



## UCL POLICY BRIEFING – JUNE 2014

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### KEY FINDINGS

- **Other models of obesity** beyond 'energy in versus energy out' are needed
- **Developmental and social factors** are important in considering how to tackle obesity
- **Education** has been shown to help tackle obesity in women
- The **built environment can support ways of tackling obesity**, but this also requires people to make choices about being more active
- There is a need for policy to take better account of the whole body of research on obesity, and for **improved understanding of what further knowledge and evidence is required to develop effective policy.**

## Obesity: What is making the world fat? And what can we do?

### Introduction

This briefing note provides a summary of the discussions at a UCL Grand Challenge of Global Health seminar on obesity. The discussions focused on different models for understanding obesity; the impact of development on obesity; the impact on education in tackling obesity in middle-income countries; how the built environment can help to tackle obesity; and how research on obesity can be translated into effective policy.

### Models of obesity

The current typical model of obesity is essentially an energy balance equation which views the body as a system of energy input and output. This views obesity as the result of overeating and lack of exercise, making it a problem of personal control. However, **the model of 'energy in versus energy' out is too simple to explain obesity**, which is a complex and systemic disease, or why it is increasing worldwide. Nor does it explain why malnutrition and obesity can co-exist. Alternative approaches to obesity take account of development and social factors.

### Developmental Origins of Obesity

A developmental model of obesity views energy balance as a symptom of obesity. It focuses on how development can affect metabolism through perturbations such as high insulin levels and reduced sleep, and how this contributes to obesity. For example:

- children with low birth weight experience 'catch up growth' which makes them likely to weigh more than their peers and develop insulin resistance
- mothers with a low birth weight are 13 times more likely to have obese offspring: so maternal factors are also linked to obesity.

It is important to recognise that body weight is affected not only by diet and physical exercise but also by those (often trans-generational) **developmental effects which impact metabolism.**

## Insights from low- and middle-income countries

In low- and middle-income countries, problems of obesity and malnutrition co-existing (eg in Egypt, where stunted children live with obese mothers). **Obesity can thus be viewed as a problem of the social relations in society.** These change as countries develop and affect obesity differently: wealthier people have a higher rate of obesity in less economically developed countries and a lower rate of obesity in more economically developed countries.

Research in middle income countries (such as Egypt, Peru, Colombia, and Jordan) has shown **education can help to protect women against obesity.** One study in Egypt showed that, while wealth is correlated with obesity in women, wealthier women with high levels of formal education are less likely to be obese. Whilst this correlation does not necessarily imply causation, public health systems in middle income countries are not sufficiently developed to deal with the influx of high calorie food and aggressive marketing. Formal education can therefore help to counter obesity.

## Addressing obesity through the built environment

The built environment offers three scales of interventions to combat obesity:

- **Active cities:** this involves designing cities to make people more active – for example, advances in information technology, such as access to bus times can make people more likely to use public transport.
- **Active buildings:** changing the outside environment in cities is not enough when people spend 90% of their lives in buildings. A UCL study on Active Buildings<sup>1</sup> is exploring how the spatial layout of office buildings influence workers' activities
- **Active furniture:** such as sit-stand desks and treadmill desks. Furniture is relatively quick and cheap to change, unlike cities and buildings.

However, whilst the built environment can provide ways of helping to reduce obesity, people still have to choose to engage in active behaviour and take advantage of these options.

## Translating obesity research into policy

Researchers have tended to present policymakers with a highly complex picture of obesity. This makes translating evidence into policy very challenging. Policymakers may understand many of the concepts in research on obesity, but then can draw the wrong conclusions – for example an understanding of the importance of social structure in obesity can turn into blaming the poor for being obese.

There are also problems arising from researchers focusing on communicating their own research to policymakers without seeking to connect to the overall body of research on obesity in order to inform the best possible policy response. This has contributed to weak policy responses. The evidence on obesity points to the need for systemic change, but even the significant amount of funding that has been committed by the government will be insufficient to achieve this. **Researchers and policymakers should focus more on what evidence is most useful to enable the necessary policy responses.**

There is also a role for the food and retail sector in working in partnership with researchers, policymakers and others to effect change – for example, through projects to educate schoolchildren on healthy eating, designing shops to promote healthy eating, or developing healthier food alternatives.

### BACKGROUND

Non-Communicable Diseases – sometimes referred to as “chronic diseases” – account for more deaths than any other cause worldwide. Eighty per cent of these deaths occur in the world's poorest countries. NCDs include heart disease, lung disease, diabetes, cancer and mental illness. The Grand Challenge of Global Health NCD season is a series of events and exhibitions to highlight the global rise of NCDs which aim to challenge, provoke and inform. Each symposium is accompanied by a policy briefing summarising the key points of discussion.

#### Speakers

- **Amina Aitsi-Selmi** – Fellow, National Institute of Clinical Excellence
- **Matt Atkinson** – Chief Marketing Officer, Tesco
- **Tim Lang** – Professor of Food Policy, City University
- **Alexi Marmot** – Professor of Facility and Environment Management, UCL
- **Jonathan Wells** – Professor of Anthropology and Paediatric Nutrition, UCL

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