5th UK Congress on Obesity 2018

Newcastle University
Armstrong Building, Newcastle upon Tyne, UK

September 6-7, 2018
The gold-standard for ELISA-based obesity research

Official UK distributor of Mercodia ELISA kits

- Glucagon
- Glicentin
- Leptin
- Pro-Insulin
- Insulin
- and more!

Contact us for more information:
Tel: 01908 376376 / Fax: 01908 376375
Email: info@diagenics.co.uk
Website: www.diagenics.co.uk

@diagenicsltd facebook.com/diagenicsltd

diagenics
supporting biomedical research
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
LOOKING FOR WORLD-CLASS OBESITY EDUCATION?
Then you need to take…

SCOPE E-Learning offers 40+ modules on obesity management. It is an essential resource for all healthcare professionals treating patients with obesity. SCOPE offers...

**THE ESSENTIAL OBESITY COURSE**
SCOPE’s Core Learning Path comprises eight essential modules authored by leading obesity experts.

With topics ranging from how to raise the issue of obesity, to the details on how best to lose weight, this course contains the key information on obesity management.

**FREE SUPPLEMENTARY MODULES**
SCOPE also provides 30+ supplementary modules expanding on specific issues related to obesity.

All supplementary modules are available completely free of charge. Simply sign up with SCOPE to get started!

**PROFESSIONAL DEVELOPMENT**
SCOPE is the only internationally-recognised certification in obesity management.

By taking our e-learning course, you can become SCOPE Certified and be recognised worldwide for your obesity expertise.

GET STARTED TODAY!
Find out more at www.worldobesity.org/SCOPE
UKCO2018 is a SCOPE Accredited event earning you 4 SCOPE points which can be used towards your SCOPE Certification. SCOPE is the official education programme of the World Obesity Federation developed by global obesity experts to educate health professionals.

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

**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
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

Registration and Coffee
(08.30 - 09.45)
Enterance Foyer - Armstrong Building

Welcome Address
Dr Simon Williams, ASO Chair & Professor David Burn, PVC Faculty of Medical Sciences, Newcastle University
(09.45 - 10.15)
Boiler House

Plenary Lecture 1
Periconceptional parental nutrition and mHealth interventions to support health care
Professor Régine Steegers, Erasmus MC, The Netherlands
(10.15 - 11.00)
Boiler House

Prize talks: Best Practice Award and 'New to Research' Best Abstract Award
(11.00 - 11.30)
Boiler House

Symposia and Oral abstracts (11.30 - 13.00)

<table>
<thead>
<tr>
<th>ASO Symposium 1</th>
<th>Member-led Symposium 1</th>
<th>Ethicon Symposium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obesity and age-related disease</td>
<td>Are ‘systems’ and ‘evidence-based/programme-focused’ approaches contradictory or complementary in obesity prevention, and how shall we move forward?</td>
<td>Treatment and Prevention: Surgery for Obesity and Type II Diabetes</td>
</tr>
<tr>
<td>Room 1.06</td>
<td>Room 1.04</td>
<td>Boiler House</td>
</tr>
</tbody>
</table>

Lunch, Exhibition and Posters (including poster pitch sessions)
(13.00 - 14.30)
Kings Hall

ASO Networks Forum - All welcome
(14.00 - 14.30)
Boiler House

Plenary Lecture 2
Public health International/European life course obesity
Jo Jewell, WHO Europe
(14.30 - 15.15)
Boiler House

Symposia and Oral abstracts (15.15 - 16.45)

<table>
<thead>
<tr>
<th>ASO Symposium 2</th>
<th>Oral Abstracts 1</th>
<th>Member-led Symposium 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bariatric surgery and life stages</td>
<td>Health, Behaviour and Environment</td>
<td>Weight management and diet quality before and after pregnancy: Public perception, priority areas and what interventions work?</td>
</tr>
<tr>
<td>Boiler House</td>
<td>Room 1.04</td>
<td>Room 1.06</td>
</tr>
</tbody>
</table>

Coffee Break & Exhibition
(16.45 - 17.15)
Kings Hall

Plenary Lecture 3
Translational research in childhood obesity
Professor Ashley Adamson, Newcastle University
(17.15 - 18.00)
Boiler House

Welcome Reception Drinks - Poster Networking & Exhibition
Host: Professor Chris Day, Vice Chancellor & President, Newcastle University
(18.00 - 19.30)
Kings Hall, Armstrong Building

Friday 7th September

Plenary Lecture 4
Public Health England - National Perspective
Dr Alison Tedstone, Public Health England
(08.30 - 09.15)
Boiler House

Symposia and Oral Abstracts (09.15 - 10.45)

<table>
<thead>
<tr>
<th>ASO Symposium 3</th>
<th>Oral Abstracts 2</th>
<th>N8 AgriFood Symposium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular aspects of obesity</td>
<td>Management and Intervention</td>
<td>Food insecurity and obesity</td>
</tr>
<tr>
<td>Boiler House</td>
<td>Room 1.04</td>
<td>Room 1.06</td>
</tr>
</tbody>
</table>

Coffee Break & Exhibition
(10.45 - 11.15)
Kings Hall

Symposia and Oral Abstracts (11.15 - 12.45)

<table>
<thead>
<tr>
<th>ASO Symposium 4</th>
<th>Oral Abstracts 3</th>
<th>Member-led Symposium 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproduction and Intergeneration</td>
<td>Basic and Experimental Science</td>
<td>A whole systems approach to tackle obesity</td>
</tr>
<tr>
<td>Boiler House</td>
<td>Room 1.04</td>
<td>Room 1.06</td>
</tr>
</tbody>
</table>

ASO Annual General Meeting
(12.45 - 13.30)
Boiler House

Lunch, Exhibition and Posters (including poster pitch sessions)
(13.00 - 14.15)
Kings Hall

Fuse Sponsored Plenary Lecture
Obesity and Cancer - A duty of care or a duty of silence?
Professor Annie Anderson, Dundee University
(14.15 - 15.00)
Boiler House

Fuse Sponsored Best Abstract in Public Health Award
(15.00 - 15.15)
Boiler House

Obesity Empowerment Network session
(15.15 - 15.45)

Best Poster Award announcement and Closing Remarks
Dr Simon Williams, ASO Chair & Prof. Eugene Milne, Newcastle Director of Public Health
(15.45 - 16.00)
Boiler House

End of Programme
### Thursday 7th September

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.30 – 09.45</td>
<td>Registration and Coffee</td>
<td>Main Foyer</td>
</tr>
<tr>
<td>09.45 – 10.15</td>
<td>Welcome address</td>
<td>Boiler House</td>
</tr>
<tr>
<td>Dr Simon Williams, ASO Chair &amp; Professor David Burn, Newcastle University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.15 – 11.00</td>
<td>Plenary Lecture 1</td>
<td>Boiler House</td>
</tr>
<tr>
<td>Chair: Dr Simon Williams, ASO Chair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periconceptional parental nutrition and mHealth interventions to support health care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor Régine Steegers, Erasmus MC, The Netherlands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.00 – 11.30</td>
<td>Prize talks: Best Practice Award and ‘New to Research’ Best Abstract Award</td>
<td>Boiler House</td>
</tr>
<tr>
<td>Chair: Dr Maria Bryant, Leeds University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.00</td>
<td>Best Abstract Award</td>
<td></td>
</tr>
<tr>
<td>Investigating the association between pregnancy following bariatric surgery and adverse perinatal outcomes: A systematic review and meta-analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zainab Akhter, Newcastle University, Newcastle upon Tyne</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.15</td>
<td>Best Practice Award</td>
<td></td>
</tr>
<tr>
<td>The Spire Southampton ‘The Weigh Ahead’ Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.30 – 13.00</td>
<td>ASO Symposium 1 – Obesity and age-related disease</td>
<td>Room 1.06</td>
</tr>
<tr>
<td>Chair: Professor Graham Finlayson, Leeds University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.30</td>
<td>Ageing, obesity and cardiovascular health</td>
<td></td>
</tr>
<tr>
<td>Dr Mario Siervo, Newcastle University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.00</td>
<td>Oxygen, activity and the ageing brain; radical insights</td>
<td></td>
</tr>
<tr>
<td>Professor Damian Bailey, University of South Wales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.30</td>
<td>Weight loss and osteoarthritis</td>
<td></td>
</tr>
<tr>
<td>Professor Henning Bliddal, Copenhagen University, Denmark</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.30 – 13.00</td>
<td>Commercial Symposium – Ethicon Treatment and Prevention: Surgery for Obesity &amp; T2D</td>
<td>Boiler House</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science of obesity/T2D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr Barbara McGowan, Guys and St Thomas’ NHS Foundation Trust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evidence for surgery for obesity &amp; T2D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor Francesco Rubino, King’s College London</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathway success: pre, peri and post-operative (tier 3 setting)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr Carly Hughes, Fakenham Medical Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paul Stevenson, Patient Representative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.30 – 13.00</td>
<td>Member-led Symposium 1</td>
<td>Room 1.04</td>
</tr>
<tr>
<td>Chair: Dr Bai Li, University of Birmingham</td>
<td></td>
<td></td>
</tr>
<tr>
<td>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</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.30</td>
<td>Using a systems approach in community-based childhood obesity prevention</td>
<td></td>
</tr>
<tr>
<td>Professor Steven Allender, Deakin University, Australia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11.45 The international Healthy Life Trajectories Initiative (HeLTI) - intervention studies focusing on childhood obesity prevention  
Professor William Fraser, Sherbrooke University, Canada

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, University of Birmingham & Guangxi Medical University, China

12.15 Overview of childhood obesity prevention trials in the UK: Where next?  
Professor Peymane Adab, University of Birmingham

12.30 Chess, not chequers  
Professor Harry Rutter, London School of Hygiene & Tropical Medicine

12.45 Interactive discussion with delegate participation

13.00 – 14.30 Lunch, Exhibition and Posters  
Kings Hall

14.00 – 14.30 ASO Networks Forum – all welcome  
Boiler House

14.30 – 15.15 Plenary Lecture 2  
Boiler House

Chair: Dr Nicola Heslehurst, Newcastle University

European public health perspective of obesity throughout the life course  
Jo Jewell, WHO Regional Office for Europe

15.15 – 16.45 ASO Symposium 2 – Bariatric surgery and life stages  
Boiler House

Chair: Dr Barbara McGowan, Guys and St Thomas’ NHS Foundation Trust

15.15 Pregnancy following bariatric surgery  
Professor Roland Devlieger, KU Leuven, Belgium

15.45 Bariatric surgery in the adolescent  
Dr Andrew Beamish, Gothenburg University, Sweden

16.15 Bariatric surgery and aging  
Speaker to be announced

15.15 – 16.45 Oral Abstracts Session 1 – Health, Behaviour & Environment  
Room 1.04

Chair: Dr Angela Jones, Newcastle University

15.15 Can individuals be entirely responsible for a healthy body weight in the current food system?  
Natalie Savona, London School of Hygiene & Tropical Medicine, London

15.30 Quantifying the effect of screen advertising on dietary intake in children  
Simon Russell, University College London

15.45 The relationship between meal times, calorie consumption and weight status amongst children  
Sundus Mahdi, School of Health and Related Research (ScHARR), University of Sheffield

16.00 Diet and physical activity during and after adolescent pregnancy: A qualitative exploration with health care professionals and young women  
Grace Lucas, City, University of London

16.15 Mapping policy actions and risk factors for obesity onto the current prevention landscape  
Helen Croker, University College London

16.30 Gestational weight gain (GWG) and pregnancy outcomes in Pakistani and White British women: An analysis of data from the Born in Bradford (BiB) cohort  
Emma Slack, Newcastle University, Newcastle upon Tyne
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 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**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 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* |
### N8 AgriFood Symposium on food insecurity & obesity  
**Room 1.06**

**Chair:** Professor Jason Halford, University of Liverpool

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 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 |

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

**Chair:** Dr Emma Frew, University of Birmingham

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
</tr>
</thead>
</table>
| 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 Parrett, 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 |

### Coffee Break & Exhibition  
**Kings Hall**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.45</td>
<td>Coffee Break &amp; Exhibition</td>
</tr>
</tbody>
</table>

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

**Chair:** Dr Nicola Heslehurst, Newcastle University

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 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 |

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

**Chair:** Dr Laura McGowan, Queens University Belfast

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
</tr>
</thead>
</table>
| 11.15  | Effect of weight loss on mitochondrial defects in the ageing human colon  
Stella Breininger, 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 ≥35kg/m²: 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-Mrabeih, 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  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler House</td>
<td></td>
</tr>
</tbody>
</table>
**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**

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

---

**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 feticide, 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/](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.
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-centrecollaboration/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.
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 Akhter1, Judith Rankin1, Rute Vieira1, Lem Ngongalah1, Dries Ceulemans2, Roland Devlieger2, Roger Ackroyd3, Nicola Heslehurst1

1Institute of Health & Society, Newcastle University, Newcastle upon Tyne, United Kingdom. 2UZ Leuven, Leuven, Belgium. 3Northern 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.
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.


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 SPARcKs (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 Muir¹, Alice Graye¹, Stephanie Scott², Eileen Kaner¹, Wendy Wrieden¹, Ashley Adamson¹

¹Newcastle University, Newcastle upon Tyne, United Kingdom.
²Teesside 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.
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

Ethicon

Having made significant contributions to surgery for more than a century, the Johnson & Johnson Medical Devices Companies are in the business of reaching more patients and restoring more lives. The group represents the most comprehensive surgical technology and specialty solutions business in the world, offering an unparalleled breadth of products, services, programs and research and development capabilities directed at advancing patient care while delivering clinical and economic value to health care systems worldwide.

www.ethicon.com/emea/
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

Thursday September 6th 11.30-13.00
Room 1.04

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.
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. 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. Given obesity rates have almost tripled worldwide since 1975, 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. 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.

Lifestyle interventions to reduce the impact of obesity on maternal and child-health outcomes in the antenatal period have had mixed success; and intervening at this stage misses the opportunity to reduce risk in the early stages of pregnancy or before conception. Preconception care (PCC) is therefore increasingly recognised as vital across European countries within healthcare systems, 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. 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/m²) than men in England. 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 as a way of reaching an ethnically-diverse UK population.
References:


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
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.
Ethicon

Having made significant contributions to surgery for more than a century, the Johnson & Johnson Medical Devices Companies are in the business of reaching more patients and restoring more lives. The group represents the most comprehensive surgical technology and specialty solutions business in the world, offering an unparalleled breadth of products, services, programs and research and development capabilities directed at advancing patient care while delivering clinical and economic value to health care systems worldwide.

www.ethicon.com/emea/

InBody

InBody - Body Composition Analyser.

Global leaders in body composition analysis with established subsidiaries in USA, Japan, China, Europe (UK, Netherlands), India and Malaysia, alongside a global network of partners in over 70 countries. Today, InBody continues to spread the importance of body composition as opposed to simply monitoring your weight. InBody body composition analysis creates an accurate and detailed view of the body, allowing healthcare and fitness professionals to tailor personalised diet and exercise programs for their patients and clients.

InBody is currently used in various medical fields, including Obesity Management, Diabetes, Nephrology and Cardiology, as well as medical research. Building on our current strength and stability in the global body composition market, InBody has proven itself to be revolutionising the field of body composition analysis and continues to be an indispensable partner to healthcare and fitness professionals.

InBody body composition analysis is essential to gain a complete view of health and weight as traditional methods of assessing health, such as BMI, can be misleading. Going beyond your weight, body composition analysis breaks down your body into four components: fat, lean body mass, minerals, and body water.

By producing this detailed view of body composition, obesity and weight loss can be managed effectively. Producing an accurate view of percent body fat, visceral fat level and segmental fat analysis allows a more personalised approach to weight loss management than simply using weight and BMI. InBody provides a quick, easy and precise method to See What You're Made Of. Tel. 01530 569620 / Email: uk@inbody.com uk.inbody.com

Metabolic Health Solutions Ltd

Metabolic Health Solutions (MHS) - a health solutions company integrating technology, analytics, and healthcare management providing personalised care for the growing global obesity epidemic and associated chronic diseases. MHS is an ISO13485 company with CE Certification for its lead technology ECAL.

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.

MHS Clinics - an integrated evidence-based clinical weight management programme, combining measurement technologies, for metabolism, body composition and heart rate variability with MHS CLINICS protocols delivering a personalised, validated, nutrition and activity plan. MHS’s CLINICS elements are currently being integrated within a SAAS ecosystem, to provide a robust effective metabolic management platform.

ENABLE - MHS is developing an integrated nutrition portal and meal planning app, underpinned by a cloud-based informatics and AI system, capturing real time physiology, meal and activity data. At scale this will create significant new customer segments, with food, pharmaceutical and nutraceutical industries all expressing interest in customised data. ENABLE will be built using native google FIHR standard allowing it to be plugged into health data systems across the globe.

www.metabolichealthsolutions.org

Novo Nordisk

Novo Nordisk is a global healthcare company with 95 years of innovation and leadership in diabetes care. This heritage has given us experience and capabilities that also enable us to help people defeat obesity, haemophilia, growth disorders and other serious chronic diseases.

Headquartered in Denmark, Novo Nordisk employs approximately 42,700 people in 79 countries and markets its products in more than 170 countries. Novo Nordisk’s B shares are listed on Nasdaq Copenhagen (Novo-B). Its ADRs are listed on the New York Stock Exchange (NVO). For more information, visit novonordisk.co.uk
Sponsors and Exhibitors

seca

seca, the global leader in medical measuring and weighing, offers healthcare providers advanced wireless technology and system solutions that go beyond height, weight and BMI. Based on over 175 years of quality German engineering, seca medical devices set the standard for innovation, design and reliability. On every continent, doctors and nurses in medical practices, hospitals and nursing homes rely on the high quality of seca’s medical scales and measuring systems.

**seca mBCA for medical body composition analysis** - The sophisticated technology delivers reliable and reproducible medical data and stores the results. The seca mBCA 525 is ideal for mobile use by nutritionists and dietitians, clinically validated against the scientific gold standard for body composition: MRI, DEXA, Bod Pod, D2O, NaBr.

**seca 287 ultrasonic wireless measuring station** offers fully automatic measuring of height, weight, BMI and was designed to be user-friendly for convenient use. Automated voice guidance makes it easy for the patient to use without any assistance from the nursing staff. Digital ultrasound technology ensures for precise height measurements, with constant auto-calibration. In addition, the touch-screen display keylock function ensures that you can always rely on an accurate measuring process.

For more detailed information please contact: 0121 643 9349 sales@seca.co.uk www.uk.secashop.com

Slimming World

Slimming World is the UK’s most advanced weight management organisation, helping more than 900,000 members lose weight every week in over 18,000 groups around the UK and Ireland, run by a network of 4,800 trained consultants working in their local communities.

Each year we influence over 3 million people to eat more healthily and adopt a healthier, more active lifestyle. Working with primary care since 2000, Slimming World pioneered a subsidised referral programme that allows health practitioners to offer patients membership of one of our weekly support groups.

We have an active research programme including both internal and collaborative research to further the understanding of obesity and effective weight management, as well as regular evaluation of the effectiveness of our service to support the continued development of our programme and to provide the best support for our members.

For further information on Slimming World’s approach and our extensive evidence base please visit:
www.slimmingworld.co.uk/health
www.slimmingworld.co.uk/research-portfolio
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 Neuromuscular 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.
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 Frederiksborg, 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 unrecognized 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.
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 KULeuven 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. His 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 the UK and families with children are particularly vulnerable. 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.

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.
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. Alongside important effects of maternal dysglycemia, we found similar associations in the Singapore GUSTO cohort. 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. 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, 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.

1. Robinson SM, AJCN 2015;101:368-75,
2. Aris IM, IJO 2017;07:28,
3. Fleming TP, Lancet 2018;epub Apr 17,
4. Lillycrop K, EBioMedicine 2017;18:60-72,

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.


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.
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 overconserve 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-sectional, 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.


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.
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 periconception 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 through 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/m². 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 VLDL-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
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.
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 WAItE
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 ≥35kg/m2): 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 >
<table>
<thead>
<tr>
<th>Poster Presentations</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
</tr>
<tr>
<td><strong>Amanda Avery</strong></td>
</tr>
<tr>
<td>26</td>
</tr>
<tr>
<td><strong>Grace Ayres</strong></td>
</tr>
<tr>
<td>27</td>
</tr>
<tr>
<td><strong>Sarah Bennett</strong></td>
</tr>
<tr>
<td>28</td>
</tr>
<tr>
<td><strong>Bernardette Bonello</strong></td>
</tr>
<tr>
<td>29</td>
</tr>
<tr>
<td><strong>Dwayne Boyers</strong></td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td><strong>Dwayne Boyers</strong></td>
</tr>
<tr>
<td>31</td>
</tr>
<tr>
<td><strong>Kay Branch</strong></td>
</tr>
<tr>
<td>32</td>
</tr>
<tr>
<td><strong>Gemma Bridge</strong></td>
</tr>
<tr>
<td>33</td>
</tr>
<tr>
<td><strong>Heather Brown</strong></td>
</tr>
<tr>
<td>34</td>
</tr>
<tr>
<td><strong>Martin Čadek</strong></td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td><strong>Akin Cayir</strong></td>
</tr>
<tr>
<td>36</td>
</tr>
<tr>
<td><strong>Sarah Charman</strong></td>
</tr>
<tr>
<td>37</td>
</tr>
<tr>
<td><strong>Claudia Coelho</strong></td>
</tr>
<tr>
<td>38</td>
</tr>
<tr>
<td><strong>Emily Corbould</strong></td>
</tr>
<tr>
<td>39</td>
</tr>
<tr>
<td><strong>Nicola Cowell</strong></td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td><strong>Thomas Crabtree</strong></td>
</tr>
<tr>
<td>41</td>
</tr>
<tr>
<td><strong>Lisa Crowe</strong></td>
</tr>
<tr>
<td>42</td>
</tr>
<tr>
<td><strong>Laura Cutler</strong></td>
</tr>
<tr>
<td>43</td>
</tr>
<tr>
<td><strong>Caroline Dalton</strong></td>
</tr>
<tr>
<td>44</td>
</tr>
<tr>
<td><strong>Caroline Dalton</strong></td>
</tr>
<tr>
<td>45</td>
</tr>
<tr>
<td><strong>Naomi Dindol</strong></td>
</tr>
<tr>
<td>46</td>
</tr>
<tr>
<td><strong>Claire Duffy</strong></td>
</tr>
<tr>
<td>47</td>
</tr>
<tr>
<td><strong>Elizabeth Evans</strong></td>
</tr>
<tr>
<td>48</td>
</tr>
<tr>
<td><strong>Muna Fallatah</strong></td>
</tr>
<tr>
<td>49</td>
</tr>
<tr>
<td><strong>Emma Gibson</strong></td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td><strong>Alice Graye</strong></td>
</tr>
<tr>
<td>51</td>
</tr>
<tr>
<td><strong>Tania Griffin</strong></td>
</tr>
<tr>
<td>52</td>
</tr>
<tr>
<td><strong>Anna Gryka</strong></td>
</tr>
<tr>
<td>53</td>
</tr>
<tr>
<td><strong>Nicola Heslehurst</strong></td>
</tr>
<tr>
<td>54</td>
</tr>
<tr>
<td><strong>Elisabet Jacobsen</strong></td>
</tr>
</tbody>
</table>
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 Jumbe

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®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 Malcolmson

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 McPartin

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 McPartin

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
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 Shawe

90 The impacts of a gastroileostomy rat model on glucagon-like peptide-1: A promising model for control of type 2 diabetes mellitus
Erfan Sheikhbahaei

91 Gastroileostomy for weight reduction and lipid profile control: An experimental rat model
Erfan Sheikhbahaei

92 REBALANCE: The acceptability of weight loss programmes for adults with BMI ≥35kg/m²
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 ≥40 kg/m²)
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
Introducing ECAL – Indirect Calorimeter
Research – Education - Clinical use

• Light weight and portable
• Affordable
• Easy to use
• Comprehensive and accessible datasets
• Designed specifically to assess resting energy production and metabolism
• Certified medical device, CE and ISO13485

For more information please contact
Metabolic Health Solutions UK Ltd
Office 122, 20 Winchcome Street.
Cheltenham, Glos, GL52 2LY
peter.robins@metabolichealthsolutions.co.uk
Quick, precise, and clinically validated.

Our label: precision. Our achievement: gold standard. Our expertise: the valid analysis of fat, muscle mass, and water. Our objective: optimal support for diagnosis and therapy control. Our means: impressive precision, intuitive operation, and a measurement time of only 17 seconds. Consequently: the seca mBCA.

seca ltd. • 40 Barn Street • Birmingham • B5 5QB, England
Phone 0121 643 9549 • Fax 0121 633 3403 • info.uk@seca.com • mBCA.seca.com

How can you fight it, if you can’t measure it?

Offering an integrated approach combining expertise in the psychology of weight management, diet and physical activity, to provide an effective and practical solution to weight management.

Slimming World have an active research programme furthering the investigation and advancement of:

- highly effective weight loss and management solutions
- understanding the psychological aspects of weight management
- effective facilitation of behaviour change
- translating evidence and understanding into practical, accessible and scalable solutions

For more information on our approach and our extensive evidence base, please visit:

www.slimmingworld.co.uk/health
www.slimmingworld.co.uk/research-portfolio
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

www.aso.org.uk

A UK company limited by guarantee – Registered in England & Wales No:4796449 – Registered Charity No 1100648
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

A UK company limited by guarantee – Registered in England & Wales No:4796449 – Registered Charity No 1100648
26th European Congress on Obesity

28 April - 01 May, 2019
Scottish Event Campus (SEC)
Glasgow, Scotland

www.eco2019.org
6th 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