OBESITY

Science, medicine and society

A complete advanced undergraduate/graduate course with:

- 19 online lectures by leading authorities
- Resources for workshops, tutorials, journal clubs, projects and seminars
- Suggested exam questions and model answers
- Multiple choice questions and answers
- Recommended reading: original papers and review articles

View the content of the course on our website: hstalks.com/Obesity
View our in-depth HSTalks:
hstalks.com/CoursesBrochure
Course module with video lectures, material for tutorials (case studies, projects, workshops and recommended reading), multiple choice questions and suggested exam questions with model answers. A comprehensive course on a subject of major importance.

The material is especially designed to support research and teaching staff when presenting a comprehensive course at graduate or advanced undergraduate level with seminars, journal clubs, laboratory exercises, data workshops, online tests and end of course examinations.

The course is also suitable for continuing professional development/education programmes.

This brochure provides brief details of the complete module, including the lectures, lecturers and additional learning material.

Who is the course for?

The comprehensive material is especially suitable for teachers and researchers who wish to offer courses on specialist subjects to small groups of students (or even a single student) when it is not possible to justify the time and expense of preparing, internally, a course or there is not the range of expertise available locally to do so. All the lecturers are highly regarded experts in their fields and few institutions are likely to have a comprehensive group of faculty members with a similar range of experience and knowledge of the subject matter.

The course material is designed to be used by local faculty and staff acting as course directors, tutors and mentors.

The material is suitable for flipped classroom, blended, team and distance learning courses.

New courses are time consuming and expensive to create. These modules cut both the cost and the time, enabling a wider range of options to be offered on specialist topics. Graduate students can take the courses, mentored by their supervisors, while pursuing their research.

Ideal for Virtual Learning Environments (VLE)

All course material, including the additional learning material, is arranged in a standard format that allows easy embedding into virtual learning environments such as Moodle, Blackboard or your institute’s own system.

Supporting learning and teaching goals

In an age when faculty and staff face ever greater demands on budgets and time, these lectures and additional learning material will be of great help when preparing and delivering graduate and advanced undergraduate courses.
The prevalence of obesity is rising in both developed and non-developed countries across the globe. This constitutes a major public health problem with significant social and fiscal implications: obesity has a range of co-morbidities including type 2 diabetes and its complications, respiratory problems including sleep apnoea and asthma, and osteoarthritis. It is also frequently associated with mental distress, including depression. It is easy to dismiss obesity as a condition caused by some combination of greed, laziness and poor self-control, but in fact, when severe, it is a very complex medical condition that is highly intractable to current treatment – in many cases, the only really effective therapy is surgery. In this series of lectures we take an in-depth look at this very complex disease, considering its pathogenesis, co-morbidities, therapeutic approaches and public health measures. Our objective is to give course participants an up-to-date and well-rounded view of the topic, including consideration of future prospects for prevention and treatment of this chronic, progressive, disfiguring and disabling condition.

The course module is designed for:

This course is suitable for advanced degree students and those currently in the later part of their undergraduate degree, as well as researchers and practitioners in the field of obesity and related areas.

Editor: Prof. Alexandra Blakemore
Imperial College London, UK

Editor: Dr. Andrew Walley
St. George’s University of London, UK
Course Lectures

- **What is obesity - epidemiology**
  - Prof. Alexandra Blakemore
    - Imperial College London, UK

- **What is obesity - definition**
  - Dr. Andrew Walley
    - Institute of Medical & Biomedical Education (IMBE), St. George's University of London, UK

- **What is obesity - physiology**
  - Prof. Alexandra Blakemore
    - Imperial College London, UK

- **Obesity: the role of fetal programming**
  - Dr. Jess Buxton
    - University College London, UK

- **Childhood obesity**
  - Dr. Mars Skae
    - Royal Manchester Children's Hospital, UK

- **Dysregulated eating behaviour, eating disorders and obesity**
  - Prof. Ulrike Schmidt
    - King's College London, UK

- **Adipose tissue biology**
  - Dr. Constantinos Christodoulides
    - Oxford University, UK

- **Diabetes, obesity and mechanisms of remission after bariatric surgery**
  - Prof. Tricia Tan
    - Imperial College Healthcare NHS Trust, UK

- **Obesity and asthma**
  - Prof. Anne Dixon
    - University of Vermont, USA

- **Obesity and women’s health**
  - Dr. Thomas Barber
    - University of Warwick, UK
19 specially recorded, animated lectures by world leading authorities

**Obesity and psychology**

Dr. Samantha Scholtz  
Imperial College London,  
West London Mental Health Trust, UK

**Hormones, feeding and animal models**

Prof. Carel le Roux  
University College Dublin, Ireland

**Obesity and the hedonic response**

Dr. Tony Goldstone  
Imperial College London, UK

**Genetics of monogenic obesity**

Prof. Dr. Johannes Hebebrand  
University Hospital Essen, Germany

Prof. Dr. Anke Hinney  
University Hospital Essen, Germany

**Genetic epidemiology of obesity**

Prof. Ruth Loos  
Icahn School of Medicine at Mount Sinai, USA

**Metabolic communication in development and control of obesity**

Prof. Elaine Holmes  
Imperial College London, UK

**Obesity management: lifestyle and bariatric surgery**

Prof. John Wilding  
University of Liverpool, UK

**Obesity, present and future therapies**

Prof. Sir Stephen Bloom  
Imperial College London, UK

**Towards personalised medicine in obesity**

Prof. Alexandra Blakemore  
Imperial College London, UK
Examples of Course Materials

For each lecture, the course offers tutorials, workshops, recommended reading, multiple-choice questions, and suggested exam questions with model answers.

**HST Moodle**

**Tutorial: Obesity: the role of fetal programming**

Lecturer: Dr. Jess Buxton, University College London, UK

In developed nations, up to 30% of all women are now obese. There is increasing evidence to support a role for fetal programming in the link between maternal obesity and the cardiovascular and metabolic health of adult offspring (reviewed by Gaillard, 2015). These effects include an increased risk of obesity in the children of obese mothers, raising the prospect of a ‘vicious cycle’ of excess adiposity and its harmful effects being passed from one generation to the next (Boone-Heinonen et al., 2015).

Read the two articles below and discuss, focussing on the following:

1. What kinds of studies have been carried out – or could be carried out in future – that might help disentangle the effects of fetal programming from those of shared genetic and environmental factors on the transmission of obesity risk from a mother to her offspring?
2. What are the relative strengths of these different types of studies?
3. What interventions might help to break the ‘vicious cycle’ of obesity in future generations?
4. What about fathers?

**Exam Questions and Model Answers**

**Question 1**

Not yet answered
Marked out of 1.00
Flag question
Edit question

What is the focus of the DOHaD field of research? Describe how studies of cardiometabolic disease risk in individuals, conceived during the Dutch Hunger Winter famine of 1944-1945, have contributed to the DOHaD field.

**Multiple-choice questions and answers**

**Question 4**

Not yet answered
Marked out of 1.00
Flag question
Edit question

The increased risk of obesity and type 2 diabetes in the yellow agouti mouse model is associated with:

Select one:
- a) Decreased DNA methylation levels at the yellow fur colour version of the agouti gene
- b) An excess of folic acid in the mother’s diet during pregnancy
- c) An excess of folic acid in the mouse’s diet during weaning
- d) Increased DNA methylation levels at the yellow fur colour version of the agouti gene
- e) A lack of folic acid in the mouse’s diet during weaning.

**Recommended Review Articles**

How to access the course

Extracts of lectures can be viewed at hstalks.com/biosci/. The full length lectures can be viewed by all members of universities, colleges and medical schools currently subscribing to The Biomedical & Life Sciences Collection. Institutions that do not subscribe to The Biomedical & Life Sciences Collection may take annual licenses at US $2,000 covering an unlimited number of students.

Full supporting material: video lectures, material for tutorials (case studies, projects, workshops and recommended reading), multiple choice questions and suggested exam questions with model answers are provided to faculty members of subscribers.

To subscribe, obtain additional information and/or the additional learning material contact Dr. Eyal Kalie at eyalk@hstalks.com.

Upload to your VLE

The complete course (lectures and additional learning material) can be loaded into Moodle, Blackboard and other virtual learning environments.
HSTalks provides access to world class lectures by leading authorities from around the globe, in one online resource.

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HSTalks
hstalks.com

Email: sales@hstalks.com
Tel: +44 207 164 6721

Corporate Headquarters
Henry Stewart Talks Ltd.
Russell House 28-30 Little Russell Street
London WC1A 2HN, United Kingdom
Company Registration Number: 04833828
(England and Wales)

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