catherine.milte@deakin.edu.au

Co-Supervisor(s): Michael Tieland

Research Mentor(s):

Topic Area(s): Public health nutrition

Project Location: Online or remotely

Project Description: With Australia's increasing older population, maintenance of health in older age is important for public health intervention. Consumption of a healthy diet may reduce the risk of poor health and chronic disease in older age. One important aspect of a healthy diet in older age is protein intake. This project will explore associations between intake of protein from different sources (plant-based, animal-based) and physical and mental health (such as chronic disease, depression and cognitive function). This project involves secondary analysis of data collected from the Wellbeing, Eating and Exercise for a Long Life (WELL) study, a longitudinal cohort study of 4082 adults aged 55-65 years living in Victoria recruited in 2010. Self-report questionnaires were used to collect information on lifestyle behaviours and health status in 2010, 2012 and 2014. Information on depression and cognitive function were also collected in 2014.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Ability to work as a team member

Skills Developed: Quantitative analysis (statistics)

How should we eat nuts for better blood sugar control?

Project Number: FN_13

Primary Supervisor: Sze-Yen Tan

E-mail: szeyen.tan@deakin.edu.au

Co-Supervisor(s): Dr Elena George

Research Mentor(s):

Topic Area(s): Clinical nutrition

Project Location: Melbourne Burwood campus

Project Description: Nuts are high in protein and healthy fats, and intake has been associated with better diet quality and metabolic health. Nutrients from nuts can stimulate insulin release and lower blood sugar levels, but it is unknown whether how nuts are eaten in a diet can maximise their glucose-lowering effects. Therefore, this project aims to investigate whether manipulating the physical form or the timing of nut consumption can lead to better blood glucose levels throughout the day. Up to 2 projects are available. Findings from this project will inform the formulation of dietary advice on how nuts could be consumed to manage type 2 diabetes in the future.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: HEALTH OR FOOD BEHAVIOURS

Taste Perception During the Menstrual Cycle

Project Number: FN_14

Primary Supervisor: Andrew Costanzo

E-mail: andrew.costanzo@deakin.edu.au

Co-Supervisor(s): Simi Lewin

Research Mentor(s):

Topic Area(s): Sensory; consumer science; Public health nutrition

Project Location: Melbourne Burwood campus

Project Description: Taste sensitivity is a driver of food choice and intake. The taste sensitivity of a person is dynamic, in that it is constantly changing due to internal and external cues. One cue is the hormonal changes that occur during the menstrual cycle in eumenorrhic women. The aim of this study is to observe alimentary taste sensitivity patterns in eumenorrhic women across the menstrual cycle. Outcomes from this study will help understand how taste sensitivity is regulated in women and may explain dietary intake patterns throughout this cycle.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Interpersonal skills and ability to communicate directly with participants and other project contacts

Skills Developed: Recruitment of participants; Primary data collection skills; Quantitative analysis (statistics)

Technology for tots: What influences the use of screens during infant mealtimes?

Project Number: FN_15

Primary Supervisor: Katherine Downing

E-mail: k.downing@deakin.edu.au

Co-Supervisor(s): Alissa Burnett

Research Mentor(s):

Topic Area(s): Screen time; eating behaviours

Project Location: Online or remotely

Project Description: Why do some parents use screens when feeding their babies and others don't? Is it to do with fussy eating or the baby's personality? Or are there certain family traits that make parents more likely to use screens during mealtimes? We have data from parents of babies aged 0-12 months exploring the use of screens and eating behaviours, personality (temperament) and a range of family characteristics. This secondary data analysis project would draw upon this dataset to examine a particular aspect of screen use during mealtimes in infancy, tailored to the student's interests.

Skills/Attributes Required: Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Knowledge and background in a nutrition related field OR exercise or sports science related field

Skills Developed: Quantitative analysis (statistics)

HONOURS PROJECTS 2025: HEALTH OR FOOD BEHAVIOURS

Dietary Behaviour and Quality Among Students in HSN101: Foundations of Food, Nutrition and Health

Project Number: FN_16

Primary Supervisor: Katie Lacy

E-mail: katie.lacy@deakin.edu.au

Co-Supervisor(s): Dr Jennifer McCann

Research Mentor(s):

Topic Area(s):

Project Location: Either Burwood or Waurn Ponds Campuses

Project Description: Want to know more about the dietary behaviour of your peers? Using the dietary survey data from the last 5-10 years of data collection from HSN101 Foundations of Food, Nutrition and Health, this project gives students the opportunity to explore the types of diets followed, the reasons for choosing foods and food behaviours, and diet quality over time among students undertaking a first-year foundational nutrition unit. This project is flexible depending on the student's interests, and there is also potential to use a newly developed plant-based diet quality index for this research. Students will develop: • knowledge of dietary behaviour and/or the relationship between dietary behaviour and diet quality among a cohort of students undertaking a first-year foundational nutrition unit (HSN101 Foundations of Food, Nutrition and Health) • skills in critical analysis of relevant research literature, analysing, interpreting and presenting dietary survey data, and scientific writing

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Ability to work as a team member

Skills Developed: Quantitative analysis (statistics)

HONOURS PROJECTS 2025: PUBLIC HEALTH OR HEALTH PROMOTION

Mapping Australia's school food system and understanding stakeholder perspectives

Project Number: FN_17

Primary Supervisor: Alison Booth

E-mail: alison.booth@deakin.edu.au

Co-Supervisor(s): Jess Kempler; Claire Margerison

Research Mentor(s):

Topic Area(s): Public health nutrition

Project Location: Online or remotely

Project Description: Schools are opportune settings for supporting healthy eating behaviours for children. Australia's school food system is complex, comprised of varied food provision practices, food-related infrastructure, policies, curricula and programs. All of this influences the ways in which children interact with food within school and external settings. This study involves researching and mapping Australia's school food system, including (for example) relevant actors and organisations, curricula, health promotion initiatives and policies. The project will also involve exploring perspectives of key stakeholders within the school food system. Findings will have real-world implications for school-based food education and practice. It is intended that this project could lead to publication of the study in a scientific journal.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Qualitative analysis

Unpacking the popularity of ready-to-eat, processed toddler foods

Project Number: FN_18

Primary Supervisor: Alissa Burnett

E-mail: a.burnett@deakin.edu.au

Co-Supervisor(s): Dr Jenn McCann

Research Mentor(s):

Topic Area(s): Public health nutrition

Project Location: Online or remotely

Project Description: There has been substantial increase in the number of ready-to-eat, processed food products available in retail settings for toddlers (children aged 12–36 months). Why are these becoming more popular? Is it because they are convenient? Is it to do with the child's eating behaviours (i.e. fussy children are more likely to eat packaged foods). Or are there certain family traits that make parents more likely to purchase these foods? We would like to explore why these foods are becoming more popular by exploring the reasons why parents are using them by interviewing parents.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Interpersonal skills and ability to communicate directly with participants and other project contacts

Skills Developed: Recruitment of participants; Ability to conduct interviews; Qualitative analysis

HONOURS PROJECTS 2025: PUBLIC HEALTH OR HEALTH PROMOTION

Movement behaviour among culturally and linguistically diverse children and adolescents

Project Number: ESS_15

Primary Supervisor: Ana Maria Contardo-Ayala

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Co-Supervisor(s): A/Prof Natalie Lander; Dr Simone Verswijveren

Research Mentor(s): Gunchmaa Nyam

Topic Area(s): Physical activity; Health promotion (including policy)

Project Location: Online or remotely

Project Description: Culturally and linguistically diverse (CALD) youth are often affected by the health inequities that contribute, for example, to higher rates of overweight and obesity. This project aims to investigate movement behaviour (i.e. physical activity and sedentary time) among CALD children and adolescents in Australia. The study uses secondary data analysis to examine cross-sectional data (two large data sets are available depending on the Honours student research questions). Measures include demographic characteristics, and movement behaviours. A subsample wore GT3X+ accelerometers for seven days. Expected outcomes include insights into how CALD definitions influence movement behaviours, leading to data-driven public health recommendations. Skills gained: data analysis for large and complex data sets (using sophisticated analysis like latent profile analysis), understanding of movement behaviours, experience in study design and accelerometer analysis.

Skills/Attributes Required: Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Ability to work as a team member

Skills Developed: Quantitative analysis (statistics); Work with large data sets, work activity monitors (data cleaning, data management)

Qualitative exploration of metabolic fatty liver disease knowledge among Australian adults

Project Number: FN_19

Primary Supervisor: Elena George

E-mail: elena.george@deakin.edu.au

Co-Supervisor(s): Elena George; Sze-Yen Tan

Research Mentor(s): Ayesha Sualeheen

Topic Area(s): Dietetics; Public health nutrition; Nutritional epidemiology

Project Location: Online or remotely

Project Description: Metabolic dysfunction-associated fatty liver disease (MAFLD) is characterized by accumulation of fats in $\geq 5\%$ of hepatocytes, associated with obesity, type 2 diabetes, or other metabolic disorders. With limited pharmacotherapies available, lifestyle modifications are crucial for managing MAFLD. However, poor adherence, often due to insufficient disease knowledge, can result in adverse outcomes. This study aims to qualitatively explore MAFLD knowledge among Australian adults and identify the barriers and facilitators towards adopting lifestyle changes through semi-structured interviews. The research is expected to provide insights into MAFLD awareness and the factors influencing lifestyle modifications, contributing to better healthcare policy and practice and empowering patients to share their lived experiences. Students will develop skills in conducting in-depth interviews, analysing qualitative data and will be able to effectively disseminate study findings to academic professionals.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Qualitative analysis

HONOURS PROJECTS 2025: PUBLIC HEALTH OR HEALTH PROMOTION

Parent preferences for resources and information to support healthy child eating behaviours

Project Number: FN_20

Primary Supervisor: Tracy Jookyeong Lee

E-mail: tracy.lee@deakin.edu.au

Co-Supervisor(s): Georgie Russell

Research Mentor(s):

Topic Area(s): Public health nutrition; Behaviour nutrition

Project Location: It could be done on-campus at both campuses, online or remotely

Project Description: Children develop their eating behaviours (e.g., being fussy, eating quickly, overeating) across childhood and these can have lasting influences on their diets and weight. Parents hold the responsibility for children's eating and have a significant influence on shaping the development of children's eating and weight. Although it is recognised that parents are central to understanding how and why children's eating behaviours develop, parents' needs for resources and information to support their child's eating are largely unknown. This project will describe (i) availability and usability of resources and information that support parents and (ii) their preferences for resources and other support about children's eating. This project will involve secondary data analysis from a survey of parents. The student will have the opportunity to develop skills in literature search, data cleaning and statistical analysis.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability to work as a team member

Skills Developed: Quantitative analysis (statistics)

Understanding eating behaviours and food perceptions in children with peanut allergy

Project Number: FN_21

Primary Supervisor: Tracy Jookyeong Lee

E-mail: tracy.lee@deakin.edu.au

Co-Supervisor(s): Georgie Russell

Research Mentor(s):

Topic Area(s): Public health nutrition; Behaviour nutrition

Project Location: It could be done on-campus at both campuses, online or remotely

Project Description: Children with peanut allergy must adhere to strict dietary restrictions, potentially leading to compromised diet quality by limiting their food choices. Despite the importance of a nutrient rich and healthy food consumption on children's physical and cognitive health and wellbeing, diet quality and food consumption in children with peanut allergy, the most prevalent allergy in children, remains largely unexplored. The aim of this project is to investigate dietary patterns and eating behaviours and their associations with quality of life in children with peanut allergy. This project will involve literature search and secondary data analysis using data collected in collaboration with the Murdoch Children's Research Institute. The student will have the opportunity to develop skills in literature searching, data cleaning and statistical analysis.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability to work as a team member

Skills Developed: Quantitative analysis (statistics)

HONOURS PROJECTS 2025: PUBLIC HEALTH OR HEALTH PROMOTION

Ultra-processed food narratives in social media: a qualitative analysis of TikTok

Project Number: FN_22

Primary Supervisor: Priscila Machado

E-mail: p.machado@deakin.edu.au

Co-Supervisor(s): Rebecca Lindberg ; Emily Denniss

Research Mentor(s):

Topic Area(s): Public health nutrition

Project Location: Online or remotely

Project Description: Background: Evidence on the harms of ultra-processed foods (UPFs) to health, environmental sustainability, and society more broadly is accumulating, yet the consumption of these foods continues to grow. Research suggests that UPFs are not well understood or accurately communicated by academics, health professionals, advocates or the public. Social media is a popular source of information about food and nutrition; however, misleading information is prevalent, and evidence on UPF-related information on social media (e.g., TikTok) is lacking. Project aims: To examine how UPFs are interpreted and portrayed on TikTok. Expected outcomes: Qualitative thematic analysis of UPF narratives in TikTok videos with large number of views. TikTok is a rapidly growing social media platform with significant influence, particularly among younger audiences. Understanding how UPFs are portrayed on TikTok can reveal trends in public awareness, what drives interest in the topic, and sources of misinformation.

Skills/Attributes Required: Knowledge and background in a nutrition related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability to work as a team member

Skills Developed: Primary data collection skills; Qualitative analysis

Connecting the Dots: The Science of Movement

Project Number: ESS_16

Primary Supervisor: Shannon Sahlqvist

E-mail: shannon.sahlqvist@deakin.edu.au

Co-Supervisor(s): Anna Timperio

Research Mentor(s):

Topic Area(s): Exercise; sport science; Physical activity

Project Location: Melbourne Burwood campus

Project Description: For this project, the student(s) will work with a team of researchers to explore important research questions broadly related to children's physical activity. The Institute for Physical Activity and Nutrition (IPAN) leads an 'activation' at Scienceworks (Museums Victoria) during the school holidays. As part of the activation, children aged 4 - 12 take part in a wide variety of research-related activities while visiting the museum and get the opportunity to experience 'science in action'. In the past, activities have related to physical literacy, active travel, cognition and screen time. A range of data are collected from the children and their parents to answer important research questions. The student will work with the research team to identify a research question and the associated data collection materials, as well as have the opportunity be involved in the data collection and data analysis.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; Ability to travel to offsite for data collection and other projected related tasks

Skills Developed: Recruitment of participants; Primary data collection skills; Survey development; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: PUBLIC HEALTH OR HEALTH PROMOTION

Using machine learning models for classifying movement behaviours in preschool children

Project Number: ESS_17

Primary Supervisor: Simone Verswijveren

E-mail: s.verswijveren@deakin.edu.au

Co-Supervisor(s): Dr Katherine Downing; Dr Matthew Ahmadi

Research Mentor(s):

Topic Area(s): Physical activity

Project Location: On-campus at Melbourne Burwood Online or remotely

Project Description: Evidence suggests that excessive sitting and screen time may be harmful to child health, yet only 15% of children meet the recommended guidelines. This has contributed to global increases in health issues, such as obesity. Accurately measuring movement behaviours in children is crucial for monitoring physical activity levels and developing effective programs to address these issues. Recently, advanced machine learning algorithms have been developed to improve the recognition of young children's movement behaviours from free-living data collected using wearables. This project will utilize these algorithms with already collected data to identify and analyse movement behaviours. There is potential to apply this to longitudinal intervention data and explore associations with health outcomes, depending on the student's interest. The student will gain valuable experience in machine learning and data analysis, with opportunities for fieldwork on related projects if of interest.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interest in machine learning

Skills Developed: Quantitative analysis (statistics); Accelerometry data processing using wearables and machine learning algorithms/signal processing

Physical activity correlates among Chinese Australians

Project Number: ESS_18

Primary Supervisor: Anthony Walsh

E-mail: anthony.walsh@deakin.edu.au

Co-Supervisor(s): Jiani Ma; Ana Maria Contardo Ayala

Research Mentor(s):

Topic Area(s): Physical activity

Project Location: Online or remotely

Project Description: To investigate factors leading to lower levels of physical activity (PA) among Chinese Australian adults, and strategies to promote PA, we have collected survey and accelerometer data from a large sample of Chinese Australian adults, along with attitudinal, demographic and neighbourhood data. We are seeking students to lead aspects of the analysis. With the supervisory team, the student will identify an aspect of the evaluation of interest. Possible questions could include: • Which groups of Chinese Australians are less active, and why? • What forms of physical activity are most common and popular among Chinese Australians? • What are common barriers to sufficient PA among Chinese Australians? Depending on the research question, students will gain practical experience in ethical approval, quantitative data collection, analysis interpretation, management of large and complex data sets, and working in a research team. Chinese speaking students are especially encouraged to apply.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; ability to speak and read Chinese not required but desirable

Skills Developed: Primary data collection skills; Quantitative analysis (statistics); working with accelerometer data

HONOURS PROJECTS 2025: PUBLIC HEALTH OR HEALTH PROMOTION

Greater Brisbane Area Moves study

Project Number: ESS_19

Primary Supervisor: Anthony Walsh

E-mail: anthony.walsh@deakin.edu.au

Co-Supervisor(s): Shannon Sahlqvist; Anna Timperio

Research Mentor(s):

Topic Area(s): Physical activity

Project Location: Online or remotely

Project Description: The Queensland Government recently reduced public transport fares to 50c/trip. We have collected pre and post survey data from a large sample of Brisbane adults, to examine the impact of this policy on physical activity (PA). The survey also collected attitudinal, demographic and neighbourhood data. We are seeking students to lead aspects of the analysis, and/or to collect and analyse additional data. With the supervisory team, the student will identify an aspect of the evaluation of interest. Possible questions could include:

- What barriers influenced uptake of public transport and PA?
 - Which demographic groups increase PA more, and why?
 - Did changes in PA vary by geographical location, and why?
- Depending on the research question, students will gain practical experience in ethical approval, quantitative and/or qualitative data collection, analysis interpretation, and working in a research team. Students will gain experience in evaluation of complex real-world interventions.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Survey development; Quantitative analysis (statistics); Qualitative analysis

HONOURS PROJECTS 2025: SPORTS MANAGEMENT AND MARKETING

Examining the Social Impacts of Multi-City Mega Sport Events

Project Number: ESS_20

Primary Supervisor: Jordan Bakhsh

E-mail: j.bakhsh@deakin.edu.au

Co-Supervisor(s): Katie Rowe

Research Mentor(s):

Topic Area(s): Sport Management

Project Location: Melbourne Burwood campus

Project Description: Mega sport events, like the FIFA Women's World Cup, are designed to create positive social impacts for host communities and their members. However, community support needed to host mega sport events has faded in recent years. This has occurred over time as mega sport events have created greater costs than benefits for communities and their members. Accordingly, event organisers have endorsed a new hosting strategy designed to tackle this challenge: multi-city strategies. Multi-city strategies use multiple host locations (e.g., Adelaide, Brisbane, Melbourne, Perth, and Sydney). This strategy is designed to create positive social impacts for multiple host communities while also decreasing the cost for communities to host. In this project, the student will examine Australians' social impacts of the 2023 FIFA Women's World Cup, by analysing survey data collected post-event. The outcomes from this project will inform event governing bodies and future host destinations of how effective multi

Skills/Attributes Required: Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; Ability to travel to offsite for data collection and other project related tasks

Skills Developed: Quantitative analysis (statistics)

Social Innovation in Sport Management

Project Number: ESS_21

Primary Supervisor: Jonathan Robertson

E-mail: j.robertson@deakin.edu.au

Co-Supervisor(s): Steve Swanson

Research Mentor(s):

Topic Area(s): Sport Management

Project Location: Online or remotely

Project Description: Australia's population is becoming older, less healthy, and less connected in an increasing digital age. Simultaneously, sport participation in many traditional sport organisations is declining. Sport is continually searching for new models of delivery and business models to meet this decline and deliver on its remit to produce social and health outcomes for society. One promising area of scholarship that addresses this domain is social innovation. Social innovation broadly refers to how social value is created, captured and distributed via individuals, organisations, and institutions within society. Non-traditional sport organisations (i.e., those that manage social sport events, leagues, and physical activity opportunities) provide a theoretically relevant setting to investigate social innovation in sport, as they are particularly adept at creating, capturing and distributing new norms and values that run counter to the prevailing decline of social value in many organisations. This

Skills/Attributes Required: Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; Ability to travel to offsite for data collection and other project related tasks; Knowledge and background in sport management

Skills Developed: Ability to conduct interviews; Quantitative analysis (statistics); Qualitative analysis

HONOURS PROJECTS 2025: SPORTS SCIENCES

Barriers and enablers to the successful integration of Skill Acquisition Specialists within sport

Project Number: ESS_22

Primary Supervisor: Zoe Avner

E-mail: z.avner@deakin.edu.au

Co-Supervisor(s): David Broadbent; Lyndell Bruce

Research Mentor(s):

Topic Area(s): Applied Sports Science; Sports coaching

Project Location: Either Burwood or Waurrn Ponds Campuses

Project Description: Skill acquisition specialists have become more prominent within high performance sport systems in recent years, and yet there remains little understanding of their roles and responsibilities, how they integrate effectively within the sport environment, and the barriers and enablers for developing a sustainable and healthy career in this field. The aim of this project is to provide insight into these questions by (a) conducting an extensive review of academic and industry literature to gather insights into the role and impact of skill acquisition specialists in high-performance sports, and (b) conduct interviews with skill acquisition specialists working within high performance sport to gain first-hand perspectives on the practical aspects, challenges, and success stories related to their roles. The insights gained from this project will inform sports organizations, coaches, and practitioners on how to effectively utilise and support skill acquisition specialists.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; Ability to travel to offsite for data collection and other project related tasks

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Qualitative analysis

Inertial measure unit assessment of musculoskeletal loads during exercise and sport

Project Number: ESS_23

Primary Supervisor: Elizabeth Bradshaw

E-mail: liz.bradshaw@deakin.edu.au

Co-Supervisor(s): Eric Drinkwater

Research Mentor(s):

Topic Area(s): Exercise; sport science; Applied Sports Science; Strength; Conditioning; Biomechanics

Project Location: Either Burwood or Waurrn Ponds Campuses

Project Description: Rationale: This study will examine the musculoskeletal loads at various anatomical locations (distal tibia to head) during exercise and sport tasks. This research will contribute new knowledge on musculoskeletal loads through the body during low to high impact activities which can be used to guide exercise prescription and rehabilitation of individual athletes. Skills: This is a quantitative study that will utilise force platform and inertial measurement units during primary data collection in the Biomechanics laboratory, but with the potential for data collection in the field on different sport surfaces, depending on the individual students interests. Data analyses will require a minimum of Excel and statistical methods, but may include other specialist software and/or computer programming (e.g., Capstone, Matlab).

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Basic familiarisation with laboratory techniques; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Laboratory techniques; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: SPORTS SCIENCES

An exploration into the cognitive processes underpinning golf performance in virtual reality

Project Number: ESS_24

Primary Supervisor: David Broadbent

E-mail: david.broadbent@deakin.edu.au

Co-Supervisor(s): Lyndell Bruce; Aden Kittel

Research Mentor(s):

Topic Area(s): Applied Sports Science; Sports coaching; Sport / exercise psychology

Project Location: Either Burwood or Waurin Ponds Campuses

Project Description: Virtual reality (VR) is increasingly being utilised in sports training and skill acquisition due to its representativeness and immersive nature. However, there remains limited understanding of the extent to which cognitive processes in VR-based sport games reflect those in real-world sporting environments. This study aims to bridge this gap by examining the cognitive processes during a virtual golf game using the Think Aloud protocol (Ericsson Simon, 1993), as well as self-report measures of perceptual-cognitive demands (e.g., SIM-TLX; Harris et al., 2019). The findings will be compared with previous research conducted in real-world golf settings (e.g., Whitehead et al., 2015; Harris et al., 2021). Students on this project will gain experience using VR technologies and develop skills related to qualitative and quantitative research methods.

Skills/Attributes Required: Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts

Skills Developed: Recruitment of participants; Primary data collection skills; Quantitative analysis (statistics); Qualitative analysis

Examining the situation awareness skills of cyclists

Project Number: ESS_25

Primary Supervisor: David Broadbent

E-mail: david.broadbent@deakin.edu.au

Co-Supervisor(s): Lyndell Bruce; Aden Kittel

Research Mentor(s):

Topic Area(s): Applied Sports Science; Sport / exercise psychology

Project Location: Melbourne Burwood campus

Project Description: Cyclists are frequent casualties in road traffic collisions. Human error has been shown to be a main contributor to these incidents – particularly cyclists' failure to "look properly". To better understand cyclists' safety, it is important to assess their situation awareness; namely, their perception of elements within time and space, their comprehension of the meaning of those elements, and their projection of their future state (Endsley, 1995). We have created a 360-degree video-based resource to test the situation awareness skills of cyclists. The current project will use eye-tracking technology to examine cyclists' situation awareness skills when completing the test. Students on this project will gain experience using eye-tracking technologies and develop skills related to quantitative research methods.

Skills/Attributes Required: Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Laboratory techniques; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: SPORTS SCIENCES

Sources of stress in youth athletes

Project Number: ESS_26

Primary Supervisor: Lyndell Bruce

E-mail: lyndell.bruce@deakin.edu.au

Co-Supervisor(s): David Broadbent; Aden Kittel

Research Mentor(s):

Topic Area(s): Applied Sports Science; Sport / exercise psychology

Project Location: Either Burwood or Waurn Ponds Campuses

Project Description: Youth athletes have multiple sources of stress ranging from physical demands such as training and matches to cognitive demands and expectations around academic performance. Current literature has proposed methods to measure their response to stress, such as the short recovery stress scale. Many of the measures are related to understanding the physical stress which may be imposed from training loads. There is currently less empirical understanding around the various sources of stress that a youth athlete may be exposed to. Allostatic load is a term given to the cumulative effect that chronic stress has on mental and physical health. This project aims to investigate these sources of stress holistically and understand the impact on youth athlete's allostatic load.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Qualitative analysis

Advancing the employability of sport scientists by exploring perceptions of their industry value

Project Number: ESS_27

Primary Supervisor: Lyndell Bruce

E-mail: lyndell.bruce@deakin.edu.au

Co-Supervisor(s): David Broadbent; Aden Kittel

Research Mentor(s):

Topic Area(s): Applied Sports Science

Project Location: Either Burwood or Waurn Ponds Campuses

Project Description: The value of sport science practitioners is not well articulated across the sport industry. There is a need to understand the value of sport science professionals from the perspective of sport scientists themselves, managers, and consumers to 1) identify discrepancies that exist; 2) understand the reason behind these; and 3) provide better advocacy. Therefore, the aim of this project is to provide an in-depth understanding of the perceived value of sport scientists from multiple perspectives across diverse settings.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Qualitative analysis

HONOURS PROJECTS 2025: SPORTS SCIENCES

Biomechanical analysis of cricket spin-bowling

Project Number: ESS_28

Primary Supervisor: Aaron Fox

E-mail: aaron.f@deakin.edu.au

Co-Supervisor(s): Simon Feros; Jason Bonacci

Research Mentor(s):

Topic Area(s): Exercise; sport science; Applied Sports Science; Biomechanics

Project Location: Melbourne Burwood campus

Project Description: Understanding the biomechanics of cricket bowling provides useful data for improving performance and managing injury risk. Current biomechanical research is highly skewed towards fast bowling technique, with minimal investigation in spin bowling. This project will use three-dimensional motion capture and force plates to capture the biomechanics of spin bowling, and subsequently investigate the relationship to performance and potential injury risk. The specifics of the project (i.e. performance vs. injury focus) can be discussed and directed based on student interest.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Basic familiarisation with laboratory techniques; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Laboratory techniques; Quantitative analysis (statistics)

Understanding the mechanical performance of ballet pointe shoes

Project Number: ESS_29

Primary Supervisor: Aaron Fox

E-mail: aaron.f@deakin.edu.au

Co-Supervisor(s): Jason Bonacci

Research Mentor(s): Haydee Ferguson

Topic Area(s): Exercise; sport science; Applied Sports Science; Biomechanics; Engineering

Project Location: Geelong Waurin Ponds campus

Project Description: Ballet pointe shoes have existed for over 200 years, yet despite modern advancements in athletic footwear – the design and materials used in pointe shoes have remained stagnant in their design and technology. The current design and materials present in ballet pointe shoes also only last for a short period of time (i.e. ~20 hours of wear). Little scientific research has investigated the material and mechanical properties of ballet footwear, and a better understanding of this space may lead to improved and more sustainable designs. This project will apply a combined biomechanics and material sciences lens to investigate the mechanical properties of traditional ballet pointe shoes through load and impact testing – with the findings expected to inform future ballet footwear designs.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Basic familiarisation with laboratory techniques; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Ability to work as a team member

Skills Developed: Primary data collection skills; Laboratory techniques; Quantitative analysis (statistics)

HONOURS PROJECTS 2025: SPORTS SCIENCES

American football skill development using Virtual Reality

Project Number: ESS_30

Primary Supervisor: Aden Kittel

E-mail: aden.kittel@deakin.edu.au

Co-Supervisor(s): Lyndell Bruce; David Broadbent

Research Mentor(s):

Topic Area(s): Exercise; sport science; Applied Sports Science; Sports coaching; Sport / exercise psychology

Project Location: Either Burwood or Waurn Ponds Campuses

Project Description: American football (i.e., NFL, gridiron) is growing in popularity within Australia as both a sport to play, and to follow the NFL competition. In particular, flag football is the non-contact version of this sport and participation numbers are growing rapidly, ahead of being an official sport for the LA 2028 Olympics. Virtual Reality (VR) can be used as a skill development tool for athletes (Düking et al., 2018; Faure et al., 2020), with a commercially available game for American football. However, there is no research that exists for how VR can be used as a skill development tool for American football and flag football players. This study aims to understand how VR can be used as a skill development tool in this rapidly developing sport. Students on this project will gain experience using VR technologies and develop skills related to qualitative and quantitative research methods.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; Ability to travel to offsite for data collection and other projected related tasks

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Survey development; Quantitative analysis (statistics); Qualitative analysis

Understanding developmental pathways in sport officials

Project Number: ESS_31

Primary Supervisor: Aden Kittel

E-mail: aden.kittel@deakin.edu.au

Co-Supervisor(s): Lyndell Bruce; David Broadbent

Research Mentor(s):

Topic Area(s): Exercise; sport science; Applied Sports Science; Sports coaching; Sport / exercise psychology

Project Location: Online or remotely

Project Description: Sports officials (i.e., umpires, referees, judges) are athletes in their own right, with key skills leading to effective performance. While there is limited research exploring developmental histories and pathways in sports officials overseas (MacMahon et al., 2007; Mergler, 2019), there is limited research from an Australian perspective. This is in contrast to the amount of knowledge understanding development pathways of athletes in history (Cupples et al., 2018; Huxley et al., 2017). It is important to develop a greater understanding of development pathways in sport officials to foster talent development. This study aims to develop greater understanding of the developmental pathways and histories of sport officials. Students on this project will gain experience related to qualitative and quantitative research methods, and key stakeholders in the Australian officiating ecosystem.

Skills/Attributes Required: Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to conduct interviews; Survey development; Quantitative analysis (statistics); Qualitative analysis

HONOURS PROJECTS 2025: SPORTS SCIENCES

Links between mouthguard-measured head impacts, sleep and cognition in adolescent athletes.

Project Number: ESS_32

Primary Supervisor: Spencer Roberts

E-mail: s.roberts@deakin.edu.au

Co-Supervisor(s): Sean Corrigan

Research Mentor(s):

Topic Area(s): Exercise; sport science; Applied Sports Science; Health promotion (including policy)

Project Location: Melbourne Burwood campus

Project Description: Collision sports such as rugby and Australian football are among Australia's most participated sports. While there is growing concern over the potential consequences of repeated head impacts on athletes' long-term brain health, little is known of the head impact risks and consequences for adolescent athletes. For this project, students will be embedded with an adolescent collision sport team (Australian football or rugby) and will collect head impact data using instrumented mouthguards. Students will also help monitor the sleep and cognitive function of players during the season. This project will improve understanding of head impact exposures (e.g., number, severity etc.) in adolescent athletes, and will explore the potential consequences for sleep and cognitive function. There may also be scope within this project for students to help conduct neuroimaging (i.e., brain scans) with participants.

Skills/Attributes Required: Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; Ability to travel to offsite for data collection and other projected related tasks

Skills Developed: Recruitment of participants; Primary data collection skills; Image and/or video analysis; Quantitative analysis (statistics)

Maximal fat oxidation in trained cyclists

Project Number: ESS_33

Primary Supervisor: Chris Shaw

E-mail: chris.shaw@deakin.edu.au

Co-Supervisor(s): Chris Shaw; Kirsten Howlett

Research Mentor(s): Eloise Tarry

Topic Area(s): Sports nutrition; Exercise; sport science; Exercise physiology

Project Location: Geelong Waurin Ponds campus

Project Description: Maximal fat oxidation rates can be determined from a short incremental exercise test and is highly variable between individuals. Maximal fat oxidation has been linked to performance in long distance events and has been suggested as a tool to guide personalized nutrition interventions. These projects will examine why certain individuals are characterized by a high fat 'burning' capacity and whether maximal fat oxidation rates translate to fuel use during prolonged exercise bouts in both the fasted and fed states. These projects will use a combination of exercise testing, indirect calorimetry to assess substrate utilization, blood sampling and dietary analysis to explore the determinants of maximal fat oxidation rates in well trained cyclists and triathletes.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Knowledge and background in anatomy and/or physiology; Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to work with blood and/or muscle biopsy samples; Laboratory techniques

HONOURS PROJECTS 2025: SPORTS SCIENCES

Menstrual cycle-related symptoms and perceived effects on netball training and performance

Project Number: ESS_34

Primary Supervisor: Rhiannon Snipe

E-mail: r.snipe@deakin.edu.au

Co-Supervisor(s): Dominique Condo; Lyndell Bruce

Research Mentor(s): Izzy Cotham

Topic Area(s): Exercise; sport science; Exercise physiology

Project Location: Melbourne Burwood campus

Project Description: The majority (~75%) of female athletes experience menstrual cycle related symptoms and perceive that these symptoms negatively impact performance. However, symptoms and effects on performance have not been investigated prospectively using valid and reliable questionnaires. This research project will be the first to prospectively assess menstrual cycle related symptoms and perceived effects on netball training/competition performance using a valid and reliable questionnaire. The project will also investigate strategies used to manage symptoms by female netballers and practical perspectives on menstrual cycle monitoring to assist implementation into sport. Findings may inform individual monitoring and training/load management across the menstrual cycle. The project industry partners include Melbourne University Lightning netball and Boorondara Express and will provide practical experience in the sports industry and in-depth knowledge on menstrual cycle monitoring in female athletes.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; Ability to travel to offsite for data collection and other projected related tasks; Knowledge and interest in menstrual cycle

Skills Developed: Recruitment of participants; Primary data collection skills; Survey development; Quantitative analysis (statistics); Qualitative analysis; Translational /sports industry research, menstrual cycle monitoring in athletes

Menstrual cycle phase effects on endurance exercise performance in the heat

Project Number: ESS_35

Primary Supervisor: Rhiannon Snipe

E-mail: r.snipe@deakin.edu.au

Co-Supervisor(s): Amelia Carr ; Ee Ling Ng

Research Mentor(s): Lilia Convit

Topic Area(s): Exercise physiology

Project Location: Melbourne Burwood campus

Project Description: Research investigating the effects of the menstrual cycle on exercise performance is currently conflicting. However, some research suggests that endurance exercise performance in the heat may be impaired during the luteal phase of the menstrual cycle due to an elevated core body temperature. This Honours project will therefore investigate the effect of menstrual cycle phase on physiological responses (e.g. core body temperature, heart rate, sweat rate, hydration) and endurance exercise (e.g., running, cycling) performance in the heat. This project will provide practical laboratory, exercise physiology and performance testing skills and experience; and an in-depth understanding of female physiology, thermoregulation and performance. The outcomes will improve our understanding on the effects of the menstrual cycle on female physiology and endurance exercise performance in the heat and guide future research in this field.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Basic familiarisation with laboratory techniques; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member; Knowledge and background in exercise physiology and the menstrual cycle

Skills Developed: Recruitment of participants; Primary data collection skills; Ability to work with blood and/or muscle biopsy samples; Laboratory techniques; Exercise prescription and monitoring; Quantitative analysis (statistics); Menstrual cycle monitoring, exercise performance testing

HONOURS PROJECTS 2025: SPORTS SCIENCES

Rehabilitation of Achilles tendon rupture-repairs

Project Number: ESS_36

Primary Supervisor: Danielle Trowell

E-mail: d.trowell@deakin.edu.au

Co-Supervisor(s): Jason Bonacci

Research Mentor(s):

Topic Area(s): Exercise; sport science; Clinical exercise; Biomechanics

Project Location: Melbourne Burwood campus

Project Description: Achilles tendon ruptures are common among active individuals. Despite advancements in rehabilitation, functional deficits often persist after surgical repair. Early mobilisation and weightbearing aid recovery, yet evidence on Achilles tendon loads following rupture-repair surgery remains limited. Our research quantifies Achilles tendon forces and strain during walking, rehabilitation exercises, and clinical tests in post-repair populations. The goal is to inform exercise progressions and optimise rehabilitation strategies. We offer a biomechanics honours project tailored to individual interest, ideal for students interested in musculoskeletal mechanics, rehabilitation, and sports injury. The project involves biomechanical testing, including motion analysis, force measurement, and data interpretation.

Skills/Attributes Required: Knowledge and background in an exercise or sports science related field; Ability to learn relevant software programs (e.g. Excel, statistical software program); Ability and willingness to learn intermediate quantitative statistics (recommended for secondary data analysis projects); Interpersonal skills and ability to communicate directly with participants and other project contacts; Ability to work as a team member

Skills Developed: Primary data collection skills; Laboratory techniques; Quantitative analysis (statistics)

SUPERVISOR PROFILES

Honours Supervisors for 2025

Bianca Bernardo

I am a molecular biologist and an expert in cardiac physiology. My research focuses on preclinical testing of novel therapeutics (e.g. microRNAs and small molecules) for the failing heart. In addition to numerous invited reviews and conference presentations, I have received prestigious awards and grants for my microRNA discoveries, including the Ralph Reader Prize, grants from Diabetes Australia and Perpetual Trustees and the Inaugural Alice Baker and Eleanor Shaw Fellowship (Baker Heart and Diabetes Institute 2016-18) for recognition of research excellence and performance.

Deakin Experts Profile: <https://experts.deakin.edu.au/66420-bianca-bernardo>

Google Scholar: <https://scholar.google.com/citations?user=OweTq4YAAAAJ>

Jeremy Drake

My background is in exercise physiology and biomedical science. My research is laboratory-based with a strong focus on the physiology of stress and the molecular cell biology of cancer. I am currently involved with various projects assessing markers of stress in human biospecimens (eg blood, saliva). My research has most recently produced an international patent for the discovery of a novel, stress-responsive protein in cancer that affects how a cancer cell responds to drug treatments.

Deakin profile: <https://experts.deakin.edu.au/43898-jeremy-drake>

Shaun Mason

Dr Shaun Mason is a lecturer in Nutrition Science, and undertakes research in redox biology and proteomics across domains of chronic metabolic disease, exercise and nutrition. As part of Dr Mason's research, he has undertaken clinical trials involving antioxidant supplementation treatments in healthy individuals and in patients with type 2 diabetes. Dr Mason's main teaching areas are diet and disease, Principles of Nutrition, and nutritional physiology. Dr Mason's research profile can be found via Orcid at: <https://orcid.org/0000-0002-6138-2239>

Chris Shaw

Chris Shaw is an Associate Professor in Exercise Physiology in the School of Exercise and Nutrition Sciences/IPAN. His research focuses on how fuel use is regulated during exercise and in response to feeding. He is interested in the mechanisms underlying metabolic and cardiovascular diseases and the metabolic benefits of exercise. He performs human studies using a combination of approaches to examine whole body fuel utilization and invasive techniques to study protein expression, signalling and metabolism in skeletal muscle. He has successfully supervised 12 Honours students and 10 PhD students to completion and his previous Honours students have entered postgraduate programs including PhD, Medicine and Physiotherapy.

<https://experts.deakin.edu.au/29375-chris-shaw>

Glenn Wadley

A key focus of Prof Wadley's research program is investigating the molecular mechanisms regulating skeletal and cardiac muscle adaptations following exercise. These topics have important implications for the treatment and prevention of Type 2 diabetes and cardiovascular disease. His research utilizes a range of approaches from human exercise trials down to animal and cell culture experiments to investigate these areas. He has successfully supervised over 20 Honours students to completion and his previous Honours students have been successful in obtaining entry to competitive postgraduate programs including PhD, Medicine, Physiotherapy and Master of Dietetics. Prof Wadley's research profile can be viewed at <https://experts.deakin.edu.au/24524-glenn-wadley/about>

Helen Brown

Associate Professor Helen Brown is a behavioural epidemiologist in the Centre for Sport Research, Institute of Physical Activity and Nutrition, Deakin University. She leads a comprehensive program of research which focuses on developing and implementing evidence-based strategies to promote diversity and inclusion in sport, with a focus on coaching practice. Her research has a strong focus on translating research into policy and practice, working collaboratively with significant industry and government connections to provide evidence-based improvements to practices and systems.

SUPERVISOR PROFILES

Declan Hennessy

Dr Declan Hennessy is an accredited exercise physiologist (AEP) currently teaching into the Masters of Clinical Exercise Physiology and the undergraduate Exercise and Sport Science degrees. His research primarily focuses on exercise in cancer populations and improving fitness measures to influence important clinical outcomes. He is specifically investigating prehabilitation interventions in colorectal, breast, and prostate cancer survivors. Recently, he has been working with a high-functioning research group named Diabetes Research Technology Group (D.T.R.G) based at St Vincent's Hospital. Current research with this group explores the effects of whey protein ingestion on different exercise regimens and hypoglycaemia (<https://www.researchgate.net/profile/Declan-Hennessy>).

Shariful Islam

Shariful Islam (MBBS, MPH, PhD, FESC) is an Associate Professor and leader of the Global Health Research Group at the Institute for Physical Activity and Nutrition (IPAN). He is a Physician Scientist with a PhD in International Health. Shariful's research focuses on Global Health and Digital Health. He has experience in design and conduct of large-scale epidemiological studies, secondary data analysis, meta-analysis, and clinical trials. He has published 353 articles in peer-reviewed journals including several studies with his students. Shariful has supervised to completion 7 Doctor of Medicine and 12 Masters students, and 5 PhD students at IPAN. He currently supervises 1 Masters and 3 PhD students.

Deakin Profile: <https://experts.deakin.edu.au/42242-Shariful-Islam>

Niamh Mundell

Dr Niamh L Mundell (PhD, AEP, ESSAM) is a Lecturer in Clinical Exercise Physiology, Accredited Exercise Physiologist and member of the Institute for Physical Activity and Nutrition (IPAN) at Deakin University, Australia. She is also a Non-Executive Director at Exercise and Sports Science Australia. She is passionate about extending the inclusion of clinical exercise physiology within usual care for people with chronic and complex conditions. Long term, she aims to contribute to research that supports the progression of both the clinical exercise physiology and exercise science disciplines

<https://experts.deakin.edu.au/5971-niamh-mundell>

<https://sites.google.com/view/niamhmundell>

Jonathan Rawstorn

Jonathan is an exercise and behavioural scientist at the Institute for Physical Activity and Nutrition (IPAN). His research explores the use of technologies for monitoring delivering exercise/lifestyle programs to help improve health and performance. His research skills include intervention design/evaluation, exercise testing, validation studies, systematic reviews/meta-analysis. For more information please see Jonathan's research profile at : <https://experts.deakin.edu.au/38788-jonathan-rawstorn>

Stuart Warmington

<https://experts.deakin.edu.au/568-stuart-warmington>

<https://www.linkedin.com/in/swarmington/>

Alissa Burnett

Dr Alissa Burnett is a lecturer and researcher within the Institute for Physical Activity and Nutrition (IPAN) based at the Burwood campus. Her research focuses on the prevention of childhood obesity through investigating child eating behaviours (i.e fussiness and enjoyment of food), how these influence dietary intake and how parental factors including feeding practices and parenting styles influence the eating behaviours of young children.

<https://experts.deakin.edu.au/40831-alissa-burnett/about>

Andrew Costanzo

Dr Andrew Costanzo is a sensory nutritionist at the CASS Food Research Centre, and a lecturer in Food and Nutrition. His research investigates the factors that influence how taste perceptions are regulated to understand the interplay between taste, diet, and metabolism. He has a specific focus on problem nutrients such as fat, salt, and sugar, and his research has led to the discovery of a novel taste perception to fat. He has supervised 4 Honours students and 1 PhD student in previous years. A summary of his research is outlined in his staff profile:

<https://www.deakin.edu.au/about-deakin/people/andrew-costanzo>

SUPERVISOR PROFILES

Dan Dias

Dr Dias has over 15 years of experience in analytical biochemistry, metabolomics and natural product chemistry. His current research is focused on identifying bioactive natural products with anti-microbial properties from macro-red algae to alleviate food spoilage. Dr Dias is also engaged in utilizing chemical profiling and immunological assays to evaluate the effects of Polyphenol Rich Sugarcane Extracts on inflammatory cell signalling pathways supported by The Product Makers (industry partner).

1. Deakin Profile - <https://experts.deakin.edu.au/61794-dan-dias>
2. Google Scholar - <https://scholar.google.com.au/citations?user=g6uNxDsAAAAJ=en>
3. Researchgate - <https://www.researchgate.net/profile/Daniel-Dias-13>

Carley Grimes

Dr Grimes is a Senior Lecturer in Population Nutrition and an Accredited Practising Dietitian. Her primary research focuses on dietary intakes of children. This includes measuring what children are eating, describing children's diets and related health outcomes, and designing interventions to improve dietary intakes. She has supervised three Honours students to completion in the role of primary supervisor and supported all students to prepare and publish findings from their Honours thesis into published peer-reviewed manuscripts. She has also supervised PhD students (1 primary, 3 co-supervisor) to completion. Further information about her research profile can be found here <https://experts.deakin.edu.au/28590-carley-grimes> or <https://scholar.google.com/citations?user=wXf2bMUAAAAJ=en>

Snehal Jadhav

Dr Snehal Jadhav is a Senior lecturer in the School of Exercise and Nutrition Sciences. Her research expertise is mainly around solving industry-based problems in the area of microbial food safety and metabolomics. She has more than 30 publications with over 1300 citations. She has previously supervised seven honours students and is currently supervising 6 PhD students at Deakin.

Rebecca Leech

Dr Rebecca Leech is a Registered Nutritionist and Nutritional Epidemiologist, funded by a NHMRC Emerging Leadership Fellowship. Her research applies novel analytic approaches to understand adults' eating patterns, including the contextual influences on food choices at meals and snacks and cardiometabolic health. Dr Leech is also interested in understanding how daily temporal patterns of diet, physical activity and sleep jointly influence health.

Deakin Profile: <https://experts.deakin.edu.au/28116-rebecca-leech>
Google Scholar: <https://scholar.google.com.au/citations?user=vbM7uu0AAAAJ=en>

Gie Liem

Gie Liem is an associate professor in sensory and consumer science. I have supervised more than 10 honours students in the past of which the majority received an HD. You can check my area of research at <https://scholar.google.com/citations?user=v-mi468AAAAJ>
Areas of interest are: sensory marketing, psychology of food choice, consumer acceptance of novel technology.

Catherine Milte

Dr Catherine Milte is a Senior Lecturer in Nutritional Sciences. Her research focuses on understanding dietary patterns, and investigating how consuming a healthy diet can protect against chronic disease and dementia in older age. Further details on Dr Milte's expertise can be found here: <https://experts.deakin.edu.au/10033-catherine-milte>

During the honours year with Dr Milte the student will develop:

- in-depth knowledge and understanding of nutrition and health concerns in the ageing population
- skills in analysing, presenting and interpreting population-based health data, particularly dietary intake data.
- skills in use of statistical analysis software
- an understanding of the conduct of epidemiological studies and the generation of new nutrition knowledge

SUPERVISOR PROFILES

Sze-Yen Tan

Dr Sze-Yen Tan's research focuses on chronic health conditions spanning from over-nutrition (e.g. obesity, CVD, diabetes) to the ageing population that is at risk for undernutrition. His research aims to identify effective dietary strategies that promote optimal appetite regulation, weight/adiposity management, glycemic blood lipid control, and healthy ageing. He has extensive experience in supervising both domestic and international research students. His research profile links could be found below:

Staff profile: <https://experts.deakin.edu.au/43218-sze-yen-tan>

Researcher profile: <https://scholar.google.com.au/citations?user=YCtqN4cAAAAJ=en>

Katherine Downing

Katherine is a Lecturer in Physical Activity and Health within the School of Exercise and Nutrition Sciences. Her research focuses on 24-hour movement behaviours (physical activity, sedentary behaviour and sleep) in the early childhood period (birth through 5 years of age). She has particular interests in the objective measurement of these behaviours, screen time use, and developing feasible, effective and scalable interventions to support healthy behaviours in children from a young age.

Katie Lacy

Dr Katie Lacy is a Senior Lecturer in Nutritional Sciences and is a member of the Institute for Physical Activity and Nutrition (IPAN). She teaches HSN101 Foundations of Food, Nutrition and Health, which introduces many students to issues around the sustainability of the food environment. Dr Lacy's research focuses on promoting evidence-based strategies for moderating energy intake and improving diet quality among young people, and she is particularly interested in dietary behaviours that are also more environmentally sustainable. Dr Lacy has supervised/co-supervised six Honours students, with most publishing their work in academic journals. For more information about Dr Lacy's teaching and research background, please visit: <https://www.deakin.edu.au/about-deakin/people/katie-lacy>

Alison Booth

A/Prof Alison Booth (RNutr) is a teaching and research focused academic within the School of Exercise and Nutrition Sciences and specialises in nutrition promotion. She co-leads the School Food Nutrition group in the Institute of Physical Activity and Nutrition (IPAN). Her current research focuses on food and nutrition education in schools (food literacy), school food environment including school lunches and teacher professional development. She has co-supervised 8 Honours students, over 12 Masters students, and three PhD students to completion.

Ana Maria Contardo-Ayala

Dr. Ana María Contardo-Ayala is a Postdoctoral Research Fellow at the Institute for Physical Activity and Nutrition (IPAN), Deakin University. She holds a PhD in Exercise Sciences from Deakin University, where she investigated the relationship between sedentary behaviour and health outcomes in youth. Her research focuses on physical activity and sedentary behaviour interventions in primary and secondary schools, particularly among culturally and linguistically diverse (CALD) communities. Dr. Contardo-Ayala is the academic leader for the adaptation and testing of the TransformUs program in secondary schools. She has authored 18 publications, comprising 17 peer-reviewed journal articles (9 as first/corresponding author) and 1 book chapter.

Elena George

Dr George is an Advanced Accredited Practising Dietitian, Senior Research Fellow in Nutrition and Dietetics and a member of the Institute for Physical Activity and Nutrition (IPAN) at Deakin. She is in the top 0.6% of researchers globally and #1 Australian Dietitian in fatty liver disease and in the top 2% of global researchers for nutrition therapy and Mediterranean diet. Dr George actively supervises HDR students (PhD, Masters and Honours). She has experience in various dietary patterns, clinical trials, epidemiology, co-design and implementation and her research program is aimed at improving clinical practice. In particular enhancing evidence-based practice in lifestyle management through research that is translated into practice.

Tracy Jookyeong Lee

Tracy Lee is a postdoctoral research fellow within the Institute for Physical Activity and Nutrition (IPAN) based at the Burwood campus. She leads a program of research aimed at understanding eating behaviours and food sensory perceptions in children. She has a particular interest in understanding how and why children with peanut allergy eat differently from the healthy children, and how those children can learn to eat well to improve their quality of life. Tracy is an active and enthusiastic supervisor of undergraduate and Honours students. Jookyeong Lee (Tracy Lee) - Google Scholar

SUPERVISOR PROFILES

Priscila Machado

Dr Priscila Machado is a Research Fellow at the Deakin IPAN. Her research focuses on understanding the role of ultra-processed foods (UPF) in the food system and human health, evaluation of sustainable healthy diets, and nutrition policy. Priscila's interests include how to effectively communicate about UPFs to increase literacy to reduce UPF consumption and support for policy actions targeting UPFs. Priscila has a career total of 50 papers, >4,300 citations (Google Scholar), and has contributed to reports on UPFs for the Food and Agriculture Organization of the United Nations, World Health Organization, Pan American Health Organization, and others. Priscila has successfully supervised previous Masters and PhD students and is committed to a high standard of support and supervision.

Shannon Sahlqvist

Dr Shannon Sahlqvist is a Senior Lecturer in Physical Activity and Health. Her research is broadly focused on the promotion of physical activity, with specific expertise in active travel (walking and cycling). She works with both children and adults to understand the barriers they face to active travel and evaluates real-world approaches aimed at increasing active travel.

Simone Verswijveren

Dr Simone Verswijveren is an Alfred Deakin Postdoctoral Research Fellow (based at Burwood Campus) at the Institute for Physical Activity and Nutrition within the School of Exercise and Nutrition Sciences. Her research focuses on children's 24-hour movement behaviours, including physical activity (e.g., walking and running), sedentary behaviour (e.g., sitting and screen time) and sleep, and how these are related to health outcomes. Her current work focuses on sophisticated methods of measuring and analysing movement behaviour data to better understand these and ultimately inform movement guidelines and health promotion efforts.

Deakin profile: <https://www.deakin.edu.au/about-deakin/people/simone-verswijveren>

Google Scholar: <https://scholar.google.com.au/citations?user=322b65AAAAAJ=en>

Anthony Walsh

Dr Anthony Walsh is an early career researcher in the School of Exercise and Nutrition Sciences/Institute for Physical Activity and Nutrition, with a long history working as a practitioner and manager in health promotion roles, in the not-for-profit sector. Anthony's area of research is active travel, and his specific areas of research focus are:

- interventions to promote physical activity through active travel, especially active commuting
- the physical activity associated with public transport use
- equity in health promotion related to active travel
- physical activity and active travel among culturally and linguistically diverse communities.

<https://www.researchgate.net/profile/Anthony-Walsh-6/publications>

<https://experts.deakin.edu.au/search?by=text=user=anthony%20walsh>

Jordan Bakhsh

Dr Jordan Bakhsh is an Alfred Deakin Postdoctoral Research Fellow in the Department of Management in the Deakin Business School and is a member of the Centre for Sport Research. Jordan's research focuses on understanding how organisations reactively and proactively engage with mega events. His research takes a pragmatic approach to examine how organisations strategically leverage mega sport events and the social and sustainable impacts those strategies create for individuals, organisations, and society. His research has been published in leading sport management journals including Sport Management Review and European Sport Management Quarterly, and he is an Editorial Board Member for the leading event management journal Event Management.

Jonathan Robertson

Dr Jonathan Robertson is a Senior Lecturer in the Sports Management Program and Co-Director of the Master of Business (Sport Management) within the Deakin Business School. He teaches undergraduate and postgraduate courses in related to sports ethics, integrity, and social issues. His primary research interests are in the areas of social change, ethics and integrity, innovation, and organisational theory.

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Zoe Avner

My research interests centre around (1) the development of more effective and ethical sport coaching and athlete development practices and (2) the development of more inclusive and equitable sport and physical cultures.

<https://experts.deakin.edu.au/60679-zoe-avner/about>

Elizabeth Bradshaw

Dr Bradshaw specialises in Sport Biomechanics (<https://experts.deakin.edu.au/43844-Liz-Bradshaw>). She is a Fellow and Life Member of the International Society of Biomechanics in Sport (ISBS) and an Exercise and Sports Science Australia (ESSA) Level 2 Accredited Sport Scientist. Dr Bradshaw research specialty is in measuring musculoskeletal loads in exercise and sport with a focus on injury control (prevention and rehabilitation) in children and youth athletes.

ORCID: <https://orcid.org/0000-0003-2271-2351>

ResearchGate: <https://www.researchgate.net/profile/Elizabeth-Bradshaw-2>

Google Scholar: <https://scholar.google.com/citations?hl=en=BWYVBxAAAAAJ>

David Broadbent

Dr David Broadbent is a lecturer and researcher in the School of Exercise and Nutrition Sciences. David's broad area of research is on expertise and skill acquisition in a range of domains, such as sport and road users (e.g., cyclists), with a particular interest in the perceptual-cognitive skills underpinning performance (e.g., situation awareness, decision making). David uses a variety of measures and techniques as part of his research, such as eye-tracking, virtual reality, performance analysis, and behavioural responses. Click here to view his Deakin profile: <https://experts.deakin.edu.au/60433-david-broadbent>

Lyndell Bruce

Dr Bruce is an expertise researcher who explores expert performance, factors contributing to expert performance and the development of expertise, with a focus on sport. The measurement of performance, perceptual cognitive and perceptual motor factors contributing to expert performance and athlete development are strong interest areas. With a strong track record on engaging with industry to solve applied sport challenges, Dr Bruce uses a multidisciplinary approach using a range of technologies and analytical techniques to offer insights into the research questions. She also has a strong interest in developing the sport science discipline and the future workforce.

<https://www.deakin.edu.au/about-deakin/people/lyndell-bruce>

Aaron Fox

Dr Aaron Fox is a senior lecturer and researcher in the School of Exercise and Nutrition Sciences and has expertise in the area of neuromechanics and human performance. Aaron's work involves the use of a range of technologies (including motion capture, force plates, electromyography) and analytical techniques to identify optimal strategies for improving human performance and reducing injury risk.

Google Scholar Profile: <https://scholar.google.com.au/citations?user=p0QjWTQAAAAJ=en>

Aden Kittel

Dr Aden Kittel (Lecturer - Motor Learning and Development) has investigated how decision-making skills can be improved through off-field training for sporting officials such as Australian football umpires. This has been explored the use of video-based and innovative 360 Virtual Reality (360VR) methods for assessing and developing decision-making in sports officials. Aden is now leading multiple research projects relating to sport officials' (referees, umpires) recruitment, talent development, and education. In addition, Aden has established himself as a world-leading researcher using 360VR technology, and is exploring varied uses of this technology in sport and education development.

<https://experts.deakin.edu.au/65441-aden-kittel>

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Spencer Roberts

Dr Roberts' research examines novel approaches for mitigating the risks and consequences of head impacts in collision sport. His research incorporates instrumented mouthguards for monitoring head impact exposures in adult and adolescent athletes (e.g., Rugby, Australian football) and explores the efficacy of novel approaches (e.g., neuroimaging, fluid biomarkers, sleep architecture) for diagnosing and managing brain injuries. Dr Roberts is also pursuing projects examining the influence of lifestyle factors, such as sleep and diet, on recovery from sport-related concussion.

Rhiannon Snipe

Dr Rhiannon Snipe is a lecturer and researcher in sports nutrition. Her research aims to address the significant gap in female athlete-focused research and support female athlete health, wellbeing and performance. Dr Snipe has extensive experience supervising Honours, Masters and PhD research projects in female athlete physiology, health and performance. Please get in contact to discuss other potential projects on female athlete health and performance.

Deakin Profile: <https://experts.deakin.edu.au/43740-Rhiannon-Snipe#>

Danielle Trowell

Dr Danielle Trowell is a Lecturer in Sport Science at the Melbourne Burwood Campus and a member of the Centre for Sport Research (CSR) within the Institute for Physical Activity and Nutrition (IPAN). Dr Trowell's research employs three-dimensional motion analysis, electromyography, ultrasound, and musculoskeletal modelling techniques to investigate the biomechanical mechanisms underpinning human performance and lower limb musculoskeletal injury. Her primary research focuses on running biomechanics, the prevention and management of lower limb musculoskeletal conditions, and plantarflexor rehabilitation and loading.