

# UKCO

# 2018

6-7 SEPTEMBER



## 5<sup>th</sup> UK Congress on Obesity 2018

Newcastle University

Armstrong Building, Newcastle upon Tyne, UK

September 6-7, 2018



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STUDY OF OBESITY

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## ASO Networks Forum – All Welcome (Thursday 14.00-14.30 Boiler House)

The ASO North East Network would like to invite representatives from ASO Networks to an informal session to share ideas and experiences of running an ASO Network. The North East Network will open the session with a brief discussion of recent events and then facilitate discussion and exchange ideas for future ASO Network meetings and involvement in future UKCO conferences. This meeting is open to all delegates interested in finding out more about the ASO Network events and those wishing to get involved with their local Network.



### ASO Networks

The ASO has established ten networks throughout the UK

- East of England Network
- Midlands Network
- North West England Network
- Scotland Network
- Wales Network
- London & South East Network
- North East England Network
- Northern Ireland Network
- South West England Network
- Yorkshire Network

### Aims of the ASO Networks

- Organise meetings and events across the UK in order to meet the ASO mission and objectives at a regional level and to be responsive to local needs
- Provide a forum for local networking between researchers, practitioners and policy makers in the field of obesity to share research, good practice and policy updates
- Offer additional communication channels between the ASO and its members and allow the ASO to be more responsive to its members' needs

### Interested in attending or organising a meeting in your area?

Each ASO network aims to have one or two meetings per year. Meeting details can be found on the ASO website. If you have an idea for a meeting contact the Network lead in your area.

Further information about the ASO networks can be found on the website at

[www.aso.org.uk/aso-networks](http://www.aso.org.uk/aso-networks)

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OBESITY

# UKCO - 5<sup>th</sup> UK Congress on Obesity

Please join Ethicon for our symposium

6<sup>th</sup> September 2018  
11:30 - 13:00

Room : Boiler House

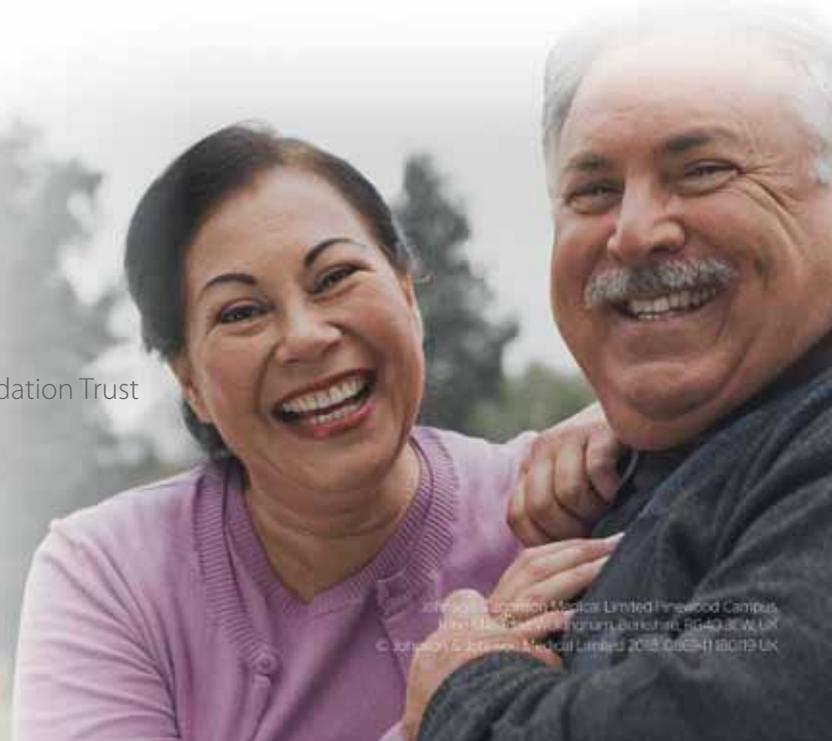
## Treatment & Prevention - Surgery for Obesity & T2D

### Guest Speakers:

Dr Barbara McGowan, Guys and St Thomas' NHS Foundation Trust  
Professor Francesco Rubino, King's College London  
Dr. Carly Hughes, Fakenham Medical Practice  
Paul Stevenson, Patient Representative

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To earn your SCOPE points, you must **complete the SCOPE sign sheet** which can be found at the registration desk.



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## UKC2018 Organising Committee

**Ashley Adamson**, Newcastle University/Director of Fuse  
**Zainab Akhter**, Newcastle University  
**Craig Blundred**, Newcastle City Council  
**Louisa Ells**, Teesside University  
**Louise Hayes**, Newcastle University  
**Nicola Heslehurst**, Newcastle University  
**Frances Hillier-Brown**, Durham University  
**Angela Jones**, Newcastle University  
**Scott Lloyd**, Public Health South Tees  
**John Mathers**, Newcastle University  
**Vicki McGowan**, Newcastle University  
**Eugene Milne**, Newcastle Director of Public Health  
**Judith Rankin**, Newcastle University  
**Laura Ritson**, Newcastle University/Fuse  
**Emma Slack**, Newcastle University  
**Falko Sniehotta**, Newcastle University  
**Carolyn Summerbell**, Durham University  
**Anita Tibbs**, Newcastle University  
**Wendy Wrieden**, Newcastle University

### Great North Run

The **Great North Run** takes place straight after the UKCO Congress on Sunday 9th of September. Thank you to our five participants who will be running and raising funds for the ASO!

**Diarmuid Coughlan**  
**Ian Copley**  
**Beth Hadley**  
**Madeleine Winnard**  
**Paul Davison**

# Welcome

Dear Colleagues,

On behalf of the UK ASO Trustees it is with great pleasure that I welcome you to the 5th UK Congress on Obesity and to Newcastle University. This is only my second visit to Newcastle and I am looking forward enormously to the Congress and to exploring this wonderful city again. We are extremely grateful to Newcastle University for the encouragement and support it has provided to the Local Organising Committee and for its financial contribution. It is especially pleasing that Professor Chris Day, Vice Chancellor & President of the University is acting as our host at the welcome reception on Thursday evening. We look forward to seeing delegates at this reception when there will also be an opportunity to view posters, to network and to visit our exhibitors.

UKCO is arguably the most important ASO activity and provides an opportunity for multidisciplinary researchers, practitioners, policymakers and other key stakeholders to share knowledge and experiences as part of our organised and collaborative attempt to create more effective strategies for obesity treatment and prevention. I would encourage everyone to make full use of the opportunity for networking that the Congress presents and to engage with delegates and sponsors who may not be familiar to you.

The main theme of this year's Congress is obesity through the life course and we should give our warm thanks and congratulations to Dr Nicola Heslehurst and the Local Organising Committee who have produced such an excellent programme. The main programme offers sessions from distinguished leading researchers, clinicians, practitioners and early-career researchers. A range of themed plenary lectures, topical ASO, commercial and member-led symposia and presentations of the Best Practice and Best Abstract Awards are also included. Over the next two days we will, of course, hear a great deal about obesity through the life course. At a time when the UK is facing the significant public health challenges of childhood obesity and an ageing population, this year's theme is very appropriate.

Prior to the official opening of UKCO2018, we are pleased to announce that Fuse, the Centre for Translational Research in Public Health, hosted a pre-congress symposium on the translation of obesity research into practice. We are indebted to Fuse for this significant contribution to this year's Congress and, if you attended this symposium, we hope that you found the event both enjoyable and informative. On Tuesday 4th September we also hosted a public-engagement event in collaboration with Newcastle University, Fuse and Café Scientifique. The public event was part of the Great Exhibition of the North programme and we are extremely thankful to everyone who was involved in creating this important event.

Once again, this year we are delighted to be delivering the Early Career Researchers workshop and we should thank Dr Maria Bryant for leading the organisation of this important activity. The feedback we receive suggests that this workshop is highly valued, and we are extremely grateful to Slimming World for their sponsorship of this workshop. We hope that the Early Career Researchers who attended found the event to be thoroughly worthwhile.

The food and refreshments on offer at the Congress have been carefully chosen to provide delegates with healthy alternatives and we are extremely grateful to the catering and technical staff at Newcastle University who help to make events like this run smoothly. Not to ignore the other side of energy balance, the local organisers have also included walking buses and guided runs that some delegates may wish to take part in. Details of these physical activities can be found in this programme book.

On behalf of the UK ASO Trustees and Local Organising Committee members can I wish you an enjoyable and informative UKCO2018 and very fond memories of Newcastle. Last year ASO celebrated its 50th anniversary, so we are at the beginning of the next 50 years of ASO activities – who knows where delegates will be gathered in 2068!

Dr Simon Williams  
Chair of ASO



# General Information

## Congress Venue: Newcastle University – Armstrong Building, Newcastle

The Congress will take place at **Newcastle University's Armstrong Building**.

Please see the accompanying map (right) where the Armstrong Building is **marked 22** on the campus map. The main auditorium where most lecture sessions will take place is called the **Boiler House, marked 10** on the campus map. Other lecture sessions in the break out rooms are located in the Armstrong Building on the first floor, **Rooms 1.04 and 1.06**.

The Exhibition, Poster Sessions, Lunches and Breaks will take place in **King's Hall** in the Armstrong Building, **marked 22** on the campus map. The Drinks Reception on Thursday evening will also take place in King's Hall.

## Congress Registration

The Registration area is located inside the main entrance of the **Armstrong** building. The registration desk will open on Thursday 6th of September from 08.30 to 09.45 and from 8.00 to 8.30 on the Friday. Please ensure you wear your badge at all times during the Congress.

## Certificates of Attendance

Certificates of Attendance will not be issued at the Congress. They will be provided after the event upon request as a PDF file. Please email [ukco@aso.org.uk](mailto:ukco@aso.org.uk) from Tuesday September 11th to request a copy.

## Chairpersons and Speakers

All speakers should have their presentation available on a memory stick so that it can be uploaded onto the provided equipment in each of the lecture rooms. Please ensure that you submit your presentation **at least 15 minutes** prior to the start of the session. Technical assistance will be available in each of the rooms.

We kindly ask that all chairpersons and speakers are available in the relevant lecture room at least ten minutes prior to the start of each session. Please allow 5-10 minutes for audience questions at the end of each session.

## Drinks Reception

The complimentary drinks reception takes place on the Thursday evening from 18.00 to 19.30 in **King's Hall, Armstrong Building**. (marked 22 on the campus map). We encourage all delegates to attend.

## Exhibition

The exhibition will take place in **King's Hall** marked 22 on the campus map. Exhibition times will be during the lunches and coffee breaks. Please see the programme for times.

## Lunches and Breaks

Lunches and coffee breaks on the Thursday and Friday will be available in the **King's Hall**. This will be clearly signposted and we kindly ask delegates to make their way there promptly.

## Poster Sessions

The poster sessions will take place on Thursday and Friday during the lunch breaks in the **King's Hall**. Please see the Programme for times. We encourage all delegates to attend and vote for the best poster. **Poster voting forms** will be available near the poster area. Please return voting forms to the registration desk by Friday 14.30. The Best Poster winner will be announced on Friday at 15.45 in the main lecture room – the Boiler House.

**Poster Pitch Sessions:** These sessions will be chaired and will take place at 13.15 on both Thursday and Friday. Please see pages 36-39 to view the poster titles.

If you are presenting a poster please check the programme book on pages 36-39 for your poster number. We ask that you hang your poster prior to the session on Thursday which commences at 13.00. Help and materials will be provided to assist you. Please ensure that you are available to discuss and answer any questions from delegates during the session. If your poster is nominated 'best poster' by delegates, you will receive a complimentary registration to UKCO 2019. Best poster will be announced on Friday at 15.45 in the main lecture room – the Boiler House.

## Wi-Fi

Visitors who cannot connect to eduroam can use the **free** cloud Wi-Fi network **Wi-Fi Guest** to access the Internet using their device.

1. From your device connect to the network **Wi-Fi Guest**
2. On the Cloud landing page locate the box **Get online at Newcastle University** and click **Go**
3. Scroll down to select **Create Account**
4. Enter your details and the account will be created.
5. The device will then be connected to **WiFi Guest**

*Disclaimer: Newcastle University and the ASO will not accept any responsibility for the loss or damage of any property at the Congress.*

## Practising what we preach at UKCO

**We are making every effort to ensure that the food provided and opportunities for activity align with obesity prevention messages.**

The Scottish Cancer Prevention Network has produced a healthy meeting score card\* and we have tried to make sure that we score full marks for the coming conference not only in terms of health but also in sustainability. As there is good evidence that we need to reduce meat consumption for our food supply to be sustainable and an awareness that many of us often choose vegetarian options even if we are not fully vegetarian the conference lunches will be meat free. We have also requested wholemeal bread and scones, fruit, vegetables and salads with very small portions of sweet treats. In addition, we aim to reduce the use of plastic disposable packaging as far as is practical. Water should be available from water coolers throughout the conference and please take the opportunity to move from your seat at the end of each presentation with standing ovations.

\*<https://www.cancerpreventionscotland.org.uk/docs/healthymeetings/FormScorecard.pdf>

# General Information / Campus Map

## Opportunities for physical activity and rest during UKCO

### Standing applause after presentations

As a means of breaking up the amount of time you spend sitting during the conference sessions, we encourage you to stand while clapping at the end of each presentation if you are able.

### Mobikes

Download the Mobike app (<https://mobike.com/uk/download>) and use Newcastle's dockless bike-sharing scheme to hire a bike to get around the city. You pay a £1 refundable deposit and add credit to your 'wallet' before hiring a bike. Locate a bike near you using the app, scanning the QR code on the bike using the camera on your phone, and you're off!

### Take a detour...

Why not see a bit more of Newcastle on your way to the conference? If you walk directly from Motel One to the Armstrong Building, Newcastle University, you'll take approximately 1400 steps. You could take a detour around the lake in Leazes Park and increase your step count to 3200!

### Walking bus

'Walking buses' will also be on offer during the conference. Volunteers will lead a walking bus from The Sandman Signature Hotel (meet at reception at 8.45am on Thursday and 8.00am on Friday morning) and Motel One (meet at reception at 8.45am on Thursday and 8.00am on Friday morning) to walk to the conference venue. A walking bus will also leave the conference for the train station at 16.15 on Friday.

### Join us for a morning run

We'll depart for a leisurely 5km (30 minute) run from Motel One at 06:30 and 07:00 on Friday morning. For those looking for a longer run join us at 06:30 and do both loops! We'll be back in good time for breakfast before heading to the first session of the morning at 08:30. *Disclaimer: ASO and Newcastle University will not accept any responsibility for accident or injury during this activity.*

### Make a splash

If swimming is your thing you can use the pool at Northumbria University (<https://northumbriasport.com/facilities/swimming-pool/>). It's open for public swimming from 07:00 every morning.

### And relax

If you find yourself in need of somewhere to go for a bit of quiet/ breathing space, there are a few options to choose from. We will have indoor seating in the Armstrong building and there will also be a dedicated quiet room, near Kings Hall, for those who need some good quality rest. Then, if you find yourself in a need of some fresh air, the Quadrangle is close by which has plenty of places to sit and is a nice place to watch the world go by if the weather is nice (you can take a virtual tour here: <https://www.ncl.ac.uk/tour/campus/quadrangle/>).



# Programme Overview

Thursday 6th September		
<p><b>Registration and Coffee</b> (08.30 - 09.45) Entrance Foyer - Armstrong Building</p>		
<p><b>Welcome Address</b> <i>Dr Simon Williams, ASO Chair &amp; Professor David Burn, PVC Faculty of Medical Sciences, Newcastle University</i> (09.45 - 10.15) Boiler House</p>		
<p><b>Plenary Lecture 1</b> Periconceptional parental nutrition and mHealth interventions to support health care <i>Professor Régine Steegers, Erasmus MC, The Netherlands</i> (10.15 - 11.00) Boiler House</p>		
<p>Prize talks: Best Practice Award and 'New to Research' Best Abstract Award (11.00 - 11.30) Boiler House</p>		
<p><b>Symposia and Oral abstracts (11.30 - 13.00)</b></p>		
<p><b>ASO Symposium 1</b> Obesity and age-related disease Room 1.06</p>	<p><b>Member-led Symposium 1</b> Are 'systems' and 'evidence-based/programme-focused' approaches contradictory or complementary in obesity prevention, and how shall we move forward? Room 1.04</p>	<p><b>Ethicon Symposium</b> Treatment and Prevention: Surgery for Obesity and Type II Diabetes Boiler House</p>
<p>Lunch, Exhibition and Posters (including poster pitch sessions) (13.00 - 14.30) Kings Hall</p>		
<p>ASO Networks Forum - All welcome (14.00 - 14.30) Boiler House</p>		
<p><b>Plenary Lecture 2</b> Public health International/European life course obesity <i>Jo Jewell, WHO Europe</i> (14.30 - 15.15) Boiler House</p>		
<p><b>Symposia and Oral abstracts (15.15 - 16.45)</b></p>		
<p><b>ASO Symposium 2</b> Bariatric surgery and life stages Boiler House</p>	<p><b>Oral Abstracts 1</b> Health, Behaviour and Environment Room 1.04</p>	<p><b>Member-led Symposium 2</b> Weight management and diet quality before and after pregnancy: Public perception, priority areas and what interventions work? Room 1.06</p>
<p>Coffee Break &amp; Exhibition (16.45 - 17.15) Kings Hall</p>		
<p><b>Plenary Lecture 3</b> Translational research in childhood obesity <i>Professor Ashley Adamson, Newcastle University</i> (17.15 - 18.00) Boiler House</p>		
<p><b>Welcome Reception Drinks - Poster Networking &amp; Exhibition</b> <i>Host: Professor Chris Day, Vice Chancellor &amp; President, Newcastle University</i> (18.00 - 19.30) Kings Hall, Armstrong Building</p>		
		

Friday 7th September		
<p><b>Plenary Lecture 4</b> Public Health England - National Perspective <i>Dr Alison Tedstone, Public Health England</i> (08.30 - 09.15) Boiler House</p>		
<p><b>Symposia and Oral Abstracts (09.15 - 10.45)</b></p>		
<p><b>ASO Symposium 3</b> Molecular aspects of obesity Boiler House</p>	<p><b>Oral Abstracts 2</b> Management and Intervention Room 1.04</p>	<p><b>N8 AgriFood Symposium</b> Food insecurity and obesity Room 1.06</p>
<p>Coffee Break &amp; Exhibition (10.45 - 11.15) Kings Hall</p>		
<p><b>Symposia and Oral Abstracts (11.15 - 12.45)</b></p>		
<p><b>ASO Symposium 4</b> Reproduction and Intergeneration Boiler House</p>	<p><b>Oral Abstracts 3</b> Basic and Experimental Science Room 1.04</p>	<p><b>Member-led Symposium 3</b> A whole systems approach to tackle obesity Room 1.06</p>
<p>ASO Annual General Meeting (12.45 - 13.30) Boiler House</p>		
<p>Lunch, Exhibition and Posters (including poster pitch sessions) (13.00 - 14.15) Kings Hall</p>		
<p><b>Fuse Sponsored Plenary Lecture</b> Obesity and Cancer - A duty of care or a duty of silence? <i>Professor Annie Anderson, Dundee University</i> (14.15 - 15.00) Boiler House</p>		
<p><b>Fuse Sponsored Best Abstract in Public Health Award</b> (15.00 - 15.15) Boiler House</p>		
<p>Obesity Empowerment Network session (15.15 - 15.45) Boiler House</p>		
<p><b>Best Poster Award announcement and Closing Remarks</b> <i>Dr Simon Williams, ASO Chair &amp; Prof. Eugene Milne, Newcastle Director of Public Health</i> (15.45 - 16.00) Boiler House</p>		
<p>End of Programme</p>		





# Full Programme

## Thursday 7th September

08.30 – 09.45	<b>Registration and Coffee</b>	Main Foyer
09.45 – 10.15	<b>Welcome address</b>	Boiler House
	Dr Simon Williams, ASO Chair & Professor David Burn, Newcastle University	
10.15 – 11.00	<b>Plenary Lecture 1</b>	Boiler House
	<i>Chair: Dr Simon Williams, ASO Chair</i>	
	<b>Periconceptual parental nutrition and mHealth interventions to support health care</b> Professor Régine Steegers, Erasmus MC, The Netherlands	
11.00 – 11.30	<b>Prize talks: Best Practice Award and 'New to Research' Best Abstract Award</b>	Boiler House
	<i>Chair: Dr Maria Bryant, Leeds University</i>	
11.00	<b>Best Abstract Award</b> <b>Investigating the association between pregnancy following bariatric surgery and adverse perinatal outcomes: A systematic review and meta-analysis</b> Zainab Akhter, Newcastle University, Newcastle upon Tyne	
11.15	<b>Best Practice Award</b> <b>The Spire Southampton 'The Weigh Ahead' Service</b> Faye Keefe, The Spire Southampton 'The Weigh Ahead' Specialist Tier 3 Weight Management Service, Southampton	
11.30 – 13.00	<b>ASO Symposium 1 – Obesity and age-related disease</b>	Room 1.06
	<i>Chair: Professor Graham Finlayson, Leeds University</i>	
11.30	<b>Ageing, obesity and cardiovascular health</b> Dr Mario Siervo, Newcastle University	
12.00	<b>Oxygen, activity and the ageing brain; radical insights</b> Professor Damian Bailey, University of South Wales	
12.30	<b>Weight loss and osteoarthritis</b> Professor Henning Bliddal, Copenhagen University, Denmark	
11.30 – 13.00	<b>Commercial Symposium – Ethicon Treatment and Prevention: Surgery for Obesity &amp; T2D</b>	Boiler House
	<i>An overview of the science, guidelines and evidence for the surgical treatment of Obesity &amp; Type-II Diabetes and why we need to act now to provide the best outcomes for patients, practitioners and payors.</i>	
	<b>Science of obesity/T2D</b> Dr Barbara McGowan, Guys and St Thomas' NHS Foundation Trust	
	<b>Evidence for surgery for obesity &amp; T2D</b> Professor Francesco Rubino, King's College London	
	<b>Pathway success: pre, peri and post-operative (tier 3 setting)</b> Dr Carly Hughes, Fakenham Medical Practice	
	Paul Stevenson, Patient Representative	
11.30 – 13.00	<b>Member-led Symposium 1</b>	Room 1.04
	<i>Chair: Dr Bai Li, University of Birmingham</i>	
	<i>Are 'systems' and 'evidence-based/programme-focused' approaches contradictory or complementary in obesity prevention, and how shall we move forward? An international symposium to exchange lessons learnt from studies undertaken in developing and developed countries</i>	
11.30	<b>Using a systems approach in community-based childhood obesity prevention</b> Professor Steven Allender, Deakin University, Australia	



Continued >



# Full Programme

11.45	<b>The international Healthy Life Trajectories Initiative (HeLTI) - intervention studies focusing on childhood obesity prevention</b> Professor William Fraser, Sherbrooke University, Canada	
12.00	<b>Lessons learnt from 10-year rigorous development and evaluation of an evidence- based childhood obesity prevention programme (CHIRPY DRAGON) for Chinese primary school aged children</b> Dr Bai Li, University of Birmingham & Guangxi Medical University, China	
12.15	<b>Overview of childhood obesity prevention trials in the UK: Where next?</b> Professor Peymane Adab, University of Birmingham	
12.30	<b>Chess, not chequers</b> Professor Harry Rutter, London School of Hygiene & Tropical Medicine	
12.45	<b>Interactive discussion with delegate participation</b>	
13.00 – 14.30	<b>Lunch, Exhibition and Posters</b>	<b>Kings Hall</b>
14.00 – 14.30	<b>ASO Networks Forum – all welcome</b>	<b>Boiler House</b>
14.30 – 15.15	<b>Plenary Lecture 2</b>	<b>Boiler House</b>
	<i>Chair: Dr Nicola Heslehurst, Newcastle University</i>	
	<b>European public health perspective of obesity throughout the life course</b> Jo Jewell, WHO Regional Office for Europe	
15.15 – 16.45	<b>ASO Symposium 2 – Bariatric surgery and life stages</b>	<b>Boiler House</b>
	<i>Chair: Dr Barbara McGowan, Guys and St Thomas' NHS Foundation Trust</i>	
15.15	<b>Pregnancy following bariatric surgery</b> Professor Roland Devlieger, KU Leuven, Belgium	
15.45	<b>Bariatric surgery in the adolescent</b> Dr Andrew Beamish, Gothenburg University, Sweden	
16.15	<b>Bariatric surgery and aging</b> Speaker to be announced	
15.15 – 16.45	<b>Oral Abstracts Session 1 – Health, Behaviour &amp; Environment</b>	<b>Room 1.04</b>
	<i>Chair: Dr Angela Jones, Newcastle University</i>	
15.15	<b>Can individuals be entirely responsible for a healthy body weight in the current food system?</b> Natalie Savona, London School of Hygiene & Tropical Medicine, London	
15.30	<b>Quantifying the effect of screen advertising on dietary intake in children</b> Simon Russell, University College London	
15.45	<b>The relationship between meal times, calorie consumption and weight status amongst children</b> Sundus Mahdi, School of Health and Related Research (SchARR), University of Sheffield	
16.00	<b>Diet and physical activity during and after adolescent pregnancy: A qualitative exploration with health care professionals and young women</b> Grace Lucas, City, University of London	
16.15	<b>Mapping policy actions and risk factors for obesity onto the current prevention landscape</b> Helen Croker, University College London	
16.30	<b>Gestational weight gain (GWG) and pregnancy outcomes in Pakistani and White British women: An analysis of data from the Born in Bradford (BiB) cohort</b> Emma Slack, Newcastle University, Newcastle upon Tyne	



# Full Programme

## 15.15 – 16.45 **Member-led Symposium 2** Room 1.06

*Chair: Dr Laura McGowan, Queen's University, Belfast*

*Weight management and diet quality before and after pregnancy: Public perception, priority areas and what interventions work?*

- 15.15 Assessing the evidence linking preconception health and nutritional status, to pregnancy, birth and later health outcomes: Opportunities for intervention?**  
Professor Judith Stephenson, University College London
- 15.35 Preconception micronutrient status in the UK and Ireland – nutrients of concern**  
Professor Jayne Woodside, Queen's University, Belfast
- 15.50 Public perceptions of preconception health behaviours: What do men and women of child-bearing age in the UK think about competing health priorities in the preconception period?**  
Dr Laura McGowan, Queen's University, Belfast
- 16.05 Weight management after and between pregnancies – challenges and opportunities**  
Dr Michelle McKinley, Queen's University, Belfast
- 16.25 Support for maternal weight management and healthy lifestyle behaviour following birth in an ethnically diverse, inner city London population. Update from the SWAN feasibility study**  
Professor Debra Bick, King's College London

## 16.45 – 17.15 **Coffee Break & Exhibition** Kings Hall

## 17.15 – 18.00 **Plenary Lecture 3** Boiler House

*Chair: Dr Maria Bryant, Leeds University*

### **Translational Research**

Professor Ashley Adamson, Newcastle University

## 18.00 – 19.30 **Welcome Reception – Poster Networking & Exhibition** Kings Hall

*Host: Professor Chris Day, Vice Chancellor & President, Newcastle University*



## Friday 7th September

## 08.30 – 09.15 **Plenary Lecture 4** Boiler House

*Chair: Dr Clare Llewellyn, University College London*

### **A life course approach to obesity policy in England**

Dr Alison Tedstone, Public Health England

## 09.15 – 10.45 **ASO Symposium 3 - Molecular aspects of obesity** Boiler House

*Chair: Dr Amy Ahern, Cambridge University*

- 09.15 Genetic influences on weight loss - opportunities for personalisation?**  
Professor John Mathers, Newcastle University
- 09.45 Identification of metabolically unfavourable adiposity**  
Professor John Chambers, Imperial College London
- 10.15 Reversal of Type 2 Diabetes Throughout the Lifecourse**  
Professor Roy Taylor, Newcastle University

Continued >



# Full Programme

## 09.15 – 10.45 **N8 AgriFood Symposium on food insecurity & obesity** Room 1.06

*Chair: Professor Jason Halford, University of Liverpool*

- 09.15 **Food insecurity as a driver of obesity in humans: The insurance hypothesis**  
Professor Daniel Nettle, Newcastle University
- 09.45 **“You cannot improve what you cannot measure” – The case for routine measurement of child food insecurity in the UK**  
Dr Alison Fildes, University of Leeds
- 10.15 **Towards understanding the relationship between food insecurity, socioeconomic status and obesity in families in Northern England: A strategically important multidisciplinary project**  
Dr Sam Caton, University of Sheffield

## 09.15 – 10.45 **Oral Abstracts 2 – Management and Intervention** Room 1.04

*Chair: Dr Emma Frew, University of Birmingham*

- 09.15 **Feasibility of trial procedures for the GLOWING pilot cluster randomised controlled trial: Supporting midwives implementation of weight management in pregnancy guidelines**  
Catherine McParlin, Newcastle University & Newcastle upon Tyne Hospitals Trust
- 09.30 **Weight Management Interventions and NICE Guidelines: Development and implementation of an intervention reporting template to complement the core outcome set**  
Lisa Heggie, Institute of Cardiovascular and Medical Sciences, University of Glasgow
- 09.45 **Recruitment and delivery of a weight management programme for fathers of primary school aged children: challenges experienced in the Healthy Dads, Healthy Kids-UK feasibility study**  
Tania Griffin, University of Birmingham
- 10.00 **The equity impact of brief opportunistic interventions to promote weight loss in primary care: Secondary analysis of the BWeL randomised trial**  
Kate Tudor, University of Oxford
- 10.15 **Abandoned after the “honeymoon”. Patients’ experiences and needs for longer term follow up after bariatric surgery: A rapid review and qualitative synthesis**  
Helen Parretti, Institution of Applied Health Research, University of Birmingham
- 10.30 **Is a total diet replacement programme cost-effective to treat obesity?**  
Seamus Kent, University of Oxford

## 10.45 – 11.15 **Coffee Break & Exhibition** Kings Hall

## 11.15 – 12.45 **ASO Symposium 4 – Reproduction and Intergeneration** Boiler House

*Chair: Dr Nicola Heslehurst, Newcastle University*

- 11.15 **Developmental origins of obesity**  
Professor Keith Godfrey, Southampton University
- 11.45 **Interventions in pregnancy and offspring adiposity**  
Professor Lucilla Poston, Kings College London
- 12.15 **Physical activity and pregnancy guidelines – from evidence to infographic**  
Dr Charlie Foster, University of Bristol

## 11.15 – 12.45 **Oral Abstracts 3 – Basic and Experimental Science** Room 1.04

*Chair: Dr Laura McGowan, Queens University Belfast*

- 11.15 **Effect of weight loss on mitochondrial defects in the ageing human colon**  
Stella Breining, Human Nutrition Research Centre & Centre for Ageing and Vitality, Newcastle upon Tyne
- 11.30 **A systematic review of long-term randomised controlled trials of weight management programmes for people with BMI  $\geq 35\text{kg/m}^2$ : The NIHR HTA funded REBALANCE Project**  
Clare Robertson, Health Services Research Unit, University of Aberdeen
- 11.45 **Effect of weight loss by low calorie diet on hepatic VLDL-TG export and remission of type 2 diabetes**  
Ahmad Al-Mrabeh, Newcastle Magnetic Resonance Centre, Institute of Cellular Medicine, Newcastle University



# Full Programme

- 12.00 **Platelets mitochondrial DNA methylation as a predictor of future CVD in adults with obesity**  
Sarah Corsi, Human Nutrition Research Centre, Institute of Cellular Medicine, Newcastle University, Newcastle upon Tyne
- 12.15 **Investigating the molecular basis and therapeutic potential of the heme oxygenase-1 (HO-1) – adiponectin axis: Divergent effects of a HO-1 inducer (CoPP) on adiponectin, weight gain, inflammation and insulin responsiveness in vitro and in vivo**  
Jon Whitehead, University of Lincoln
- 12.30 **Reference values for skeletal muscle mass and fat mass by bioelectrical impedance analysis derived from the UK Biobank population**  
Carmen Piernas, Nuffield Department of Primary Care, University of Oxford
- 11.15 – 12.45 Member-led Symposium 3 Room 1.06**
- Chair: Professor Paul Gately, Leeds Beckett University*
- A whole systems approach to tackle obesity*
- 11.15 **Why do Local Authorities need a whole systems approach to tackle obesity?**  
Jamie Blackshaw, Public Health England
- 11.45 **The development of the Whole Systems Obesity process**  
Dr Duncan Radley, Leeds Beckett University
- 12.15 **Implementation, experience and insights from delivering the Whole Systems Obesity process in our Local Authority**  
Sue Weaver, Gloucestershire City Council
- 12.45 – 13.30 ASO Annual General Meeting Boiler House**
- 13.00 – 14.15 Lunch, Exhibition and Posters Kings Hall**
- 14.15 – 15.15 Fuse Sponsored Plenary Lecture & Award Lecture – best abstract in public health Boiler House**
- Chair: Professor Ashley Adamson, Newcastle University*
- 14.15 **Obesity and Cancer – A duty of care or a duty of silence?**  
Professor Annie Anderson, Dundee University
- 15.00 **Fuse Award lecture – best abstract in public health**  
**Developing a co-designed intervention for young adults, supporting healthier eating and safer alcohol use, to reduce risks associated with obesity and risky drinking**  
Cassey Muir, Newcastle University, Newcastle upon Tyne
- 15.15 – 15.45 Obesity Empowerment Network Session Boiler House**
- Chair: Dr Nicola Heslehurst, Newcastle University*
- The complex tango of weight and health**  
Sharon Newsome and Ann Vincent, Obesity Empowerment Network
- 15.45 – 16.00 Best Poster Award announcement and closing remarks Boiler House**
- Dr Nicola Heslehurst, ASO Trustee & Chair of the Local Organising Committee  
Professor Eugene Milne, Newcastle Director of Public Health



**End of Programme**

# Pre-Conference Programme

## ASO Early Career Researchers Workshop at UKCO2018

Sponsored by Slimming World

Wednesday 5th September – Room 1.06

### Programme

12:00–12:30	Registration and lunch
12:30–12:40	<b>Welcome: ASO and Early Career Researcher Network</b> Dr Maria Bryant, Leeds Institute of Clinical Trials Research, University of Leeds
12:40–13:40	<b>Skills to enhance the success of interviews</b> Professor Judith Rankin, Institute of Health & Society, Newcastle University
13:40–14:40	<b>Conducting research with an aim to influence health-care policy</b> Dr Barbara McGowan, Guys and St Thomas's NHS Trust
14:40–15:00	Break
15:00–14:00	<b>Evaluating public health interventions</b> Professor Ashley Adamson, Human Nutrition Research Centre, Newcastle University
16:00–16:15	<b>Discussion and Close – All speakers</b> Questions and wider discussion of the role of the ECRN in ASO
16.30–18.00	<b>Fuse Symposium – Translation of obesity research into practice</b> Free to attend (but optional) to ECRN attendees
18:00–19:30	Drinks reception



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## Speaker Biographies

### Professor Judith Rankin

Professor Judith Rankin has a Personal Chair in maternal and perinatal epidemiology in the Institute of Health and Society. Her two main research interests are in congenital anomaly epidemiology and reproductive loss. She works closely with the PHE National Congenital Anomaly and Rare Diseases Registration Service (NCARDRS) and the European Surveillance of Congenital Anomalies (EUROCAT). Taking an interdisciplinary approach, she has been involved in qualitative research exploring the experiences of parents and health professionals following fetocide, withdrawal of life-saving support from sick neonates and loss from a twin pregnancy and developed guidelines for health professionals when there has been a loss from a multiple pregnancy.

### Dr Barbara McGowan

Barbara McGowan is a consultant and Honorary Senior Lecturer in Diabetes and Endocrinology at Guy's and St Thomas' Hospital London. She was awarded a PhD from Imperial College London in 2007 investigating the role of gut hormones and other neuropeptides in appetite control. She currently leads the obesity bariatric service at Guy's and St Thomas Hospital where she manages patients with complex obesity. Her areas of research interest include gut hormones, obesity and remission of type 2 diabetes post-bariatric surgery. Her main remit within the ASO is to promote education and training in obesity for all healthcare professionals.

### Professor Ashley Adamson

Ashley Adamson is Director of Fuse, UKCRC Centre for Translational Research in Public Health. Fuse has a wide network of partners working in public health practice and policy, including Local Authorities, third sector organisations and business. In April 2017, Ashley was appointed National Director for the NIHR School for Public Health Research <http://sphr.nihr.ac.uk/> and NIHR Senior Investigator in 2018. She is a Professor of Public Health Nutrition at Newcastle University, and leads a research team in Public Health Nutrition Research in the Human Nutrition Research Centre. Ashley's personal research interests focus on the complex relationships between the food environment and food choice, socio-demographic and wider upstream determinants of health with a particular focus on prevention of obesity.

# Pre-Conference Programme

## Fuse Workshop – Translation of obesity research into practice Evidence and engagement: There's more to [research] life than a systematic review



### Wednesday 5th September – Room 1.06

In this workshop the Foodscape Project ([www.fuse.ac.uk/nihrsphr/cross-centre-collaboration/transformingthefoodscape.html](http://www.fuse.ac.uk/nihrsphr/cross-centre-collaboration/transformingthefoodscape.html)) will be used as a case study to demonstrate the process of evidence gathering and stakeholder engagement for the purpose of public health intervention development and practice-based evaluation.

### Programme

#### Welcome and introduction

**Ashley Adamson**, Professor of Public Health Nutrition, Director of Fuse and Director of SPHR

#### Overview of Foodscape

**Amelia Lake**, Reader in Public Health Nutrition, Teesside University

#### Systematic mapping and evidence synthesis

**Frances Hillier-Brown**, Teaching Fellow in Sports and Exercise Science, Durham University

#### Stakeholder identification and involvement

**Louis Goffe**, Research Associate, Newcastle University

#### The importance of wider engagement

**Amelia Lake**, Reader in Public Health Nutrition, Teesside University

#### A Local Authority perspective

**Scott Lloyd**, Advanced Public Health Practitioner, Public Health South Tees

#### Group work

Participants will have an opportunity to work in small groups to reflect on how the Foodscape experience might inform a project that they are involved with.

# ASO Best Abstract Award

## Zainab Akhter



Zainab Akhter is a final year PhD student in the Maternal and Perinatal Research Team at the Institute of Health & Society, Newcastle University. She started her epidemiology-based PhD in 2016 after completing her undergraduate degree in Genetics. Her research interests include maternal obesity and bariatric surgery in women of reproductive

age and associations with adverse perinatal outcomes in a subsequent pregnancy. She is particularly interested in investigating congenital anomalies in pregnancy after bariatric surgery due to the link with nutrition. Alongside her studies, She has worked in a student support role, arranging training opportunities and an annual conference for PhD students in the Institute of Health & Society.

### **Investigating the association between pregnancy following bariatric surgery and adverse perinatal outcomes: A systematic review and meta-analysis.**

**Zainab Akhter**<sup>1</sup>, Judith Rankin<sup>1</sup>, Rute Vieira<sup>1</sup>, Lem Ngongalah<sup>1</sup>, Dries Ceulemans<sup>2</sup>, Roland Devlieger<sup>2</sup>, Roger Ackroyd<sup>3</sup>, Nicola Heslehurst<sup>1</sup>

<sup>1</sup>Institute of Health & Society, Newcastle University, Newcastle upon Tyne, United Kingdom. <sup>2</sup>UZ Leuven, Leuven, Belgium.

<sup>3</sup>Northern General Hospital, Sheffield, United Kingdom

Maternal obesity is associated with adverse outcomes for both mother and baby. Bariatric surgery prior to pregnancy reduces the risk of health complications for the mother but there is limited evidence of the impact of bariatric surgery on perinatal outcomes. Bariatric surgery can cause nutritional deficiencies which may impair fetal development. This systematic review investigated the association between pregnancy after bariatric surgery and adverse perinatal outcomes.

Six databases were searched up to February 2018 and supplemented by hand-searching relevant journals. Reference lists and citations of included studies were screened. Observational studies published in English language reporting perinatal outcomes after bariatric surgery compared to pre-pregnancy obesity or BMI-matched controls were included. The primary outcomes were congenital anomalies and perinatal mortality. PROSPERO registration: CRD42017051537.

Nineteen studies with 8,206 pregnancies after bariatric surgery and 206,413 controls were included. Meta-analysis identified significantly increased odds of perinatal mortality after bariatric surgery (OR 1.57 95% CI 1.16-2.13). There were too few cases of congenital anomalies to calculate statistical significance. Meta-analysis also identified significant associations with SGA infants (OR 2.28 95% CI 2.05-2.55) and preterm birth (OR 1.28 95% CI 1.07-1.53). Narrative summary suggests reduced risks of macrosomia, large-for-gestational-age (LGA) infants, and post-term birth.

Bariatric surgery prior to pregnancy is significantly associated with an increased risk of perinatal mortality, SGA infants, and preterm birth. The risk of macrosomia, LGA infants, and post-term birth may be decreased after bariatric surgery. Larger scale studies of national and international data are required to overcome sample size limitations for rare outcomes.

# ASO Best Practice Award

## Faye Keefe



Faye Keefe, Head of Weight Management Services, Spire Hospital Southampton. Faye holds full registration with the Association of Nutrition, she completed her degree in Health Sciences in 2001, and specialised in nutrition gaining a Master's degree in 2006. She worked in Southampton schools helping to transform the school meal service and

supporting all Southampton schools to achieve healthy school's accreditation, going onto develop specialist weight management programmes. She works freelance writing for journals, lecturing to Health Promotion Undergraduates and is an accredited Weight Management Practitioner, having her own private practice Since 2011, also working with many commercial companies. She has headed up the Specialist Tier 3 Weight Management Service 'The Weigh Ahead' at Spire Southampton for the past 2 years, transforming the service over Hampshire, Dorset, Southampton City and Isle of Wight. She has also developed a private 'Lifestyle' weight management service, and since the beginning of 2018 has worked with the Spire Southampton Tier 4 bariatric service, she also holds the internationally recognised SCOPE certification and is a member of BOMSS.

### **The Spire Southampton 'The Weigh Ahead' Service.**

#### **Faye Keefe**

*The Spire Southampton 'The Weigh Ahead' Specialist Tier 3 Weight Management Service, Southampton, United Kingdom*

The Spire Southampton 'The Weigh Ahead' Service, is a specialist Tier 3 weight management service, providing multi-disciplinary weight management programmes for NHS patients across Southampton City, Hampshire, Dorset and the Isle of Wight.

We are a team of Nutritionists, Behaviour Change Therapists, Activity Advisors, Dieticians, Bariatric Nurses, Administrators trained in motivational interviewing, GP with special interest in nutrition, and a Bariatric Physician.

Since 2016, we have redeveloped the service to focus primarily on behaviour change and include compassion-focussed interventions across the whole multidisciplinary team, which studies have shown significantly improves shame, self-criticism and emotional eating.

The Impact of this has been increased patient engagement with the 6 month service (less patients dropping out prior to completion), which increases the cost benefit to the NHS and overall effectiveness of the service (percent of patients completing in 2015 was 80%, compared with 83% in 2016, and 85% in 2017 (based on patients referred from Hampshire and Southampton City Clinical Commissioning Groups).

Since October 2017, the service has also started monitoring additional clinical outcomes measures alongside weight loss. Most notable of these outcomes in relation to the introduction of compassion-focussed interventions across the whole MDT is that 80% of patients completed their programme (between October 2017 and April 2018) with an improvement in their combined PHQ-9 and GAD-7 score (Spitzer et al., 1999), which is an indication of an improvement in mental wellbeing.

# FUSE Award – Best Abstract in Public Health

## Cassey Muir



Cassey Muir is a research assistant at Newcastle University working across two teams, public health nutrition and SPARKS (supporting prevention and care for alcohol and other risk behaviours). Her background is in Health Psychology, with particular research interests in intervention development, public health behaviour, and supporting young people.

In October she will be starting an NIHR School for Public Health Research funded PhD at Newcastle University. The aim of this project is to co-design an intervention to promote resilience in children and young people affected by parental substance misuse. She has also volunteered with different community organisations over the past 5 years, including Children North East as a peer mentor and worked as an assistant psychologist in cardiopulmonary transplantation.

**Developing a co-designed intervention for young adults, supporting healthier eating and safer alcohol use, to reduce risks associated with obesity and risky drinking.**

Cassey Muir<sup>1</sup>, Alice Graye<sup>1</sup>, Stephanie Scott<sup>2</sup>, Eileen Kaner<sup>1</sup>, Wendy Wrieden<sup>1</sup>, Ashley Adamson<sup>1</sup>

<sup>1</sup>Newcastle University, Newcastle upon Tyne, United Kingdom.

<sup>2</sup>Teesside University, Middlesbrough, United Kingdom

**Background:** Unhealthy eating and risky alcohol use can contribute to weight gain both directly and indirectly. Intervening in early adulthood, when these linked unhealthy patterns emerge and are prominent, may prove beneficial in reducing the risks associated with obesity and heavy drinking.

**Aims:** This study used co-design techniques to develop intervention principles and core intervention concepts to support healthier eating and safer alcohol use amongst young adults.

**Method:** Data derived from this study were situated within a broader research project focused on understanding the links between unhealthy eating and alcohol use in early adulthood. Qualitative data were collected across two co-design workshops. Twenty-two young adults and thirty-six other stakeholders were recruited to confirm the projects' earlier findings including how young adults' eating practices change before, during and after alcohol consumption, and the socio-cultural links between food and alcohol intake. Data were analysed using a thematic framework developed deductively based on formative stages of the project.

**Results:** Intervention principles included the need to be accessible, personalised, social and mindful of young adults' lifestyles and resources. Core intervention concepts encompassed the importance of intervening in community settings with group-based approaches and to personalise the motivational hook, key messages, and goals to the young adult.

**Conclusion:** Further work is planned to explore emergent issues and act as an authenticity check on initial analysis. The final output will be a prototype intervention, with the aim to reduce heavy alcohol consumption and/or unhealthy eating behaviours associated with excess body weight amongst young adults.



# Commercial Symposium

Thursday September 6th 11.30-13.00  
Ethicon

Boiler House

## Programme

### Prevention or Cure? Surgery for Obesity & T2D

*An overview of the science, guidelines and evidence for the surgical treatment of Obesity & Type-II Diabetes and why we need to act now to provide the best outcomes for patients, practitioners and payors.*

#### Science of obesity/T2D

Dr Barbara McGowan, Guys and St Thomas' NHS Foundation Trust

#### Evidence for surgery for obesity & T2D

Professor Francesco Rubino, King's College London

#### Pathway success: pre, peri and post-operative (tier 3 setting)

Dr Carly Hughes, Fakenham Medical Practice

Paul Stevenson, Patient Representative

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# Member-led Symposia

Thursday September 6th 11.30-13.00

Room 1.04

**Member-led Symposium: Are 'systems' and 'evidence-based/programme-focused' approaches contradictory or complementary in obesity prevention, and how shall we move forward?**

**An international symposium to exchange lessons learnt from studies undertaken in developing and developed countries. *University of Birmingham***

## Background

Globally, extensive resources have been invested to develop and evaluate intervention programmes to prevent obesity using various strategies in different settings. However, the pandemic continues to rise in almost all parts of the world. Even the most cost-effective intervention programmes are often subject to the question of sustainability. Meanwhile, growing understanding of the complex nature of obesity prevention is driving calls for the increased use of systems theory and methods. The application of a systems approach to obesity prevention requires us to change the way we think and work (e.g. to understand systems rather than risk factors; to develop sustainable system interventions rather than finite programmes; to use routine monitoring data rather than randomised controlled trials for evaluation). This is a challenge to randomised controlled trials being the standard for the evidence-based practice and has led to debates on whether the systems approach is complementary or contradictory. A shared understanding of these discussions could help identify effective and coordinated future approaches for obesity prevention.

## Main aim

The proposed international symposium aims to provide a timely opportunity for anyone involved in obesity prevention research, practice or policy to join experts in the field to discuss this important question. Researchers with international experience in either 'systems methods' or 'evidence-based/programme focused' approach to obesity prevention will share their views on the symposium questions. They will review the strengths and challenges/limitations in applying those approaches, drawing on their experience from completed or ongoing studies in 6 countries. Where appropriate, they will also consider any interrelationships between the two approaches. Following the talks, the audience will be invited and facilitated to join interactive discussions in small groups to exchange experiences and opinions (detailed on the last page). Both the talks and open discussion will be kept coherent to focus on the defined symposium questions. The expected outcome of the symposium is shared and improved understanding of both approaches and possible ways to move our field forward in a more coordinative and effective way.

## Programme

11.30

### **Using a systems approach to community-based childhood obesity prevention**

**Professor Steven Allender**, Director, The Global Obesity Centre, Deakin University, Australia

*Why do we need a systems approach to obesity prevention; Examples of using systems methods in community-based childhood obesity prevention studies in Australia and beyond; Challenges in applying a systems approach.*

11.45

### **The international Healthy Life Trajectories Initiative (LIFE TREE) - intervention studies focusing on childhood obesity prevention**

**Professor William Fraser**, Director of Centre hospitalier universitaire de Sherbrooke, Canada

*Setting up evidence-based interventions involving important community activities to prevent childhood obesity in Canada, China, India and South Africa.*

12.00

### **Lessons learnt from 10-year rigorous development and evaluation of an evidence-based childhood obesity prevention programme (CHIRPY DRAGON) for Chinese primary school aged children**

**Dr. Bai Li**, Institute of Applied Health Research, University of Birmingham, UK. Guangxi Medical University, China

*Advantages and disadvantages of a rigorous and lengthy approach to developing and evaluating childhood obesity programmes in rapidly developing countries like China; Why and how the two approaches are complementary; Impact of the stage of the epidemic on a country's readiness to adopt a systems approach and on intervention outcomes.*

12.15

### **Overview of childhood obesity prevention trials in the UK: where next?**

**Professor Peymane Adab**, Lead for Chronic Disease Management, Institute of Applied Health Research, University of Birmingham, UK

*Summary of the main recent trials of obesity prevention in the UK; The extent to which recent trials incorporate systems theory and approaches; The lessons learnt and what may be the next steps going forward.*

12.30

### **Chess not chequers**

**Professor Harry Rutter**, Deputy Director, Centre for Global Chronic Conditions, London School of Hygiene & Tropical Medicine, UK

*UK policy and practice responses to complex public health problems tend to focus on short-term impacts on proximal factors. Part of the reason for this is the nature of the evidence base that underpins our actions, driven by structural factors relating to the funding, conduct, publication and implementation of research. Adopting a complex systems approach allows us to move beyond this focus on the proximal and consider wider effects across systems over the short, medium and long term.*

**Funding statement:** The chair of this proposed symposium (Bai Li) and the CHIRPY DRAGON project (3rd talk) are funded through a charitable donation to the University of Birmingham by Zhejiang Yong Ning Pharmaceuticals, to support the CHIRPY DRAGON project and career development of Bai Li. The funder plays no roles in any aspects of the research project or the proposed symposium. The University of Birmingham and CHIRPY DRAGON project team members have agreed to use Bai Li's conference budget within the CHIRPY DRAGON fund to cover all speaker costs, to facilitate a successful organisation of an international symposium at the 2018 UKCO.

# Member-led Symposia

Thursday September 6th 15.15-16.45

Room 1.06

**Member-led Symposium: Weight management and diet quality before and after pregnancy:**

**Public perception, priority areas and what interventions work** *Centre for Public Health, Queen's University Belfast*

## Main aim

To examine the importance of weight management and good nutritional status for women during the reproductive years, with a focus on what is already known about effective intervention approaches in the preconception and post-partum period, public perceptions, and priority areas for future interventions.

## Background

Reviews highlight the importance of a mothers' nutrition status before pregnancy for the healthy development and long-term health of the future generation<sup>1</sup>. Recent evidence also illustrates the important role fathers play; suggesting paternal, and not only maternal obesity significantly alters DNA methylation in offspring, leading to increased risk for chronic diseases in adulthood for their offspring<sup>2</sup>. Given obesity rates have almost tripled worldwide since 1975<sup>3</sup>, many more adults conceive a pregnancy with significant amounts of excess weight, carrying forward chronic disease-related risks.

In addition to obesity implications, research shows sub-optimal maternal health behaviours (e.g. poor diet and thus poor nutritional status) are carried forward from the 'preconception' or 'pre-pregnancy' period into pregnancy yet identifying or limiting these behaviours gestationally is often inadequate for negating adverse maternal, birth and child health related-outcomes<sup>4-7</sup>. There is also growing concern over population-wide micronutrient deficiencies in nutrients such as iodine, folate and folic acid, known for their significant role in preconception health, fetal development and early life<sup>8</sup>.

Lifestyle interventions to reduce the impact of obesity on maternal and child-health outcomes in the antenatal period have had mixed success<sup>9</sup>; and intervening at this stage misses the opportunity to reduce risk in the early stages of pregnancy or before conception<sup>7</sup>. Preconception care (PCC) is therefore increasingly recognised as vital across European countries within healthcare systems<sup>10</sup>, although there is a stark lack of data regarding public perceptions of PCC. Recent systematic review evidence supports PCC interventions targeting a variety of lifestyle behaviours (including diet and weight management) citing improvements in natural pregnancy rates<sup>11,12</sup>. Evidence-based interventions for weight management and dietary quality before, after and between pregnancies is also of importance, as women have an increased risk of weight gain during the reproductive years, leading to higher rates of severe obesity (BMI>40kg/m<sup>2</sup>) than men in England<sup>13,14</sup>. Yet interventions targeting the postpartum period are lacking; and there is a need to account for the life-changing and complex circumstances surrounding this life-stage, which must be carefully considered when developing interventions.

Together, this highlights the need for targeted, evidence-based interventions for weight management and dietary quality across the reproductive life-cycle.

## Objectives

(1) To assess the evidence linking preconception health, particularly nutritional status, to pregnancy, birth and later health outcomes, and assess opportunities for intervention;  
(2) to examine current diet and nutritional status in the preconception period in the UK and Ireland and highlight nutrients of concern;  
(3) to examine what adults of child-bearing age in the UK think about the importance of key health behaviours (such as diet, weight, alcohol etc.,) in the preconception period, and contrast this against current health practices;

(4) to outline the importance of the post-partum period as an opportune time for weight management interventions and the specific challenges of developing interventions targeting this stage of life (with example of an on-going trial); and finally,  
(5) to examine an alternative perspective on post-partum weight management interventions using commercial weight management groups as a way of reaching an ethnically-diverse UK population.

## Summary

Drawing on a forthcoming Lancet Series on 'Preconception Health' (to be published online in April), Professor Stephenson will begin by talking about the evidence linking preconception health, particularly nutritional status, to pregnancy, birth and later health outcomes, and assess opportunities for intervention, including what is known about the extent of planning for pregnancy. In particular, she will present findings from a pilot study that assessed the feasibility of an intensive weight loss intervention in obese women requesting removal of contraceptive devices in order to become pregnant.

Professor Woodside will further highlight the issue of nutrition by discussing the micronutrient status of the population, for example, iodine and folate, as well as folic acid use, in relation to PCC and pregnancy health status. The talk will be based on recent surveys carried out in both the UK and Ireland.

Despite advances in the evidence supporting the importance of preconception health, little is known regarding public perceptions of PCC. Dr McGowan, a Chartered Psychologist, will discuss findings from a recent UK survey examining the views of men and women of child-bearing age in the UK (18-60 years) in relation to PCC and lifestyle behaviour modification at this time (for example, dietary change, weight reduction, supplement use, smoking, alcohol use etc.), and place this into context by illustrating how adults considered to be in the 'child-bearing years' currently behave in relation to key health and lifestyle practices. These findings contribute to the evidence-base surrounding public views on PCC and lifestyle behaviours, in order to inform future PCC interventions.

Furthermore, it is important to pay attention to weight management before, after and between pregnancies as women have an increased risk of weight gain during the reproductive years. Having a baby is a life-changing event for women from a physiological, psychological, and social change perspective. Dr McKinley will discuss the challenges of weight management at this stage of life alongside opportunities for intervention. Key findings from an NIHR funded text-message based intervention specifically designed for mums in the post-partum period will be highlighted. Finally, Professor Bick will present the background to the development, implementation and evaluation of the NIHR funded SWAN feasibility study. The aims of SWAN were to assess the feasibility of conducting a definitive RCT to assess effectiveness of lifestyle information and access to Slimming World groups to achieve and maintain healthy post pregnancy weight management in an ethnically diverse, inner city population. 193 women were recruited, with 97 randomised to control and 96 to the intervention. Findings from completion of 6 month follow up (which achieved 80% follow-up) will be presented, with preliminary findings from 12 month follow up. Focus will be on process outcomes of interest, including women's views and perceptions of access to the intervention offered, barriers and facilitators to access, impact on lifestyle, views and perceptions of participating in a weight management study and considerations for future work.



# Member-led Symposia

## References:

<sup>1</sup>Dyer et al. Metabolic imprinting by prenatal, perinatal, and postnatal overnutrition: a review.  
*Semin Reprod Med* 2011; 29:266–276.

<sup>2</sup>Soubry et al. Newborns of obese parents have altered DNA methylation patterns at imprinted genes.  
*Int J Obes* 2015;39:650–657.

<sup>3</sup>World Health Organisation. Obesity and overweight. 2017;  
<http://www.who.int/mediacentre/factsheets/fs311/en/> 3/11/17.

<sup>4</sup>Schummers et al. Risk of adverse pregnancy outcomes by prepregnancy BMI: a population-based study to inform prepregnancy weight loss counseling.  
*Obstet Gynecol* 2015;125:133–143.

<sup>5</sup>Colaci et al. Men's BMI in relation to embryo quality and clinical outcomes in couples undergoing in vitro fertilization.  
*Fertil Steril* 2012;98:1193–1199.e1.

<sup>6</sup>Frey et al. The clinical content of preconception care: preconception care for men.  
*Am J Obstet Gynecol* 2008;199:S389–S395.

## Programme

- 15.15 **Assessing the evidence linking preconception health and nutritional status, to pregnancy, birth and later health outcomes: Opportunities for intervention?**  
Professor Judith Stephenson, University College London
- 15.35 **Preconception micronutrient status in the UK and Ireland – nutrients of concern**  
Professor Jayne Woodside, Queen's University, Belfast
- 15.50 **Public perceptions of preconception health behaviours: What do men and women of child-bearing age in the UK think about competing health priorities in the preconception period?**  
Dr Laura McGowan, Queen's University, Belfast
- 16.05 **Weight management after and between pregnancies – challenges and opportunities**  
Dr Michelle McKinley, Queen's University, Belfast
- 16.25 **Support for maternal weight management and healthy lifestyle behaviour following birth in an ethnically diverse, inner city London population. Update from the SWAN feasibility study**  
Professor Debra Bick, King's College London



# Member-led Symposia

Friday September 7th 11.15-12.45

Room 1.06

Member-led Symposium: A whole systems approach to tackle obesity *Leeds Beckett University*

## Symposium aims

- To present the rationale and background for commissioning the Whole Systems Obesity programme;
- To outline the Whole Systems Obesity process and the underpinning theory;
- To present the experiences and insights of a Local Authority when moving through the Whole Systems Obesity process.

## Symposium description

This symposium will present the outcomes to date of the Public Health England commissioned Whole Systems Obesity programme. The programme was commissioned to enable all Local Authorities (LAs) to create a whole systems approach to obesity, and to be able to do so in an independent and autonomous manner. This series of presentations will provide the context for the commissioning of the programme, outline the process for working towards a whole systems approach (i.e. the Whole Systems Obesity process), and then present the reflections of a LA involved in the testing of the approach.

## Symposium outline

Previous efforts to tackle obesity have tended to focus primarily on individual-level interventions (e.g. weight management, health trainers, physical activity on referral), rather than through an approach which addresses the multi-faceted and complex drivers of obesity, hence having little impact on population prevalence. New approaches are therefore required to adequately account for the complexity of the 'obesity system'. These systems are adaptive; changing over time in response to new causal drivers and the implementation of actions. The Foresight Report (2007) illustrated the breadth and complexity of the obesity system, identifying 108 causal drivers with over 300 inter-relationships. Given the complexity of the obesity system, an equally complex and comprehensive approach is needed to change the functioning of the system to one which promotes a healthier weight. This symposium will present the rationale for, the methods to develop, and reflections of such an approach; the Whole Systems Obesity programme.

## Presentation 1: The rationale and background for commissioning the Whole Systems Obesity programme

The first presentation will be a reflection from the commissioners of the Whole Systems Obesity project – Public Health England (PHE). PHE, in conjunction with the Association for Directors of Public Health (ADPH), identified an appetite for whole systems approaches to tackle obesity amongst Directors of Public Health. As a result, in 2015 PHE laid out their plans to develop a set of resources that enable all LAs to independently develop a whole systems approach to obesity. This approach would enable LAs to account for the complexity illustrated in the Foresight Report, and to deliver on the NICE Obesity and Communities guidance. Such an approach would signify a step change in the way that obesity is tackled at the local level. Subsequently in 2015, PHE – with support of the ADPH and the Local Government Association – commissioned Leeds Beckett University to develop a Whole Systems Obesity manual and supplementary resources. This presentation will talk to three objectives:

- 1) The rationale for a whole systems approach to obesity;
- 2) Present PHE's vision for the Whole Systems Obesity programme;
- 3) Introduce the Whole Systems Obesity programme.

## Presentation 2: The Whole Systems Obesity Process

The second presentation will be led by Leeds Beckett University, the institution commissioned to deliver on the Whole Systems Obesity programme. Since 2015, Leeds Beckett have co-created (with multiple LAs) a process that enables LAs to work towards a whole systems approach to obesity. This robust, yet pragmatic, approach is underpinned by systems science, and draws on an extensive cross-disciplinary evidence base. The resultant process has six phases which will take LAs from a reflection on their current position, to creating an implementable whole systems action plan that can be delivered upon by their cross-sectoral stakeholders. This approach also includes a detailed methodology for mapping out the local causal systems of obesity, for identifying leverage points across the system to bring about change, and to establish an engaged – and diverse – stakeholder group. This presentation will therefore aim to:

- 1) Introduce the six phased Whole Systems Obesity process;
- 2) Talk through each of the six phases in further detail;
- 3) Link the six phased approach back to the evidence base;
- 4) Highlight the evaluation framework utilised to test the acceptability of the process.

## Presentation 3: A Local Authority Account of the Whole Systems Obesity Implementation

The final presentation will give a detailed account of the Whole Systems Obesity process from one of the involved pilot LAs. Given that LAs in England have a shared responsibility for their community's health and wellbeing, they are in a uniquely influential position to accomplish transformational change as to how obesity is tackled. LAs are one of the very few organisations with a responsibility across the whole of their local area combined with a democratic element, featuring locally elected members that represent their areas in Parliament. Consequently, LAs are well placed to lead the creation and delivery of a whole systems approach in their local area, hence why the outputs of the Whole Systems Obesity programme were to be aimed at LAs.

Whilst the Whole Systems Obesity process has been co-produced with input from a large body of LAs, it is pivotal to appraise the successes and barriers when implementing this process in the local contexts. This presentation will therefore be of importance to those working in both LAs and also in academia. For LAs, hearing about the process from those who have experienced it will offer invaluable insights, and for academics, this presentation will affirm the many realities of research working in practice. As such, this presentation will cover:

- 1) A first-person account of a LA experience of the Whole Systems Obesity process;
- 2) The successes and barriers when implementing this process;
- 3) Practical recommendations for those working in local government and in academia.

## Panel Discussion and Questions

There will be an opportunity for questions at the end of each presentation with a discussion panel addressing general comments at the end of the symposium

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Launched in 2011, MHS has built a strong platform for innovation and growth centred on R&D and intellectual property, to develop metabolic health solutions that enable people to live longer happier and healthier lives. Core to this is our central mission to measure the world's metabolism, empower individuals, healthcare professionals and governments, to develop long-term cost-effective health and wellness solutions.

### Products/Services

**ECAL Technology** - MHS has developed proprietary IP in a metabolic diagnostic technology to create ECAL. ECAL, a compact, portable medical device, measuring metabolic rate and fuel utilisation of an individual, provides highly accurate informative data, interpretations and therapeutic recommendations for obesity and other metabolic diseases. The technology is available for primary practitioners (GP's, dietitians, physiologists, naturopaths), specialist practitioners (endocrinologists, bariatric surgeons and liver specialists), academic researchers and educators.

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# Sponsors and Exhibitors

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# Speaker Presentation Summaries and Biographies

## Professor Ashley Adamson, Newcastle University

### Plenary Lecture – Thursday 6th, 17.15-18.00. Boiler House

Ashley Adamson is Director of Fuse, UKCRC Centre for Translational Research in Public Health. Fuse has a wide network of partners working in public health practice and policy, including Local Authorities, third sector organisations and business. In April 2017, Ashley was appointed National Director for the NIHR School for Public Health Research <http://sphr.nihr.ac.uk/> and NIHR Senior Investigator in 2018. She is a Professor of Public Health Nutrition at Newcastle University, and leads a research team in Public Health Nutrition Research in the Human Nutrition Research Centre. Ashley's personal research interests focus on the complex relationships between the food environment and food choice, socio-demographic and wider upstream determinants of health with a particular focus on prevention of obesity.

### Translational research in childhood obesity

As researchers we work hard to understand more about complex problems and to generate evidence but even the best evidence does not guarantee take-up into practice. Research take-up is slow; it can be up to 17 years from the 'eureka' moment to impact on practice. Research is often not useful to practice; it takes too long to report or may fail to ask the right questions to address the most pressing issues. This brings challenges for researchers, as evidence (produced through a systematic and robust research process) is often not fully taken into account in decision-making. So how do we resolve this? Translational research acknowledges and embraces the push, pull, exchange and sharing of knowledge across professional, organisational and sector boundaries working on the principle that it is a blend of research evidence, professional know-how and partnership that will make the most of opportunities to for impacting on the public's health.

There are many opportunities for practice, policy and researchers to work more closely together. This will be illustrated by work led by Newcastle which seeks to increase parental acknowledgement of childhood adiposity to promote prevention and early intervention. The presentation will start with early findings from the Gateshead Millennium Study, describe work with parents, children and Local Authority Public Health teams, NHS Choices, the National Child Measurement Programme and Public Health England.

## Professor Annie Anderson, Dundee University

### Plenary Lecture – Friday 7th, 14.15-15.00. Boiler House

Professor Annie Anderson BSc PhD Rd FRCP is Professor of Public Health Nutrition in the School of Medicine, University of Dundee. Her training spans biological aspects of nutrition as well as behavioural, social and cultural dimensions. Following two years clinical dietetic practice in Cambridge she undertook a PhD at the University of Aberdeen and research posts at the University of Glasgow and the MRC Medical Sociology Unit. Her research areas focus on theory based, behaviourally focused, dietary and obesity (population and individual) interventions aimed at chronic disease risk reduction with a special interest in cancer prevention and survivorship. During 2013 to 2015 she was a member of the European Code Against Cancer – Physical activity, obesity, nutrition and alcohol working group for the WHO International Agency for Research on Cancer (IARC) and during 2015/16 a member of an expert working group on body fatness and cancer for the Agency.

### Obesity and cancer – A duty of care or a duty of silence?

Excess body fatness is associated with the development of at least 13 cancers and there is some evidence that intentional weight loss may reduce cancer risk. Obese breast and colorectal cancers generally seem to have a poorer prognosis than their healthy weight counterparts. However, discussing obesity within cancer settings (e.g. population cancer screening, high risk family history clinics and cancer survivors) remains a topic that clinicians frequently fail to discuss due to fear of provoking guilt or shame or having a negative impact on professional-patient relationships. In turn, much of the general public remain unaware of the relationship between obesity and cancer risk and cite fate, luck or genetics as major reasons for the development of cancer. Collectively there is a need to consider how we can broach the topic in a supportive but not shameful or stigmatising manner as part of a duty of care.

## Professor Damian Bailey, University of South Wales

### ASO Symposium – Obesity and age-related disease Thursday 6th, 11.30-13.00. Room 1.06

Damian is a Professor of Physiology & Biochemistry and former Head of Research and Director of the Research Institute of Health & Wellbeing in the Faculty of Life Sciences & Education at the University of South Wales. He leads the Neurovascular Research Laboratory committed to understanding the source, mechanisms and consequences of free radical formation during human ageing with a specific focus on the mechanisms that regulate blood flow and oxygen transport to the human brain. His research is supported by a Royal Society Wolfson Research Fellowship and he is a Fellow of the Physiological Society, Royal Society of Chemistry and American College of Sports Medicine for contributions to clinical vascular physiology.

### Oxygen, activity and the ageing brain; radical insights

Photosynthesising cyanobacteria breathed life into what was, until a billion years ago considered a reductive atmosphere, thus providing a selective pressure for the evolution of oxygen-dependent micro-organisms that began with the autotrophic eukaryotes. Since these primordial times, the respiring mammalian cell has become entirely dependent on molecular oxygen since it serves as the terminal electron acceptor in mitochondrial oxidative phosphorylation and multiple enzymes require oxygen as a substrate. The human brain exemplifies this reliance on oxygen since, unlike most other tissues, it is committed to a continually active state. In his presentation, Professor Bailey will take a functionally integrated translational approach to illustrate how the brain copes with the energetic challenges imposed by ageing highlighting the evolutionary conserved oxygen-sensing mechanisms that collectively serve to defend cerebral oxygenation with a specialist focus on reactive oxygen-nitrogen species and the link to the "fat brain". This is an area of clinical interest given the link between obesity, stroke and neurodegeneration yet our understanding of the unified regulatory mechanisms remains incomplete and often controversial. Professor Bailey will combine science with adventure, highlighting how novel models involving physiological extremes of cerebral blood flow can provide unique insight into the fundamental mechanisms underlying human brain ageing.

# Speaker Presentation Summaries and Biographies

## Dr Andrew Beamish, Gothenburg University, Sweden

### ASO Symposium – Bariatric surgery and life stages Thursday 6th, 15.15-16.45. Boiler House

Andrew Beamish is currently combining his Specialty Training in Upper GI Surgery in Wales with a PhD in Adolescent Bariatric Surgery in Sweden.

His PhD examines medium to long-term outcomes after Roux-en-Y gastric bypass in adolescents in the AMOS study, with a specific focus on bone health beyond the early years after surgery. He is also working with the Teen-LABS group in the US, and developing a protocol for an international RCT in Europe, comparing gastric bypass and sleeve gastrectomy in teenagers. He is a past-president of the Association of Surgeons in Training, Assistant Editor of the International Journal of Surgery, and Board Member of the surgical safety charity, CORESS.

### Bariatric surgery in the adolescent

The development of obesity has increasingly shifted toward childhood. One in five children globally has overweight and one six children in the US has obesity. Preventative measures have consistently failed and effective, enduring therapeutic options are lacking. When obesity is severe, the likelihood of an individual improving their health and achieving normal weight is very slim. Building on the success of adult bariatric surgery programmes, a growing body of evidence now demonstrates the effectiveness, and limitations, of enrolling adolescents onto bariatric/metabolic surgical programmes.

This talk explores the existing and rapidly developing evidence supporting the use of surgical therapies in severe and comorbid adolescent obesity. The main surgical procedures are described in brief and data from key studies, such as the AMOS and Teen-LABS studies, are presented in the context of the wider literature. The beneficial effects of surgery on weight and comorbidities, such as type 2 diabetes, are discussed. Crucially, the safety profile and potential negative effects of surgery are also explored, alongside consideration of patient selection criteria and the latest guidelines, published in the US this year.

## Professor Henning Bliddal, Copenhagen University, Denmark

### ASO Symposium – Obesity and age-related disease Thursday 6th, 11.30-13.00. Room 1.06

Professor Henning Bliddal is a specialist in rheumatology. Since 1997 he has been Leader and Professor of Research at the Parker Institute, a clinical research unit of Rheumatology, Copenhagen University Hospital, Bispebjerg and Frederiksberg, Denmark.

Professor Bliddal's research projects have over the last years concentrated on treatment of patients with knee osteoarthritis (OA) with very significant results in patients with this disease in combination with obesity. HB has supervised numerous medical students and physicians, including 25 PhD students. He has extensive teaching experience and is a regular contributor and guest speaker at national and international congresses. HB has published more than 300 papers (2018) in international medical journals covering many different aspects of rheumatology. For details please refer to PubMed and Embase.

### Weight loss and osteoarthritis

Obesity is widely acknowledged as a risk factor for the incidence and progression of osteoarthritis, and has a negative influence on outcomes. Loss of at least 10% of body weight is recognized as a fundamental part of the management of obese patients with osteoarthritis, and can lead to significant improvement in pain relief, physical function and health-related quality of life. Weight loss in the obese with concomitant knee osteoarthritis reduces blood pressure and with the lower weight significantly reduces cardiac risk. Given the significant health, social and economic burden of osteoarthritis, especially in obese patients, it is imperative to advance our knowledge of osteoarthritis and obesity, and apply this to improving care and outcomes. In the UK (excluding Scotland) knee replacement operations have risen from 28,000 in 2004 to 98,000 in 2016, 96% with a sole diagnosis of KOA. Direct and Indirect costs (e.g. working days lost) to the UK economy are suggested to be about 1% of GNP. This presentation reviews what is known about osteoarthritis and obesity, discusses current key challenges and ongoing hypotheses arising from research in these areas, and postulates what the future may hold in terms of new horizons for obese patients with osteoarthritis.

## Dr Sam Caton, University of Sheffield

### N8 AgriFood Symposium – Food Insecurity and Obesity Friday 7th, 09.15-10.45. Room 1.06

Sam is a lecturer in Public Health in the School of Health and Related Research at the University of Sheffield. Sam joined Sheffield in 2013 and prior to this Sam worked at the University of Bradford as a lecturer in Psychology and held post-doctoral positions in Germany (Ludwig Maximilians Universität, Munich, Department of Endocrinology), the USA (Purdue University, West Lafayette, Indiana, Department of Psychology) and most recently in the UK (University of Leeds, Institute of Psychological Sciences). Sam is a biological Psychologist with an interest in the broad areas of obesity, appetite regulation and nutrition. Sam's current research projects include a BBSRC DRINC funded project focusing on snacking and portion sizes in preschool children, she is also working on an N8 funded project examining the association between food insecurity and obesity in children (lead by Dr Emma Boyland, University of Liverpool).

### Towards understanding the relationship between food insecurity, socioeconomic status and obesity in families in Northern England: A strategically important multidisciplinary project

Household food insecurity and obesity appear to be linked. However, no data exist on food insecurity and its impact on child health, so the problem remains unrecognised in UK policy terms. The aim of the project was to establish the fundamental relationships between food insecurity, socioeconomic status (SES) and obesity in families with primary school aged children in northern England. A quantitative survey of 188 families in the north of England was undertaken. Parents received study information and materials via their child's school, and those willing to take part were asked to complete measures of SES and household food insecurity. An association was found between decile of deprivation and food insecurity. Although food insecurity was not associated with greater weight in children, it was associated with parental weight status. Parents in the most insecure group were more likely to be in a higher weight category. Low levels of household food insecurity in this sample may be due to limited recruitment of the relevant demographic groups rather than a true reflection of the scale of the problem. Future studies of this type must carefully consider how best to access the population of interest and the level of incentive offered for participation.

Continued >

# Speaker Presentation Summaries and Biographies

## Professor John Chambers, Imperial College London

### ASO Symposium – Molecular aspects of Obesity Friday 7th, 09.15-10.45. Boiler House

John Chambers is a Professor of Cardiovascular Epidemiology at Lee Kong Chian School of Medicine, and at Imperial College London, and Director of the NIHR Global Health Research Unit for Diabetes and Cardiovascular Disease. He uses population-based approaches to investigate on the mechanisms underlying the obesity, diabetes and cardiovascular disease amongst Asian populations, with a particular focus on DNA sequence variation, molecular regulatory disturbances and their interaction. He leads large-scale prospective, observational population studies in Singapore, South Asia and the UK, as well as interventional studies aimed at prevention of obesity and metabolic disease in high risk individuals.

#### Identification of metabolically unfavourable adiposity

Obesity and its primary metabolic complication type-2 diabetes, are major global public health problems. I will summarise the results of our population based approaches that have explored both DNA sequence variation, as well as disturbances of DNA regulation, underlying obesity and diabetes in high risk populations. I will also explore how genomic and epigenomic variation might be used both as a biomarker to guide therapeutic intervention for prevention of chronic disease, as well as to provide new insight into potential causal pathways and therapeutic targets for disease prevention.

## Professor Roland Devlieger, KU Leuven, Belgium

### ASO Symposium – Bariatric surgery and life stages Thursday 6th, 15.15-16.45. Boiler House

Roland Devlieger currently holds an academic position at the KU Leuven as associate professor. He is the head of the division of maternal-fetal medicine within the department of Obstetrics and Gynecology (Chair Prof. Dr. Ignace Vergote) of the University Hospitals Leuven in Belgium. He's research focus is mainly clinical and translational and focusses on obesity and pregnancy, reproduction after bariatric surgery and fetal medicine and surgery. He is Senior Clinical Researcher for the Flemish research fund, FWO Flanders, Belgium and member of the board of directors from the International Society for Prenatal Diagnosis (ISPD). He is a founding member of the Fetal Care Academy and board member of BASO (Belgian association for the study of obesity).

#### Pregnancy following bariatric surgery

An increasing number of young women are seeking surgical treatment for morbid obesity. In contrast, there is lack of good evidence-based guidelines on how to manage these patients in the reproductive phase of their lives. Risk and risk management in the preconception, pregnancy and postpartum period will be discussed as well as current controversies and research gaps in this domain.

## Dr Alison Fildes, University of Leeds

### N8 AgriFood Symposium – Food Insecurity and Obesity Friday 7th, 09.15-10.45. Room 1.06

Alison is a University Academic Fellow in Behavioural Obesity Research within the School of Psychology at the University of Leeds. Prior to her current post, Alison held post-doctoral positions at Queensland University of Technology, Kings College London and in UCL's Department of Behavioural Science and Health, where she retains an honorary position. Alison is Deputy Director of the Gemini study, a large UK twin cohort established to advance understanding of the genetic and environmental influences on appetite and growth. She also co-leads the ASO Yorkshire Regional Network. Alison is interested in the aetiology and modification of obesogenic health behaviours and has contributed to several randomised control trials targeting early life diet and obesity prevention. Alison's current research includes two N8 funded projects exploring the measurement of food insecurity, and the relationship between child food insecurity, socioeconomic status and obesity in the UK.

#### "You cannot improve what you cannot measure" – The case for routine measurement of child food insecurity in the UK

Household food insecurity refers to the inability to consistently secure adequate food of sufficient quality and quantity through socially acceptable means. Data from a range of sources suggests household food insecurity is a growing problem in the UK and families with children are particularly vulnerable. However, there is currently no routine collection of nationally representative data on household food insecurity and the data that is available often fails to account for children's experiences. This lack of measurement masks the extent of the problem and perpetuates inaction. There are internationally recognised measures of household food insecurity, but they have not yet been validated for use in the UK. Establishing valid measurement tools for assessing household food insecurity in UK families with children will facilitate their inclusion in existing national surveys. Here we present available data on UK children's experiences of household food insecurity and discuss the relevance of existing measures for the UK context.

## Dr Charlie Foster, University of Bristol

### ASO Symposium – Reproduction and Integration Friday 7th, 11.15-12.45. Boiler House

Charlie Foster, PhD is a global leader in systematic reviews and meta-analysis of the evidence base for physical activity, with reviews on epidemiology, correlates, interventions and evaluation of natural experiments. With over one hundred research publications including the Lancet, BMJ, and Cochrane Collaboration, he was asked to co-author the 2011 UK Chief Medical Officer physical activity guidelines. Charlie is a leader of physical activity and public health in the UK and was asked to present his research to the UK Parliament's 2014 All-Party Commission on Physical Activity. He has global policy and advocacy experience working with WHO, EC, and CDC USA. He is the Chair of the CMO UK expert committee for physical activity and is leading the current update of the 2019 CMO UK physical activity guidelines.

#### Physical activity and pregnancy guidelines – from evidence to infographic

Being active during pregnancy can lead to many benefits from improved fitness and lower gestational weight gain to a reduced risk of hypertension and gestational diabetes. This presentation will outline the development of the new UK CMO physical activity and pregnancy infographic, which was based on a set of evidence reviews of RCT, cohort and qualitative literature.

# Speaker Presentation Summaries and Biographies

## Professor Keith Godfrey, Southampton University

### ASO Symposium – Reproduction and Integration Friday 7th, 11.15-12.45. Boiler House

Keith Godfrey BM, PhD, FRCP, is Director of the Centre for the Developmental Origins of Health and Disease at the University of Southampton. He leads the Lifecourse Nutrition, Lifestyle and Health Theme in the NIHR Southampton Biomedical Research Centre, is an NIHR Senior Investigator and Professor of Epidemiology & Human Development at the MRC Lifecourse Epidemiology Unit at the University of Southampton. Other appointments include Honorary Consultant, University Hospital Southampton NHS Foundation Trust and Visiting Professor at the National University of Singapore. Keith's research is characterising optimal diet and body composition for women and their offspring before, during and after pregnancy, alongside defining the epigenetic mechanisms underlying lasting effects of the developmental environment.

### Developmental origins of obesity

Arising from the developmental origins hypothesis, within the UK Southampton Women's Survey we have shown greater adiposity in the offspring in association with higher maternal adiposity, poor quality maternal diets in pregnancy, low maternal vitamin D status, excess gestational weight gain, and short duration of breastfeeding.<sup>1</sup> Alongside important effects of maternal dysglycemia, we found similar associations in the Singapore GUSTO cohort.<sup>2</sup> Experimental support for developmental influences on obesity and metabolic risk is strong, with recent data pointing to the importance of preconception maternal and paternal influences.<sup>3</sup> In animals the environment during early life induces altered phenotypes in ways which are influenced or mediated by epigenetic mechanisms, including DNA methylation, covalent modifications of histones and non-coding RNAs. Evidence from human studies suggests a similar important role for epigenetic processes,<sup>4</sup> and our work points to the importance of considering both fixed genetic variation and environmental factors in interpreting epigenetic variation and later metabolic risk. Ongoing trials are seeking to reduce the risk of offspring obesity through intervention before and during pregnancy.<sup>5</sup>

<sup>1</sup>Robinson SM, *AJCN* 2015;101:368-75, <sup>2</sup>Aris IM, *IJO* 2017;07:28, <sup>3</sup>Fleming TP, *Lancet* 2018-epub Apr17, <sup>4</sup>Lillycrop K, *EBioMedicine* 2017;19:60-72, <sup>5</sup>Godfrey K, *Trials* 2017;18:131.

## Mr Jo Jewell, WHO Europe

### Plenary Lecture – Thursday 6th, 14.30-15.15. Boiler House

Jo Jewell is the Technical Officer for Nutrition, Physical Activity and Obesity at the WHO Regional Office for Europe, where he has worked since 2014.

His previous experience includes roles as Policy and Public Affairs Manager at World Cancer Research Fund International, based in London, and as Policy Coordinator at the European Public Health Alliance in Brussels. He has a background in European politics and has a Masters from the London School of Hygiene and Tropical Medicine and the London School of Economics in Health Policy, Planning, and Financing.

His experience and publications mainly relate to nutrition policy and surveillance, including a focus on food marketing to children, the use of price policies, nutrition labelling, food composition and product reformulation.

## Professor John Mathers, Newcastle University

### ASO Symposium – Molecular aspects of Obesity Friday 7th, 09.15-10.45. Boiler House

John Mathers is Professor of Human Nutrition and Director of the Human Nutrition Research Centre in the Institute of Cellular Medicine at Newcastle University, UK. He is a past President of the Nutrition Society. His major research interests are in understanding how eating patterns influence risks of common age-related diseases. He led the *LiveWell Programme* of research which developed and piloted an internet-based lifestyle intervention designed to promote better health into old age. He also led the EU FP7-funded *Food4Me* intervention study which tested the idea that web-delivered personalised nutrition is more effective than conventional "one-size-fits-all" approaches in improving dietary behaviour. These web-delivered personalised approaches are also being investigated in the current *MedEx-UK* project which aims to reduce the risk of Alzheimer's Disease.

### Genetic influences on weight loss - opportunities for personalisation?

The risk of being obese is influenced by genetic make-up. In the general population >100 genetic variants are associated with measures of adiposity and, on average, variants in the *FTO* gene have the biggest individual effect. This raises the question "*If the risk variant in FTO helps to make people fatter, does it also make it more difficult to lose weight?*". Using data from 8 large weight loss studies involving about 9,500 participants, we found that carriage of the risk allele for *FTO* had no effect of weight loss (Livingstone et al. 2016). This lack of effect was evident for both genders, at younger and older ages and regardless of the type of intervention (diet, physical activity or drugs). Similarly, in a recent intervention study in the USA, there was no effect of variants in 3 other genes on weight loss (Gardner et al. 2018). This is good news for those wishing to lose weight since it shows that one's genes are not always one's destiny and that weight loss can be just as successful in those that carry risk alleles for increased adiposity.

Gardner CD et al. (2018) *JAMA*. 319(7):667-679.  
Livingstone KM et al. (2016) *BMJ*. 354:i4707.

## Professor Daniel Nettle, Newcastle University

### N8 AgriFood Symposium – Food Insecurity and Obesity Friday 7th, 09.15-10.45. Room 1.06

Daniel Nettle, Clare Andrews and Melissa Bateson are behavioural scientists at Newcastle University. Their EU-funded research group is dedicated to combining knowledge from animal behaviour with knowledge from the human sciences. They attempt this marriage both theoretically, and empirically, particularly through studies of two long-lived residents of Northern England, *Homo sapiens*, and the starling, *Sturnus vulgaris*. Their particular interests include weight regulation, stress, ageing, and decision-making.

Continued >

# Speaker Presentation Summaries and Biographies

## **Food insecurity as a driver of obesity in humans:**

### **The insurance hypothesis**

For twenty-five years now, the idea has been out there that food insecurity may be a predictor of obesity. The idea seems paradoxical, because food insecurity – the limited or uncertain ability to procure sufficient and appropriate food – is associated with greater hunger and therefore, one might think, weight loss. However, there are clear cases in non-human animals where restricting access to food causes higher, not lower, body weights to be maintained. The evolutionary rationale for these shifts is that individuals have to overconsume when food is available to insure themselves against the periods when it is not. We present a meta-analysis of the large human literature on food insecurity and obesity. We find that food insecurity predicts obesity, with a moderately strong effect size, but only amongst women, and only in populations with access to Western diets. We discuss possible reasons for these specificities. The human evidence is largely correlational and cross-section, and hence inferences about causality are problematic. We discuss implications and possible future directions.

Daniel Nettle, Clare Andrews and Melissa Bateson,  
Newcastle University.

## **Professor Lucilla Poston, Kings College London**

### **ASO Symposium – Reproduction and Integration Friday 7th, 11.15-12.45. Boiler House**

Professor Lucilla Poston is Head of the Department of Women and Children's Health, and of the School of Life Course Sciences at Kings College London (KCL). She holds the Tommy's Charity Chair of Maternal and Fetal Health. A graduate in Physiology (University College London) with a PhD in the field of medicine, she directs a multidisciplinary team of health professionals which she established in 1995, based at Guy's and St. Thomas' Hospitals. Her research team aims to improve the health of women and their children in the UK, and globally by better understanding of the processes which lead to complications in pregnancy, particularly premature birth, obesity, gestational diabetes and pre-eclampsia. Professor Poston's own research has focussed for many years on the consequence of exposures *in utero* for the life-long health of the child, and she was recently elected President of the International Society for the Developmental Origins of Health and Disease. Professor Poston's is a member of the UK MRC Global Health group, an honorary Fellow of the Royal College of Obstetricians and Gynaecologists (RCOG), a National Institute of Health Research (NIHR) Senior Investigator Emeritus and a Fellow of the UK Academy of Medical Sciences. In 2017 she was honoured to receive a CBE from the Queen for her services to Women's Health.

## **Interventions in pregnancy and offspring adiposity**

Observational studies in mother-child cohorts suggest a strong association between maternal obesity in pregnancy and offspring risk of obesity. Animal models are strongly supportive and several mechanistic pathways have been implicated, including permanent influences of maternal metabolic factors on neuronal pathways in the developing fetal brain involved in energy balance. Others suggest a role for epigenetic pathways. It follows that improvement in maternal metabolic function through lifestyle, dietary or pharmacological intervention in obese pregnant women should reduce the risk of childhood obesity, and that this could be one approach to prevention. Animal models also provide evidence for this, but few relevant randomised controlled trials in obese women have undertaken childhood follow-up. Of these, two have provided evidence for a reduction in offspring adiposity and others have showed no effect. However, most interventions have shown very modest influences on maternal obesity, gestational weight gain or metabolism. To determine any potential for childhood obesity prevention, further studies are required of adequately powered RCTs with substantive effects on maternal outcomes.

Dalrymple KV, Martyni-Orenowicz J, Flynn AC, Poston L,  
O'Keeffe M.

Can antenatal diet and lifestyle interventions influence childhood obesity? A systematic review. *Matern Child Nutr.* 2018 Jul 1:e12628. doi: 10.1111/mcn.12628. [Epub ahead of print]

## **Dr Mario Siervo, Newcastle University**

### **ASO Symposium – Obesity and age-related disease Thursday 6th, 11.30-13.00. Room 1.06**

Dr Siervo is a clinical scientist with a specialty in Clinical Nutrition and Metabolic Medicine obtained at the University of Naples, Italy. He was awarded a Masters in Public Health Nutrition from London School of Hygiene and Tropical Medicine and obtained his PhD in Human Physiology and Nutrition at the University of Cambridge. Dr Siervo worked for several years at the MRC Human Nutrition Research Centre and in the Obesity clinic at Addenbrooke's Hospital in Cambridge before joining for one year the Laboratory of Biological Modelling of the National Institutes of Health in Washington DC. He returned to the UK in 2011 to join Newcastle University where he currently holds a position as Senior Lecturer in Nutrition.

Dr Siervo's research aims to understand the influence of nutrition on lifelong health and prevention of age-related chronic metabolic and neurodegenerative diseases. The group includes two core research themes: 1) Ageing and Body Composition Phenotypes and 2) Nitric Oxide Pathway and Vascular Ageing. The objectives of his research are to investigate how the age-related modifications of arterial elasticity, adiposity and muscle mass contribute to the increase in hypertension, type 2 diabetes or dementia that occur with ageing. Dr Siervo has published more than 140 peer-reviewed articles, contributed to several book chapters and serve on the editorial board of the *Proceedings of Nutrition Society*, *Clinical Obesity*, *Journal of Nutrition Health and Ageing and Global Epidemic Obesity*.

# Speaker Presentation Summaries and Biographies

## Ageing, obesity and cardiovascular health

Ageing and obesity are two of the most important global public health challenges within our societies. Epidemiological trends for both are projected to increase over the next decades and the collinearity of these trends are reflected in the biological and behavioural connections that characterise the ageing and weight gain processes. Ageing and obesity are both independent predictors of cardiovascular health but the relationship appears to be non-linear across the life-course as obesity, and more specifically adiposity, may become a protective factor for cardiovascular health and mortality in very old individuals (>80 years old).

This presentation will briefly summarise epidemiological trends of ageing and obesity and examine the collinearity of the projected trends globally. The main physiological and biomolecular mechanisms linking the ageing process to the development of obesity will be discussed and how they are linked to the pathogenesis of cardiovascular diseases, with a focus on the atherosclerotic process. A brief discussion will follow on the putative existence of the obesity paradox and explore mechanisms by which high adiposity might become a protective factor for cardiovascular health in very old age. Conclusions of the presentation will be directed at nutritional assessment of obesity across the life-course and opportunities for early prevention of cardiovascular diseases.

## Professor Régine Steegers, Erasmus MC, The Netherlands

### Plenary Lecture – Thursday 6th, 10.15-11.00. Boiler House

Régine P.M. Steegers-Theunissen, MD, PhD, is a professor of periconception epidemiology at the departments of Obstetrics and Gynaecology, and Paediatrics division of Neonatology at the Erasmus MC. From 1986 she is conducting multidisciplinary and translational research on the impact of periconception folic acid, parental nutrition and lifestyle on fertility and adverse maternal pregnancy and neonatal outcomes with implications for future health. In the last 10 years she implemented the research findings in a preconception outpatient clinic and developed the mHealth nutrition and lifestyle coaching programs 'smarter pregnancy' and 'smarter eating with your child (launch 2011). These web-based platforms increase the quality of preconception and pregnancy care by adopting healthy behaviors and compliance of medical treatment in couples and young children. She contributed to >320 international publications and completed the supervision of 28 PhD theses.

### Periconception parental nutrition and mHealth interventions to support health care

Reproductive failures, such as fertility problems, miscarriages, congenital malformations and fetal growth restriction, largely originate in the periconceptional period, a timespan defined as 14 weeks before until ten weeks after conception. In this period poor nutrition has a negative impact on the development and health of gametes, embryo and placenta. Embryonic health predicts fetal and newborn health and associations are shown with obesity and non-communicable diseases in childhood. In the first part of this presentation new evidence on the impact of periconceptional maternal nutrition, but also of paternal nutrition, on gametes and (pre)implantation embryo quality and embryonic growth trajectories will be demonstrated. Food frequency and general questionnaire data, biomarkers, such as red blood cell folate, are used as exposures and 3-dimensional ultrasound, time-lapse and offline virtual reality techniques to assess embryonic quality, growth trajectories and development as outcome.

In the second part of this presentation the implementation and valorization of this new knowledge in patient care will be addressed. Mothers-to-be, but increasingly also fathers-to-be, are most motivated to change poor nutritional behaviors when they are aware of the short-term health benefits of getting pregnant and having a healthy baby. However, nutrition and lifestyle counselling is not a domain often included in routine medical care. One of the recent opportunities to empower patients as well as health care professionals, is the development of evidence-based and personalized mobile-health technology-based interventions to enhance healthy nutrition. In the second part of this presentation mHealth tools for screening and coaching on health, nutrition and lifestyle during the periconceptional and pregnancy period will be outlined with a large potential health return, relatively low costs and risk of harm.

## Professor Roy Taylor, Newcastle University

### ASO Symposium – Molecular aspects of Obesity Friday 7th, 09.15-10.45. Boiler House

Roy Taylor qualified in medicine at the University of Edinburgh, and is Professor of Medicine and Metabolism at Newcastle University and Newcastle Hospitals NHS Trust. He founded the Newcastle Magnetic Resonance Centre in 2006 to develop innovative research techniques for all medical specialities. In 2011 he showed that type 2 diabetes was a simple, reversible condition of excess fat within liver and pancreas. Professor Taylor developed the system now used throughout the United Kingdom for screening for diabetic eye disease, with major reduction in blindness due to diabetes across the UK. He has delivered several named lectures including the 2012 Banting Lecture (Diabetes UK), 2015 Harry Keen Lecture and the 2016 Samuel Gee lecture (Royal College of Physicians of London).

### Reversal of Type 2 Diabetes Throughout the Lifecourse: The Diabetes Remission Clinical Trial (DiRECT)

Type 2 diabetes was shown to be a simple, reversible metabolic state in 2011 with demonstration of the rapid time course of metabolic changes in liver and pancreas underpinning reversal to normal glucose control. Since then the dependence of reversibility upon duration of disease and the durability of non-diabetic glucose control have been demonstrated. Recently, DiRECT has reported upon use by Primary Care nurses or dietitians in a prospective, randomised study of type 2 diabetes of <6 years duration and BMI 27-43kg/m<sup>2</sup>. In the intervention group, weight loss was induced using a liquid diet replacement (825-853 kcal/day) for 3-5 months with withdrawal of all anti-diabetic drugs on day 1. At 12 months, 25% of all Intervention participants had lost >15kg and 46% were non-diabetic off all medications. Those with HbA1c <48mmol/mol (<6.5%) after weight loss (n=37; responders) were compared with those remaining >48mmol/mol (n=16; non-responders). Decreases in liver fat, plasma VLDL1-TG concentration and intra-pancreatic fat were similar in the two groups, and beta cell recovery determined response. Absolute level of BMI was irrelevant to ability to achieve and maintain the non-diabetic state, further reinforcing the personal fat threshold hypothesis of type 2 diabetes susceptibility.

Roy Taylor, Magnetic Resonance Centre, Institute of Cellular Medicine, Newcastle University, Newcastle upon Tyne, UK

Continued >



# Speaker Presentation Summaries and Biographies

## Dr Alison Tedstone, Public Health England

### Plenary Lecture – Friday 7th, 08.30-09.15. Boiler House

Dr Alison Tedstone is Deputy Director with responsibility for diet, nutrition, obesity and physical activity in the Health Improvement Directorate of Public Health England (PHE). Her teams work areas include the National Diet and Nutrition Survey, nutrient composition of foods, scientific advice on nutrition (including the Scientific Advisory Committee on Nutrition), and advice on nutrition and actions to improve diet, including work underpinning the government's Childhood Obesity Plan with the food industry to reduce the sugar, salt and calorie content of everyday foods. The division also coordinates, across PHE, a programme of work aimed at tackling the nation's obesity problem which supports national and local level delivery, including actions aimed at improving systems leadership and addressing the environmental causes of obesity.

Alison transferred with other nutrition colleagues from the Department of Health in 2013 and before that from the Food Standards Agency (FSA) in 2010. Before joining the FSA, in 2001, Alison was an academic at the London School of Hygiene and Tropical Medicine. Alison completed post doctorate research in Oxford and is a registered public health nutritionist.

### A life course approach to obesity policy in England

Obesity is a chronic condition, with a range of complex drivers and causes. Intervention at every point of the life course is required to tackle obesity and contribute towards the delivery of Public Health England's (PHE) enduring priority 'to help people live longer and more healthy lives'.

This plenary will explore PHE's role in informing evidence and data to influence and inform policy development, including the Childhood Obesity Plan, and the approaches PHE are delivering in relation to childhood obesity and across the life course. This will include: how evidence from the Scientific Advisory Committee on Nutrition and PHE has been used; the implementation policies that PHE is responsible for, such as the Sugar and Calorie reduction programmes; and the wider programme of work PHE is delivering to support local action around obesity and its causes, including secondary prevention, through the public health workforce, schools, local government, the NHS and others.

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# Poster Presentations

## Poster Pitch Session

Thursday 6th September 13.15

Chair - Professor Judith Rankin

- 01 The effects of bariatric surgery on DNA methylation in adults: A systematic review  
**Khalil ElGendy**
- 02 Parental perceptions of hospital food outlets  
**Lorraine McSweeney**
- 03 Examining the relationship between health enhancing physical activity, child obesity, and social disadvantage in England  
**Robert Noonan**
- 04 A qualitative study exploring the views of parents, religious leaders and mosque members on the acceptability of an obesity prevention intervention within Islamic religious settings in the UK  
**Kiran Rai**
- 05 Economic evaluation of weight management for severely obese adults: VLCD results from the NIHR HTA funded REBALANCE Project  
**Lise Retat**

## Poster Pitch Session

Friday 7th September 13.15

Chair - Professor Louisa Ells

- 06 Longitudinal effects of dietary patterns at age 7 years on adiposity at age 15 years in the Gateshead Millennium Study  
**Roisin Rigg**
- 07 Measuring Weight Specific Quality of Life in Adolescents: An Examination of the Concurrent Validity and Test Re-Test Reliability of the WAiE  
**Tomos Robinson**
- 08 Association between life-course BMI status and later life health care costs  
**Diarmuid Coughlan**
- 09 A systematic review of methods and cost-effectiveness findings of economic evaluations of obesity prevention and/or treatment interventions in children and adolescents  
**Mandana Zanganeh**

- 10 Cost-effectiveness of the Chirpy Dragon programme for the prevention of obesity in Chinese primary school-aged children: A cluster-randomised controlled trial  
**Mandana Zanganeh**
- 11 Association between physical activity participation at midlife and later life health care costs in US adults by BMI status  
**Diarmuid Coughlan**
- 12 A systematic review of UK based long-term non-surgical interventions for people with severe obesity (BMI  $\geq 35\text{kg/m}^2$ ): The NIHR HTA funded REBALANCE Project  
**Magaly Aceves-Martins**
- 13 A HAPPY Evaluation: Taking an innovative approach to evaluating a community-based obesity prevention intervention  
**Sara Ahern**
- 14 Physical activity and diabetes risk in the Kuwaiti population  
**Ahmad Alkhatib**
- 15 Fruit and vegetables intake, diabetes and associated health risks in the Kuwaiti population  
**Ahmad Alkhatib**
- 16 Postprandial venous and capillary blood glucose differences following rest or exercise in obese insulin resistant males  
**Dean Allerton**
- 17 Energy balance and body fatness: A systematic review of the diet, nutrition and physical activity determinants of weight gain, overweight and obesity from the WCRF/AICR Third Expert Report  
**Emily Almond**
- 18 Relationship between changes in hepatic fat and abdominal adiposity after weight loss in type 2 diabetes  
**Ahmad Al-Mrabeh**
- 19 Increased risk of gestational diabetes, caesarean delivery and large for gestational age infants among overweight and obese women in Greater Glasgow and Clyde  
**Amaal Alrehaili**
- 20 Idiopathic Intracranial Hypertension in the British population with obesity  
**Maddalena Ardissino**
- 21 Trends in ischaemic events and outcomes in men and women with obesity in the UK  
**Maddalena Ardissino**
- 22 Obesity and Depression: Insights on incidence and outcomes from a British cohort  
**Maddalena Ardissino**
- 23 Evaluation of a commercial weight management provider delivering an innovative approach in Scotland  
**Ravi Assi**
- 24 Healthy High Streets collaboration: An innovation challenge aiming to change the street environment to tackle childhood obesity  
**Jessica Attard**

Continued >

# Poster Presentations

- 25 Impact of a weight management programme on weight change and the associated dietary habits of non-pregnant women  
**Amanda Avery**
- 26 A service evaluation to observe whether a reduction in dietary fat scores and an increase in dietary fibre scores is associated with significant weight loss, utilising the Dietary Instrument of Nutrition Education (DINE), on a population from an Adult Weight Management Service (AWMS)  
**Grace Ayres**
- 27 Supporting people with a Learning Disability to access mainstream Weight Management Services  
**Sarah Bennett**
- 28 The role of social networks in weight management interventions during pregnancy and postpartum: A systematic review  
**Bernardette Bonello**
- 29 Economic evaluation of Roux-en-Y bariatric surgery for adults with severe obesity: Results from the NIHR HTA funded REBALANCE Project  
**Dwayne Boyers**
- 30 Economic evaluation of weight management for adults with severe obesity: Results from the NIHR HTA funded REBALANCE Project  
**Dwayne Boyers**
- 31 Targeted approach to weight management in pregnancy  
**Kay Branch**
- 32 Public comments to UK Soft Drink Industry Levy: Thematic analysis of reader comments on popular UK newspaper websites  
**Gemma Bridge**
- 33 The proof is in the pudding: Exploring the impact of different methods for measuring obesity on wage discrimination  
**Heather Brown**
- 34 How do Local Authorities deliver the National Child Measurement Programme?  
**Martin Ćadek**
- 35 The association of occupational noise exposure, obesity, and hypertension in young Chinese population  
**Akin Cayir**
- 36 Increased level of habitual physical activity improves body composition and exercise tolerance but has limited effect on cardio-metabolic function in middle-aged women  
**Sarah Charman**
- 37 Hyperemesis gravidarum after sleeve gastrectomy – Case report  
**Claudia Coelho**
- 38 Modelling the epidemiological impact and cost-effectiveness of Look AHEAD in the UK healthcare system: Results from the NIHR HTA funded REBALANCE Project  
**Emily Corbould**
- 39 The Food Newcastle Partnership: Developing a sustainable food city approach  
**Nicola Cowell**
- 40 A retrospective audit of inpatient management of patients with Type 1 Diabetes mellitus undergoing bariatric surgery  
**Thomas Crabtree**
- 41 Acceptability of the GLOWING pilot cluster RCT (Gestational Obesity Weight-management: Implementation of National Guidelines): A qualitative study of pregnant women's participation  
**Lisa Crowe**
- 42 Impact of parental perceptions of child obesity and Health-Related Quality of Life (HRQoL) on subsequent child weight outcomes  
**Laura Cutler**
- 43 Fasting PYY prior to a weight-loss programme is associated with weight-loss in people with obesity  
**Caroline Dalton**
- 44 Eating Behaviour, Alexithymia, and BMI in people with obesity  
**Caroline Dalton**
- 45 A review of clinical tools to assess nutritional intake in adults post bariatric surgery  
**Naomi Dindol**
- 46 Nutritional Food Labelling awareness in the community  
**Claire Duffy**
- 47 "Does he have a gene or something?" Children's emerging understandings of the mechanisms and consequences of body weight change: An interview study with 4- to 9-year-olds  
**Elizabeth Evans**
- 48 Acceptability studies of seaweed and alginate enriched cheeses and their influence on gastrointestinal wellbeing  
**Muna Fallatah**
- 49 Fit 4 the Future: A place-based, community led approach to improve wellbeing and address childhood obesity  
**Emma Gibson**
- 50 Exploring the association between food and alcohol behaviours in a student population and the acceptability of interventions to reduce health risk due to excess weight gain and alcohol consumption  
**Alice Graye**
- 51 A weight management programme for fathers of primary school aged children: Qualitative findings from Healthy Dads, Healthy Kids UK  
**Tania Griffin**
- 52 Eating out of home - more of and more often than we think  
**Anna Gryka**
- 53 Implementation of national screening guidelines for gestational diabetes mellitus (GDM): A national survey of maternity units in England  
**Nicola Heslehurst**
- 54 Cost-effective interventions for adults with severe obesity: Findings from the REBALANCE systematic review  
**Elisabet Jacobsen**

# Poster Presentations

- 55 The association of breakfast frequency and cardiovascular disease (CVD) risk factors among adolescents in Malaysia  
**Laura Johnson**
- 56 Psychologically supporting patients with complex obesity through their weight loss journey  
**Sandra Jumbé**
- 57 Size and shape of skinfold thickness and its association with cardiovascular disease specific mortality among NHANES III adult population  
**Kim Hankook**
- 58 Socioeconomic status shapes changes in appetite avidity from toddlerhood to early childhood  
**Alice Kininmonth**
- 59 Third-wave cognitive behaviour therapies for weight management: Systematic review and network meta-analysis  
**Emma Lawlor**
- 60 QRisk<sup>®</sup>2 heart age reduction following 10% body weight loss with Total Diet Replacement (TDR) and maintenance of 10% weight loss using meal replacements (MRP) for four years in elderly people with obesity and knee osteoarthritis: The Copenhagen experience  
**Anthony Leeds**
- 61 Associations between physical activity and body composition in the Fenland Cohort: An isocaloric analysis  
**Tim Lindsay**
- 62 Developing a core outcome set for lifestyle weight management interventions by expert consensus: Study protocol  
**Ruth Mackenzie**
- 63 Core outcome set for lifestyle weight management Interventions  
**Ruth Mackenzie**
- 64 Effects of overweight and obesity on systemic inflammation and WNT pathway-related markers of colorectal cancer risk  
**Fiona Malcomson**
- 65 Nutritional supplementation during pregnancy in women post bariatric surgery: A case series from a UK regional centre  
**Kate Maslin**
- 66 Acceptability and experience of midwives participating in an intervention to support the implementation of weight management in pregnancy guidelines into routine practice: The GLOWING pilot trial  
**Catherine McParlin**
- 67 Maternal obesity in the North East of England and associations with maternal socio-demographic indicators of inequality: A secondary analysis of 12,598 pregnancies  
**Catherine McParlin**
- 68 Sarcopenic obesity and insulin resistance: Application of novel body composition models  
**Ines Mendes**
- 69 Frequency of consuming home-cooked meals and potential advantages for diet and obesity: Cross-sectional analysis of a population-based cohort study  
**Susanna Mills**
- 70 Dietary approaches to the management of type 2 diabetes (DIAMOND): Protocol for a randomised feasibility trial  
**Elizabeth Morris**
- 71 Overweight and obesity in low income countries: A protocol for a systematic review and meta-analysis of treatment strategies  
**Caroline Nakachwa**
- 72 Maternal overweight and obesity amongst African immigrant women living in high income countries: A systematic review  
**Lem Ngongalah**
- 73 Overweight and obesity amongst children of African immigrant women living in high income countries: A systematic review  
**Lem Ngongalah**
- 74 The beliefs, knowledge, attitudes and experience of breastfeeding among African immigrant mothers residing in developed countries: A systematic review  
**Adefisayo Odeniyi**
- 75 A qualitative study of the breastfeeding and weaning practices of African immigrant mothers living in North East England  
**Adefisayo Odeniyi**
- 76 A qualitative study on the perspectives of health professionals on the breastfeeding and weaning practices of African immigrant mothers living in North East England  
**Adefisayo Odeniyi**
- 77 The development of guidelines for psychological support pre and post bariatric surgery  
**Jane Ogden**
- 78 An evaluation of the North Yorkshire tier 2 weight management programme for children and young people  
**Claire O'Malley**
- 79 The determinants of physical function in adults with severe obesity  
**Sam Orange**
- 80 Does food reward increase or decrease during weight management? A systematic review  
**Pauline Oustric**
- 81 The combined effect of the Mediterranean diet and physical activity on obesity: A systematic review and meta-analysis of randomised controlled trials  
**Angeliki Papadaki**
- 82 Discriminatory ability of anthropometric measurements of central fat distribution for prediction of carbohydrate intolerance in patients with normal fasting glucose: The DICAMANO Study  
**Belen Perez Pevida**
- 83 Changes in food intake and body composition following gastric bypass surgery  
**Tamsyn Redpath**
- 84 The development of the GLOWING intervention to facilitate community midwives' implementation of weight management guidelines  
**Lucia Rehackova**

Continued >



# Poster Presentations

- 85 Finding intermediate DNA methylation biomarkers of early life exposures and subsequent obesity  
**Natassia Robinson**
- 
- 86 Influence of parental healthy-eating attitudes and nutritional knowledge on nutritional adequacy and diet quality among preschoolers: The SENDO Project  
**Andrea Romanos Nanclares**
- 
- 87 The feasibility of screening for obesity-related co-morbidities in children/adolescents attending community weight management services  
**Vishal Sharma**
- 
- 88 Adiposity predicts low cardiorespiratory fitness in individuals with metabolic disease  
**Andrew Shaw**
- 
- 89 Observational prospective cohort study of reproductive health outcomes in women aged 18-45 undergoing metabolic surgery: Study protocol  
**Jill Shave**
- 
- 90 The impacts of a gastroileostomy rat model on glucagon-like peptide-1: A promising model for control of type 2 diabetes mellitus  
**Erfan Sheikhabaei**
- 
- 91 Gastroileostomy for weight reduction and lipid profile control: An experimental rat model  
**Erfan Sheikhabaei**
- 
- 92 REBALANCE: The acceptability of weight loss programmes for adults with BMI  $\geq 35\text{kg/m}^2$   
**Zoe Skea**
- 
- 93 Do maternal obesity services work: A comparative evaluation of local maternal obesity services in relation to pregnancy outcomes?  
**Hora Soltani**
- 
- 94 Action Weight: A Specialist Weight Management Service continues to flourish in a cardiac rehabilitation setting  
**Russell Tipson**
- 
- 95 Self-Compassion as a function of BMI: The rational for Compassion Focused Therapy in severe obesity  
**Ann Vincent**
- 
- 96 What is known about the beliefs, feelings and cultural norms of staff in primary care in discussing weight? A systematic review of qualitative studies  
**William Warr**
- 
- 97 Promoting healthy weight in pre-school: Co-production of an online training resource for multi-agency professionals  
**Paula Watson**
- 
- 98 Conspicuously invisible: The evidence gap regarding severe obesity (BMI  $\geq 40\text{ kg/m}^2$ )  
**Kath Williamson**
- 
- 99 Out-patient attendance does not predict weight loss after Roux-en-Y Gastric Bypass (RYGB)  
**Janine Wilton**
- 
- 100 Exploring alcohol and fast food purchases in young adults  
**Wendy Wrieden**
-



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# ASOCOM

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COLLABORATING CENTRE FOR OBESITY MANAGEMENT

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## ASO UK Centres for Obesity Management Network

The ASO has established a network of Centres for Obesity Management aimed at strengthening and advancing the evidence base, improving practice and influencing policy for the management of obesity in adults within the UK.

### Who should join?

The ASO UK Adult COMs network includes Tier 2, Tier 3 and Tier 4 adult obesity services delivered across a range of NHS and non NHS settings. Each centre will be involved in working towards improving the management of adults with obesity.

If you are interested in joining please contact the ASO Office at [ASOoffice@aso.org.uk](mailto:ASOoffice@aso.org.uk)

[www.aso.org.uk](http://www.aso.org.uk)

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ASSOCIATION FOR THE  
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## ASO Membership

Membership is open to obesity researchers, healthcare professionals, clinicians, scientists, public health practitioners, academics and students.

### Membership Benefits

- **Reduced delegate fees at the annual ASO UK Congress on Obesity (UKCO)**
- **Free attendance at ASO Network meeting and events**
- **Voting rights on the main policy issues of the ASO**
- **Affiliation to the European Association for the Study of Obesity (EASO) and the World Obesity Federation (WOF)**
- **Reduced delegate fees at EASO and WOF conference and events**
- **Discounted journal subscriptions to:**
  - Diabetes, Obesity and Metabolism
  - International Journal of Obesity (IJO)
  - International Journal of Paediatric Obesity
  - Obesity Reviews
- **Further benefits for student membership**

### Membership Fees

Membership is valid for 12 months from the date of joining.

- **Full Membership** – Annual Fee £60
- **Student Membership** – Annual Fee £30

Further information about the ASO and ASO membership can be found on the website at

[www.aso.org.uk](http://www.aso.org.uk)

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# EASO

European Association for the Study of Obesity



28 April - 01 May, 2019  
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# 6<sup>th</sup> UK Congress on Obesity

## SAVE THE DATE

### Leeds University

### September 12-13, 2019

#### Congress Theme

### Future thinking and Innovation in Obesity

#### Confirmed Speakers

**Dr Giles Yeo**, University of Cambridge – Innovations in genetics and obesity

**Professor Dame Theresa Marteau**, University of Cambridge -  
Behaviour change

**Dr Oli Williams**, University of Leicester -  
A fresh way to look at stigma and inequalities

**Professor Gary Frost**, Imperial College London - Advances in dietary assessment

**Professor John Wright**, Bradford Institute for Health Research -  
City collaboratory approaches



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