

# Healthy Development Adelaide

A Research and Innovation Cluster in South Australia

## Newsletter

Vol 14, Issue 3 – June 2018



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### Upcoming Conferences / Scientific Meetings

#### 20 - 23 June

Australasian Society for Stem Cell Research - Melbourne, Australia

#### 1 - 4 July

European Society of Human Reproduction and Embryology - Barcelona, Spain

#### 16 - 17 July

Gynaecology, Obstetrics and Reproductive Health - Bangkok, Thailand

#### 29 July - 3 August

Childhood Trauma - Melbourne, Australia

#### 19 - 22 August

Endocrine Society of Australia & Society for Reproductive Biology - Adelaide, Australia

#### 24 - 26 August

Australasian Diabetes in Pregnancy Society - Adelaide, Australia

For further event info go to [www.adelaide.edu.au/hda/events](http://www.adelaide.edu.au/hda/events)

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## LATEST NEWS

### HDA Women's Excellence in Research Award 2018 Winner

Congratulations to A/Professor Charlene Thornton from the College of Nursing and Health Sciences at Flinders University for winning this year's award.

Charlene's talk was titled **Improving the health and wellbeing of mothers and babies now and into the future**. Event was held on 16 May and chaired by Professor Sarah Robertson, Director of the Robinson Research Institute, University of Adelaide and member of HDA Steering Group and Executive Committee.

Charlene was awarded \$1,000 prize money and received a plaque on the night. The talk and audio can be found at [www.adelaide.edu.au/hda/news](http://www.adelaide.edu.au/hda/news)



Charlene discussed how she utilises linked population datasets to establish incidence and prevalence and the associations between current practice variations and short and long term health outcomes for mothers and babies.

Three current papers were discussed: 1. Born before Arrival – Incidence and associated factors and the relationship with homebirth and freebirth; 2. Gastro-oesophageal reflux diagnoses and the association with maternal anxiety and 3. Five year baby/child health outcomes comparing birth intervention and normal physiological birth in a healthy maternal cohort.

Pic L to R: Professor Sarah Robertson with A/Professor Charlene Thornton and her award

.... HDA Partners ....



Government of South Australia Department for Education  
Women's and Children's Health Network



## HDA RESEARCH MEMBER PROFILE - DR JODIE AVERY

### ROBINSON RESEARCH INSTITUTE, UNIVERSITY OF ADELAIDE

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Dr Jodie Avery is a social researcher with advanced skills in both quantitative and qualitative research methodologies in the Equity and Healthy Futures and the Lifecourse and Intergenerational Health (LIGHT) research group with the Robinson Research Institute. As a chronic disease epidemiologist her primary area of research has concerned the intersection of women's chronic health conditions with psychosocial factors that may influence other associated comorbidities. This includes investigating psychosocial and mental health aspects of women's chronic conditions such as Polycystic Ovary Syndrome (PCOS) and Incontinence through the life course.

Her research focuses on determining the prevalence of Polycystic Ovary Syndrome (PCOS) in the community as well as assessing physical, psychosocial and psychological barriers and enablers, for postpartum weight loss in women with and without PCOS. Polycystic Ovary Syndrome (PCOS) is the most common endocrine disorder in women and it generates numerous health problems across the lifespan. PCOS affects up to 18% of women of reproductive age in Australia, and of the women screened for PCOS, 70% have not been diagnosed. Ultimately, Jodie hopes to increase the awareness of PCOS within the medical community so that women may receive a more timely diagnosis, as well as care that is appropriate to their needs.

Jodie has recently been awarded a Robinson Research Foundation Career Development Fellowship for 2018 to look at "Endocrine profiles of women with Polycystic Ovary Syndrome in midlife: New investigations of the Lucina cohort", as well as an Australian Federation of University Women SA Trust Postdoctoral Award. In 2017 she undertook a Career Development Fellowship from the NHMRC Centre for Research Excellence in PCOS examining "Barriers to post-partum weight reduction in women with Polycystic Ovary Syndrome" as well as gaining a position as a University Research Fellow with the Centre for Traumatic Stress Studies.

Previously, Jodie has been a Senior Research Associate / Epidemiologist with Population Research and Outcome Studies, Discipline of Medicine, University of Adelaide. After completing degrees in Arts (Politics and Psychology) and Medical Radiations, Jodie moved to Public Health. She has worked in public health since 1997 and completed her Master of Public Health in 2003. Jodie's PhD explored "Depression and its Association with the Psychosocial Factors of Urinary Incontinence" with the Discipline of General Practice. Jodie has previously worked in research with the Discipline of Obstetrics and Gynaecology, University of Adelaide; CSIRO Health Sciences and Nutrition; and the SA Department of Health, before PROS moved to the University of Adelaide.

Passionate about public health, Jodie has been Vice President of the SA Branch of the Public Health Association, mentoring students and early career professionals. Jodie is also a member of the EMCR. Jodie's current population health interests include women's health, psychosocial outcomes, chronic conditions, incontinence, mental health, quality of life, health information, health literacy, carers' health, aboriginal health and complementary medicine regulation.

Find out more about Jodie's work in  
<https://researchers.adelaide.edu.au/profile/jodie.avery>  
<http://www.pcos-cre.edu.au/barriers-to-reduce-postpartum/>

☎ 8313 1217

✉ [jodie.avery@adelaide.edu.au](mailto:jodie.avery@adelaide.edu.au)

## NEW HDA MEMBERS

**Ms Wei Song**, PhD Candidate  
Discipline of Psychology, Flinders University  
*Focus - behavioural genetics (childhood trauma)*

**Ms Nina Wilson**, PhD Candidate  
School of Pharmacy & Medical Sciences, UniSA / SAHMRI  
*Focus - maternal nutrition*

**Ms Kate Obst**, PhD Candidate  
School of Psychology, University of Adelaide  
*Focus - pregnancy loss and families*

**Mr Thomas Trebilco**, PhD Candidate  
Discipline of Psychology, Flinders University  
*Focus - behavioural genetics (stress & infertility)*

**Jack Darby**, PhD candidate, Early Origins of Adult Health Research Group, UniSA

In March 2018, I was supported by Healthy Development Adelaide to attend the annual Fetal and Neonatal Workshop which was held in Queenstown, New Zealand. The workshop is affiliated with the Perinatal Society of Australia and New Zealand (PSANZ) and provides a slightly more relaxed atmosphere for students and early career researchers to present their research findings. Whilst, the majority of presentations at the workshop are by students and early career researchers, there are some presentations by senior world leaders in the field of fetal and neonatal development.

At the meeting I presented work entitled “Maternal undernutrition increases IGF2 signalling molecules and fibrosis in the heart of the late gestation sheep fetus” in an oral presentation session that was focused on cardiac development. The work I presented was performed as part of my PhD at the University of South Australia the supervision of Professor Janna Morrison (Early Origins of Adult Health Research Group). The main aim of my PhD is to identify molecular mechanisms within the heart of the growth restricted fetus that may contribute to adult onset cardiovascular disease in babies born with a low birth weight. After I presented my findings, the workshop uses a panel discussion of all presenters in the session to continue to discuss the research with the audience. Our research generated a lot of discussion and from this I not only received constructive feedback but also suggestions about where my research could go from here.

Attending the meeting allowed me to learn from other researchers as they presented their work and has given me some great ideas on where to focus my research in the future. The workshops gave me a forum to network with other researchers in my field as well as talk to and strengthen the relationship we have with researchers that we already collaborate with. From the meeting, we already have some fantastic collaborative ideas in the pipeline. Being able to present my research to experts in the field of fetal development was a significant highlight during my PhD candidature and I would like to thank Healthy Development Adelaide for giving me the opportunity to do so. The experience has opened my eyes to wide array of research that is occurring in the field of fetal development and has motivated me to continue to work hard and achieve my research goals.

## HDA TRAVEL GRANT - RECIPIENT REPORT 2018

**Dr Zohra Lassi**, Robinson Research Institute, University of Adelaide

With the assistance of 2018 Healthy Development Adelaide Travel Grant I was privileged to attend Annual Congress of Perinatal Society of Australia and New Zealand (PSANZ) in Auckland, New Zealand. This annual congress is held once every year in Australia or New Zealand to provide an opportunity for members to broaden their perspectives of perinatology; stimulate research activities aimed at improving perinatal care; present scientifically rigorous and valid new information; and debate new information and ideas of relevance to perinatology.

This leading Congress brought together approximately more than 500 national and international experts, including researchers (such as scientists and epidemiologists), health care professionals (including midwives, neonatal nurses, neonatologists and obstetricians), and policy makers– with the aim of exploring and promoting novel concepts in perinatal health. There were multiple sessions during the 3 days’ conference in a variety of formats, ranging from plenary discussions, to oral presentations, complemented by poster sessions, and other interest group meetings. I greatly valued hearing about the latest advancements in perinatal health researches and trials.

The main purpose of attending the conference was to present the findings from my work. I presented a poster on my findings from a research on health and wellbeing for young Aboriginals in South Australia. My poster was very well received by the audience and generated some good discussion during the poster display session. I also embraced opportunities to network throughout the conference, for example attending the Welcome Reception and lunch/tea breaks. This events allowed me to further develop relationships and exchanges ideas with researchers in similar roles across the country – including current/future colleagues and collaborators from other universities.

Attendance at the PSANZ was extremely rewarding. I extend sincere thanks to Healthy Development Adelaide for the opportunity to share my research findings, to network with national and international colleagues and friends, and to acquire knowledge from experts who are dedicated to improving perinatal health in Australia, and the world.

**Mitchell Lock**, PhD Candidate, Early Origins of Adult Health Research Group, UniSA

The aim of the Fetal and Neonatal Workshop of Australia and New Zealand is to provide a venue for presentation and discussion of new research in fetal and neonatal development. From its inception the Workshop has been the primary meeting in Australia and New Zealand for researchers working in the burgeoning field of experimental perinatology. I submitted an abstract and was given an oral presentation for the conference, the abstract is attached. The presentation was titled “Immediate gene response following myocardial infarction in the fetal and adolescent sheep heart” and allowed me to share some of the gene array data I collected last year during my stay at the University of Florida in the USA.

This meeting is a well-respected and highly attended amongst those in the fetal and neonatal development field around Australia and New Zealand. Presenting my work particularly exhibits the unique sheep model and techniques we are capable of utilizing in Adelaide (generating an infarction while in utero as well as fetal MRI, coupled with miRNA and gene array) to an international audience. Collaboration is one of the key aspects this conference is focused on and is overall a very friendly and supportive group of researchers.

My presentation generated healthy discussion on the ability for binucleated cardiomyocytes to proliferate. This is a somewhat controversial topic, as it was previously thought that binucleated cardiomyocytes were quiescent, this may not be true given some recent cardiac development studies using rodents. The discussions held after the talks during the conference dinner were equally enlightening and helped me develop my research networks and expand my understanding of the many challenges a fetus and infant can face during early life.

The remainder of the time after the conference was spent with research collaborators, re-enforcing the ties between our lab groups, and planning new collaborative efforts. Some new potential collaborations were formed after all the talks were complete as well as sharing of interesting new techniques that can be used in Adelaide to visualize cardiac and brain morphology *ex vivo* using MRI analyses.

This travel grant benefitted me greatly, allowing me to present my thesis data, gain excellent and valuable feedback and generate new connections and collaborations, all while enjoying the beautiful Queenstown/New Zealand landscape.

## HDA TRAVEL GRANT - RECIPIENT REPORT 2018

**Dr Ryan Rose**, Robinson Research Institute, University of Adelaide / Embryologist, Fertility SA

With the help of the Healthy Development Adelaide, I had the privilege of being able to attend the 8<sup>th</sup> Congress of the Asia Pacific Initiative on Reproduction (ASPIRE) in Taipei, Taiwan which ran from the 12-15<sup>th</sup> of April.

Our abstract “The BlastGen pilot study: A randomized controlled trial of GM-CSF supplemented blastocyst media” was selected as one of the top 10 abstracts for the conference, which was a collaboration between the University of Adelaide, Fertility SA and an industry partner ORIGIO. Furthermore I was honored to receive a prize for “Outstanding Oral Presentation” and one of the top 5 presentations of the conference.

A strength of this conference was the development and improvement of clinical trials were many experienced researchers including the current editor for Human Reproduction, Hans Evers spoke on the topic. There was also the opportunity to attend a pre-congress workshop themed “Conducting and Interpreting Clinical Trials”. The workshop helped to stimulate concepts for trials and support those who attended with the design and improvement of these ideas. In my current role, the workshop was of immense value as we are currently running clinical trials and are endeavoring to conduct more in the future.

The ASPIRE conference will benefit Healthy Development Adelaide by providing further opportunity for collaborations. In the field of infertility, we tend to have small sample sizes when conducting clinical trials due to the smaller size of our IVF clinics. With collaborations from countries like China and Japan, we will be able to work with them and their patient group to conduct and conclude larger scale trials faster and more efficiently.

ASPIRE’s mission statement focuses on advances of fertility services and forming cohesive groups to promote fertility management across the region. The meeting was the perfect platform to start developing some of these relationships.



## HDA TRAVEL GRANT - RECIPIENT REPORT 2018

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**Dr Karen Best, Research Fellow/Clinical Scientist, SAHMRI Healthy Mothers and Babies**

In March 2018, thanks to the generous support of HDA, I was fortunate to attend the Maternal and Perinatal Clinical Trials (IMPACT) workshop and the 22nd Congress of the Perinatal Society of Australia and New Zealand (PSANZ) held in Auckland, New Zealand. I arrived in a very busy Auckland Airport on Friday night as the conference coincided with an Ed Sheeran concert and thousands of extra visitors to the city.

The IMPACT workshop was held on the weekend prior to the PSANZ Congress. Several perinatal clinical trials that are in the design stage were presented and it was a valuable experience to be part of the interactive discussion and advice shared by experts in the field. The PSANZ congress was held from Sunday to Wednesday. PSANZ is a bi-national multidisciplinary society dedicated to improving the health and long-term outcomes for mothers and their babies. Prior to the congress I was accepted as a member of the PSANZ Academy which meant that I got to review and score abstracts for acceptance at the congress and to co-chair a session with an experienced PSANZ member.

The theme of this year's meeting was 'Whenua ki whānau – nurturing the people of our land.' We were treated to an amazing opening ceremony with an opera singer performing 'Hallelujah' and 'The Prayer' to a standing ovation. The congress was attended by internationally renowned researchers and clinicians with an interest in perinatal health and a healthy start to life for all. Some congress highlights included late breaking results from Australian and New Zealand randomised controlled trials and the launch of new guidelines related to perinatal care. I attended a fabulous Early Career Researcher workshop on Monday evening where we got together for networking and round table discussions with experienced PSANZ mentors. My abstract titled "Exposure to everyday chemicals: phthalate concentrations in pregnant Australian women" was accepted for an oral presentation which I gave on final day of conference. This was well received with several audience members asking questions and approaching me following my talk to discuss further. Conference abstracts were published in Journal of Paediatrics and Child Health. I would like to sincerely thank Healthy Development Adelaide for their financial support to assist with costs of attending this workshop and conference. It was a very worthwhile experience that has aided my professional development and further enhanced my ECR track record.

## HDA TRAVEL GRANT - RECIPIENT REPORT 2018

**Danielle Pollock, PhD Candidate, School of Nursing and Midwifery, UniSA**

In March 2018, I travelled to Auckland, New Zealand and attended the Perinatal Society of Australian and New Zealand (PSANZ) conference. I had the opportunity to discuss my research on stillbirth stigma at a breakfast session, and then present my findings on the antenatal silence of stillbirth education in Australia. Presenting to a room of esteemed researchers, obstetricians, midwives and consumers was an incredible honour. Both presentations were well received and created much discussion on what we tell pregnant women, and how we should be spreading important health messages, such as monitoring baby's movements and stillbirth. I also had several obstetricians approach me and discuss further issues surrounding the discussion of stillbirth and strategies on what we can do next to improve the current climate.

The conference started with an old Maori saying that deeply resonated with me: "with my basket of knowledge, and your basket of knowledge, we can feed the people." That saying continued throughout the conference with high calibre and innovating science that certainly will assist in reducing infant mortality within Australia and New Zealand. The most interesting presentation was on the artificial uterus! Furthermore, this conference highlighted the need for better communication amongst colleagues, but also with our women.

During this trip, I was able to reconnect with researchers I had met previously and discuss in detail my research. They offered interesting insight about my findings and future directions which will assist me in the future. These connections have also granted me future opportunities on multi-centre international collaborations. Overall, attending this conference helped me build up my domestic and international network, and I look forward to the opportunities that can come from it.

The HDA travel grant made this trip possible. I am a mother to a beautiful little toddler, Charlie and little newborn, Zoe and this grant gave me financial freedom to bring them along and continue to be a mother, but also to follow my passion of research. The conference was extremely valuable to my professional development and continuing motivation in the final stages of my PhD.

## UPCOMING HDA EVENT

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Joint forum with HDA and Australian Association for Infant Mental Health Inc.  
**Nurturing early social and emotional wellbeing through  
infancy and early childhood**



Australian Association for  
Infant Mental Health Inc.

Infant Mental Health Awareness Week  
11-17 June 2018  
Australia



**Dr Patricia O'Rourke**, Child Psychotherapist

Department of Psychological Medicine, Women's and Children's Health Network

**The Maternal Looking Guide: A clinical tool for midwives to assess mothers' interactions with their newborns**

**Ms Naomi Guiver**, Clinical Psychologist/PhD Candidate

College of Medicine & Public Health, Flinders University

**Giving babies the best possible start to life: The role of antenatal psychosocial screening programs**

**Ms Amy Garrett**, PhD Candidate, Robinson Research Institute, University of Adelaide

**Effect of poor mental health during pregnancy on neurodevelopmental outcomes in 8-10 year old children**

**Dr Prue McEvoy**, Clinical Director, Child and Adolescent Mental Health Service (CAMHS)

Women's and Children's Health Network

**Improving the mental health of babies and young children in South Australia - what services are needed into the future**

**Wednesday 13 June, 5.30 - 7.30pm**

{doors open from 5.00pm, networking with light refreshments from 7.00pm}

**Rumours (6th floor), Union House, University of Adelaide (North Terrace campus)**

All Welcome - FREE admission

**RSVPs required for seating and catering**

**by Thursday 7 June to [anne.jurisevic@adelaide.edu.au](mailto:anne.jurisevic@adelaide.edu.au)**

## NEW HDA MEMBERS...CONTINUED

**Dr Suzanne Mashtoub**

Gastroenterology Dept, WCH, University of Adelaide

*Focus - intestinal disorders, emu oil*

**Ms Alex Shoubridge**

School of Pharmacy & Medical Sciences, UniSA

*Focus - orthopaedics, bone implants*

**Dr Weifeng Han**, Lecturer

Speech Pathology, Flinders University

*Focus - language development and disorder*

**Ms Naomi Guiver**, PhD Candidate

College of Medicine & Public Health, Flinders Uni

*Focus - child maltreatment*

**Ms Sophie Kedzior**, PhD Candidate

Robinson Research Institute, University of Adelaide

*Focus - adolescent sexual and reproductive health*

**Mr Konstantinos Bogias**, PhD Candidate

Robinson Research Institute, Uni of Adelaide

*Focus - reproduction, bioinformatics*

**Ms Lauren Chartier**, PhD Candidate

Gastroenterology Dept, University of Adelaide

*Focus - IBS, emu oil*

**Miss Cyan Sylvester**, PhD Candidate

School of Pharmacy & Medical Sciences, UniSA

*Focus - bone health, vitamin D*

**Miss Maleesa Pathirana**, PhD Candidate

Robinson Research Institute, Uni of Adelaide

*Focus - preeclampsia, metabolic disease*

On 11 April, HDA held a joint forum with Novita on *Enhancing children's participation and their connections to technology and the community*. The event was chaired by Ms Lee-Anne Gasner, Novita's Executive Manager Knowledge & Strategic Projects to an audience of 55 people.

The presenters and their topics included Prof Virginia Wright (Holland Bloorview Kids Rehabilitation Hospital, Canada) on *Advances in measuring the ability of youth to safely access their community after a brain injury*; Ms Grace Bowman (Novita) on *Exploring factors contributing to physical activity participation for young people with disabilities*; and Dr Toan Nguyen (Novita) on *The switch access measure*.



On 9 May, HDA held its first thematic evening for the year on 'Sticks and Stones...and Cyberbullying'. The event was chaired by HDA Executive Committee member A/Professor Pammi Raghavendra, Flinders University to an audience of ~70 people.

The presenters and their topics included Ms Helen Connolly (SA Commissioner for Children and Young People) on *The story of Jessie*; Ms Ann-Marie Hayes (Department for Education and Development) on *Current support strategies in education and learning settings*; A/Prof Barbara Spears (UniSA) on *Exploring young people's views on cyberbullying sexting and help seeking*; and Prof Phillip Slee (Flinders University) on *What constitutes best practice in interventions*.

The talks and audio of the presentations can be found at [www.adelaide.edu.au/hda/news](http://www.adelaide.edu.au/hda/news).





# Kids hit hard by junk food advertising: new research

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**Media Release - 17 April, University of Adelaide**

Junk food ads are shown more frequently on TV at times when many children are watching, new Heart Foundation-funded research shows.

The research, led by Associate Professor Lisa Smithers from the University of Adelaide's Robinson Research Institute and published in the *Journal of Paediatrics and Child Health* today, shows that children were exposed to twice as much unhealthy food advertising as healthy food advertising.

The research found that children would view more than 800 junk food ads each year, if they watched 80 minutes of television per day.

By building a bespoke TV monitoring system, believed to be the first of its kind in the world, Associate Professor Smithers' team was able to capture an entire year's worth of television and ads from one free-to-air commercial TV network in South Australia.

"This is the most robust data we've seen anywhere. It is the largest dataset ever used by health researchers for examining food advertising in Australia, and probably the world. Most research in this area is based on only a few days of data, and there are no Australian studies taking seasonality into account," A/Professor Smithers said.

Thirty thousand hours of television containing more than 500 hours of food advertisements (almost 100,000 food ads) were logged during 2016. The Australian Guide to Healthy Eating was used to group food and beverages into healthy, discretionary (i.e. unhealthy) and other categories.

Snack foods, crumbed/battered meats, takeaway/fast food and sugary drinks were among the most frequently advertised foods.

During children's peak viewing times, the frequency and duration of "discretionary" (ie, junk) food advertising was 2.3 times higher each hour than for healthy foods.

Across the year, discretionary food advertising peaked at 71 per cent of all food advertising in January, dropping to a low of 41 per cent in August.

"Diet-related problems are the leading cause of disease in Australia, and the World Health Organization has concluded that food marketing influences the types of foods that children prefer to eat, ask their parents for, and ultimately consume," Associate Professor Smithers said.

Some countries and regions have implemented children's television advertising bans (Quebec, Canada), junk food advertising bans (Norway), and requirements to publish healthy eating messages when unhealthy foods are advertised (France). In Australia, all advertising during children's TV programs is covered by the Children's Television Standards. There are other codes developed by industry groups that aim to limit Australian children's exposure to unhealthy food advertising, however these codes are voluntary.

There is also no process for routine, independent monitoring of children's exposure to food advertising.

"Australian health, nutrition and policy experts agree that reducing children's exposure to junk food ads is an important part of tackling obesity and there is broad public support for stronger regulation of advertising to protect children," Associate Professor Smithers said.

"I would love to see the results of our research play a role in protecting children from the effects of junk food advertising."

A/Prof Smithers said the specially designed system, using a digital television tuner attached to a computer, had the potential for use across all Australian markets, as well as internationally.

"This is the kind of thing that would be fairly easy to set up to monitor change over time and to evaluate the impact of different policies," she said.

For example, researchers are now using the system to look at food advertising during sport.

"The advertising data collected for this project could have many users and collection is ongoing," said Associate Professor Smithers, who is open to enquiries from researchers about use of the data.

National Heart Foundation CEO Adjunct Professor John G Kelly said the research findings were disturbing. He said the Heart Foundation was very proud to be supporting emerging leaders such as Associate Professor Lisa Smithers, whose research was funded through a 2015 Vanguard grant.

"As a charity and the largest non-government funder of heart disease research in Australia, the Heart Foundation is proud to invest in research to help all Australians have better heart health.

"Thanks to our generous donors, the Heart Foundation is able to make important research such as this happen."



# Women who eat fast food take longer to become pregnant

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Media Release - 4 May, University of Adelaide



Women who eat less fruit and more fast food take longer to get pregnant and are less likely to conceive within a year, according to a study by researchers at the University of Adelaide's Robinson Research Institute.

The study published today (Friday 4 May) in *Human Reproduction*, one of the world's leading reproductive

medicine journals, asked 5598 women in Australia, New Zealand, the UK and Ireland about their diet. The women, who had not had a baby before, were interviewed by research midwives during their first antenatal visit.

Professor Claire Roberts, Lloyd Cox Professorial Research Fellow, from the University's Robinson Research Institute, who led the study, said: "The findings show that eating a good quality diet that includes fruit and minimising fast food consumption improves fertility and reduces the time it takes to get pregnant."

Compared to women who ate fruit three or more times a day in the month before conception, women who ate fruit less than one to three times a month took half a month longer to become pregnant. Similarly, compared to women who never or rarely ate fast food, women who consumed fast food four or more times a week took nearly a month longer to become pregnant.

Among all the couples in the study, 468 (8%) couples were classified as infertile (defined as taking longer than a year to conceive) and 2204 (39%) conceived within a month. When the researchers looked at the impact of diet on infertility, they found that in women with the lowest intake of fruit, the risk of infertility increased from 8% to 12%, and in those who ate fast food four or more times a week, the risk of infertility increased from 8% to 16%.

First author Dr Jessica Grieger, post-doctoral research fellow at University of Adelaide, said: "We recommend that women who want to become pregnant should align their dietary intakes towards national dietary recommendations for pregnancy. Our data shows that frequent consumption of fast foods delays time to pregnancy."

Previous research has tended to focus on the role that

diet plays in women diagnosed with or receiving treatment for infertility; the impact of maternal diet before conception in the general population has not been widely studied. This research was carried out in women recruited to the multi-centre Screening for Pregnancy Endpoints (SCOPE) study between 2004 and 2011. Of the 5598 women, the majority (5258, 94%) received no fertility treatments before conception and 340 did.

During the first antenatal visit at around 14-16 weeks' gestation, midwives collected information about the time it took to become pregnant and the women's diet. This included details of their diet in the month before conception, and how frequently they consumed fruit, green leafy vegetables, fish and fast foods. Fast foods included burgers, pizza, fried chicken and chips that were bought from take-away or fast food outlets. Fast foods eaten at home (bought from supermarkets, for example) were not included in the data collected and so consumption of this type of food is likely to be under-reported.

Couples were excluded from the analysis if they were receiving fertility treatment due to the male partner's infertility. Dr Grieger said: "Most of the women did not have a history of infertility. We adjusted the relationships with pre-pregnancy diet to take account of several factors known to increase the risk of infertility, including elevated body mass index [BMI] and maternal age, smoking and alcohol intake. As diet is a modifiable factor, our findings underscore importance of considering preconception diet to support timely conception for women planning pregnancy."

The researchers also found that while intake of fruit and fast foods affected time to pregnancy, pre-pregnancy intake of green leafy vegetables or fish did not. Limitations of the study include the fact that collecting data on pre-pregnancy diet relied on retrospective recall and included a limited range of foods. Information on the fathers' diet was not collected, and it is possible that other, unknown factors might have affected the results. A major strength is the large group of women included in the study.

"For any dietary intake assessment, one needs to use some caution regarding whether participant recall is an accurate reflection of dietary intake. However, given that many women do not change their diet from pre-pregnancy to during pregnancy, we believe that the women's recall of their diet one month prior to pregnancy is likely to be reasonably accurate," said Dr Grieger.

The researchers are continuing their work and plan to identify particular dietary patterns, rather than individual food groups, that may be associated with how long it takes women to become pregnant.

# Can antibiotics impair babies' vaccine response?

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Media Release - 10 May, Flinders University



Antibiotic exposure in infants could impair their responses to five important routine vaccines administered daily around the world, new research has found. Flinders University Associate Professor Lynn says that results of preclinical modelling, and more research in clinical trials, could change the way children are given antibiotics and have significant implications for vaccination programs.

"The research findings are very important because by one year of age, 50% of infants in Australia will be exposed to antibiotics, and this is the period of life that many of these vaccines are administered," he says.

"It appears that antibiotics in first year of life change the way the body builds immunity – and responds to vaccination," says A/Professor Lynn, who leads the European Molecular Biology Laboratory (EMBL) Australia biomedical informatics group at the Infection and Immunity theme at South Australian Health and Medical Research Institute (SAHMRI) in Adelaide.

"We have showed that the bacteria in the gut (the microbiome) are important in shaping the strength of the infant immune system," Associate Professor Lynn says. "Our findings could have significant implications for vaccination programs globally."

Published in *Cell Host & Microbe* today, a research team led by A/Professor David Lynn, EMBL Australia Group Leader and Flinders University College of Medi-

cine and Public Health researcher, found that the use of antibiotics in early life (in preclinical animal models) leads to impaired immune responses to five vaccinations routinely given to infants worldwide, including vaccines against meningitis, pneumonia, tuberculosis and whooping cough.

Vaccinations come second only to clean water as the most effective frontline strategies available for preventing infectious diseases. They work by supporting the immune system in producing antibodies against diseases. Antibody-mediated responses play a critical role in vaccine-enabled immunity.

However, for reasons that are poorly understood, these responses vary significantly between individuals. However, Associate Professor Lynn says the findings support the need to strengthen and repair the healthy gut bugs by replacing them with transplants, prebiotics and probiotics, in food and suitable medications.

In mice, restoring a healthy gut microbiome after antibiotic exposure rescued the impaired vaccine responses. The team has started a clinical study at the Women's and Children's Hospital in Adelaide to identify whether this phenomenon also happens in human infants, and to explore how the healthy gut microbiome influences the effectiveness of vaccination.

EMBL Australia offers powerful new enabling tools such as bioinformatics and systems biology in Australia life science research projects, infrastructure and training programs.

The secretary of the Australasian Virology Society, Flinders University A/Professor Peter Speck, congratulated the researchers' work on "emphasising the critical role of the gut microbiome in developing the immune system". "In view of the importance of vaccination in maintaining health in society, this is yet another reason why antibiotics should be administered judiciously," according to Associate Professor Speck, from the College of Science and Engineering at Flinders.

"Antibiotic stewardship is clearly of great value, especially in the neonatal setting," he says.

## What outcomes parents should expect from early childhood education and care

24 May - The Conversation

Parents often have different expectations for their three- to five-year-old children when they attend an early learning centre. Some parents expect their child to engage in academic learning activities or "real learning". Academic activities are associated with formal school-based learning such as writing, reading and knowing their numbers. So, what should three- to five-year-olds be learning?

For the full article go to <https://theconversation.com/what-outcomes-parents-should-expect-from-early-childhood-education-and-care-94731>

Media Release - 16 May, Flinders University



A study of more than 800 women undergoing acupuncture treatment during their IVF cycle has confirmed no significant difference in live birth rates.

Undertaken across 16 IVF (in-vitro fertilisation) centres in Australia and New

Zealand, the randomised clinical trial involved 848 women aged 18 to 42 undergoing an IVF cycle using fresh embryos between June 2011 and October 2015.

The findings published today in the *Journal of American Medical Association (JAMA)* support recent guidelines from the American Society for Reproductive Medicine and two high-quality meta-analyses.

The researchers from the National Institute for Complementary Medicine (NICM) Health Research Institute at Western Sydney University, Flinders University, University NSW Sydney, University of South Australia, University of Adelaide and Greenslopes Private Hospital examined the effects of acupuncture administered prior to and following an embryo transfer.

The participants were given either acupuncture or a sham acupuncture control – a non-insertive needle placed away from the true acupuncture points. The results showed the rate of live birth was 18.3 per cent among participants who received acupuncture versus 17.8 per cent who received the sham acupuncture control, a non-significant difference.

Professor Caroline Smith, chief investigator and professor of clinical research at NICM, says the study findings reflect the efficacy of a short course of acupuncture administered around the time of ovarian stimulation and on the day of the embryo transfer. "In clinical practice acupuncture treatment is individualised with variation in dosing, including more frequent treatment prior to and during the IVF cycle, the lack of frequent treatments was a limitation of our trial," says Professor Smith. "Although our findings do not support acupuncture as an efficacious treatment compared to sham, some studies suggest reproductive outcomes maybe improved when acupuncture is compared with no treatment."

While a short course of acupuncture may statistically be no better than sham at improving live birth and pregnancy outcomes, a psycho-social benefit from acupuncture was reported by women undergoing IVF.

The study's second chief investigator, Flinders University College of Nursing and Health Sciences researcher

Professor Sheryl de Lacy, focused on the design of the qualitative component of the project and perceived psycho-social benefit of acupuncture in the IVF process.

"In the Flinders part of the study, we interviewed 50 women who were enrolled in the trial about their perceptions and experience and found they did experience psycho-social benefits from acupuncture," Dr de Lacy says.

"The qualitative research will lead to another paper in coming months." Health economist Professor Julie Ratcliffe, from Flinders (and now UniSA), designed a cost-benefit analysis of the data, which is now being explored further by Flinders Associate Professor Billingsley Kaambwa for further economic analysis in followup paper.

"Feeling relaxed and reporting relief from stress and women feeling good about themselves is to be welcomed for women as they undergo an IVF cycle," says UNSW Sydney Professor Michael Chapman, also President of the Fertility Society of Australia. The main paper, 'Effect of acupuncture vs sham acupuncture on live births among women undergoing in vitro fertilization: a randomized clinical trial' is available online.

Infertility is defined as the inability to conceive a pregnancy after 12 months of unprotected sexual intercourse. One in six couples in Australia and New Zealand suffer infertility. Complementary therapies are widely used by individuals undergoing assisted reproductive technology.

UK and Australia acupuncturists indicate use during IVF is a frequent reason for women seeking treatment. The study participant criteria included: Women aged 18-42 years undergoing a fresh IVF or ICSI (intracytoplasmic sperm injection) cycle; not using acupuncture; not undergoing a frozen embryo transfer; not planning pre-implantation genetic diagnosis; not receiving donor eggs.

The complementary medicine (CM) sector is an important contributor to the Australian economy. Industry revenue is currently \$3.5 billion and is expected to grow to \$4.6 billion in 2017-18. Over this period, employment is anticipated to rise to 45,000. It is estimated that two in three Australians use CM each year and 42 per cent do so to prevent or manage chronic conditions identified as national health priorities. This is one of the highest consumption rates per capita in developed nations.

The NICM Health Research Institute at Western Sydney University is Australia's leader in integrative and complementary medicine research and policy. The centre, co-funded by the Australian and NSW Governments, plays a key national role in ensuring Australians have access to reliable evidence on complementary medicines and treatments in wide use. As an ERA 5 ranking institute, NICM is globally recognised for its world-class research and innovations in integrative and complementary medicine.



## Media Release - 7 May, UniSA

Associate Professor Tim Moore has joined the leading team at The Australian Centre for Child Protection (ACCP) at the University of South Australia as Deputy Director and Head of Practice Solutions, strengthening the Centre's position as Australia's premier research centre looking at child abuse and neglect.

A/Prof Moore, an internationally recognised child and youth researcher and children's rights advocate, moved into academia after working directly with children, young people and families.

"I wanted to better understand children's lives and the best ways to support them and their families during periods of adversity," Assoc Prof Moore says.

"I have focused on research underpinned by a commitment to promoting the needs, views and experiences of children and young people and supporting the development of practices, policies and programs that respond to them."

His work includes collaborating directly with children and young people in participatory research projects across issues such as homelessness, youth justice, child protection, residential care, young carers, and child sexual abuse prevention.

A/Prof Moore has also provided advice to several inquiries and Commissions including research for the recent Royal Commission into Institutional Responses to Child Sexual Abuse, as well as producing local, national and international initiatives that aim to improve the lives of children, young people and their families.

His appointment broadens the expertise of the leadership at ACCP, which also recently moved to a co-directorship structure with internationally renowned

child protection experts Prof Fiona Arney and Prof Leah Bromfield at the helm.

Professors Arney and Bromfield are leaders in the field of child abuse and neglect, developing important research findings for the sector and directly impacting policy and practice, as well as providing advice and leadership to the sector nationally, through strategic advisory and leadership roles.

Prof Bromfield led the research program for the Royal Commission into Institutional Responses to Child Sexual Abuse comprising more than 100 research projects.

Her work and achievements won recognition at the 2017 National Telstra Business Women's Awards where she won in the Academic and Public-sector category.

An award-winning researcher, Prof Arney has led international research programs through her 20-year career across the fields of parenting support, child and adolescent mental health and wellbeing and child protection research, also providing support and expertise to numerous national and state child protection inquiries, leading significant committees and guiding system reform efforts. UniSA Deputy Vice Chancellor: Research, Professor Tanya Monro says that the ACCP's new leadership team will further expand the work and influence of the Centre nationally and internationally.

"Tim's appointment to the Centre and the new Co-Directorship model with child protection experts Prof Arney and Prof Bromfield, means the Centre can further build and grow its ground-breaking work to continue to develop the much-needed evidence-base in this critical area and support its translation and implementation into policy and practice."

*For more information about the Australian Centre for Child Protection, visit [unisa.edu.au/ACCP](https://unisa.edu.au/ACCP)*

## How does being overweight affect my fertility?

22 May - The Conversation

The proportion of Australians who are overweight or obese is at an all-time high. We know excess weight is linked to many adverse health consequences, but there is now growing understanding that it also affects fertility.

A fine hormonal balance regulates the menstrual cycle. Overweight and obese women have higher levels of a hormone called leptin, which is produced in fatty tissue. This can disrupt the hormone balance and lead to reduced fertility.

The quantity and distribution of body fat affect the menstrual cycle through a range of hormonal mechanisms. The more excess weight and the more abdominal fat, the greater the risk of fertility difficulties.

For the full article go to <https://theconversation.com/how-does-being-overweight-affect-my-fertility-95224>

Media Release - 25 May, Flinders University



In Australia both in policy and practice, men are expected to be primary breadwinners while women are filling roles as primary caregivers for both children and the household.

A study at Flinders University has found that this leads some men to feel that if they contribute around the house in addition to undertaking paid work then their female partner should 'consider themselves lucky'.

"This type of logic reinforces gender inequalities by excusing men from making significant contributions to household and care work, instead privileging paid work as the core business of a successful family life," says Australian Research Council (ARC) Future Fellow, Associate Professor Damien Riggs, from the College of Education, Psychology and Social Work at Flinders.

"One consequence of this logic is that women are expected to be at work non-stop, whilst men are allowed to treat work as paid employment, and home as a space to engage in minimal activities."

The four-year study, conducted by Associate Professor Riggs and research associate Dr Clare Bartholomaeus, is tracking the experience of heterosexual couples from prior to conception to after the birth of a first child.

In one of the couples, the male partner considered it to be "selfish that he should be expected to engage in paid work and then spend his weekend mornings caring for their baby", whereas the female partner noted that "while she made a choice to be the primary caregiver, this did not mean she should be the only person responsible for running the household".

Associate Professor Riggs says the study shows a change in mentality is needed across the country, given personal views such as those reflected above are often reinforced at the institutional level.

"There is a need for a shift in how work is spoken about," he says.

"Men do not 'help' women by earning an income, women are not 'lucky' if a male partner contributes to household or care work.

"Identifying how particular terms serve to entrench disparities with regard to gender and care work is an important step towards social change."

## New vitamin supplement study finds they may do more harm than good

29 May - The Conversation

In Australia's most recent nutrition survey, 29% of people reported having taken at least one dietary supplement. This proportion was even higher in the United States at 52%.

A new study out today aimed to examine the benefits of vitamin and mineral supplements for prevention of heart disease, stroke and premature death (termed "all-cause mortality"). This found the most commonly studied ones had no effect, while some less common ones did have an effect. The review also found some supplements can be harmful.

### What did the study find?

The study was a systematic review, meaning the team of researchers examined all relevant research papers (179 in total) and combined the results. The supplements examined included vitamins A, B1 (thiamin), B2 (riboflavin), B3 (niacin), B6 (pyridoxine), B9 (folic acid), C, D, E, beta-carotene, and the minerals calcium, iron, zinc, magnesium and selenium. Multivitamins were defined as including most of these vitamins and minerals.

For the full article go to <https://theconversation.com/new-vitamin-supplement-study-finds-they-may-do-more-harm-than-good-97246>

## **Movement to Move Event**

### ***Global insights to get our kids moving***

Vol 14, Issue 3 –  
June 2018



**Movement to Move: Global Insights to get our Kids Moving** is proudly presented by Active Healthy Kids Australia (AHKA) and the University of South Australia (UniSA) in association with the Active Healthy Kids Global Alliance.

**26 - 29 November**

Conference & Events Centre, National Wine Centre of Australia

Corner of North Terrace and Hackney Road, Adelaide

This landmark Event will serve as a joint platform for the launch of the 'Global Matrix 3.0' featuring the Physical Activity Report Cards for children and youth from over 50 member countries of the Active Healthy Kids Global Alliance, in addition to the launch of the 2018 AHKA Report Card on Physical Activity for Children and Young People.

Also importantly, the Event will serve as a forum for engagement with key stakeholder and industry organisations and groups, both nationally and internationally, who can take the findings from the Global Matrix 3.0 & work together to develop solutions in our collective drive to get children around the world moving more everyday.

Hear from thought leaders about how we can tackle a worldwide shift in the status quo and take part in discussions, workshops and think tanks surrounding:

- + Responsibilities and accountabilities for instigating, attaining and sustaining physical activity targets across society (family, community, education, government e.g. local, state, national)
- + Capitalising on technology
- + Harnessing the power of peer & social networks
- + Getting the marketing and messaging right
- + Data collection methods, sharing and collaboration

Abstract submission deadline and Early bird fees close **30 June**.

For full details go to <http://www.movementtomove.com.au/welcome.html>

### **HDA event Attendance Certificates – AVAILABLE**

HDA provides Attendance Certificates upon request to individuals that attend our events. The certificates may be used towards your professional development program within your organisation. *It is your responsibility to check whether these certificates will be eligible within your professional development program.*

To request a HDA Attendance Certificate you will be required to complete the proof of attendance form at the event with your name, organisation and email.

HDA Attendance Certificates are FREE and will be emailed to you within one week.