

## OBESITY AND MODERN HUMANS Diet, Lifestyle or simply 'in our genes'?

Professor Steve O'Rahilly, Cambridge Institute for Medical Research  
Department of Clinical Biochemistry, University of Cambridge

7.30 p.m., Monday 8<sup>th</sup> May, 2006

The Wolfson Lecture Theatre, Churchill College, Storey's Way, Cambridge

### About the lecture (Professor O'Rahilly writes.....)

Obesity is widely recognized to be a serious medical problem resulting in myriad distressing illnesses and shortening life expectancy. Uniquely, however, its sufferers are frequently stigmatized, derided and subject to social and economic discrimination. There is a widespread tacit assumption shared not only by the general public but also the medical profession that obesity is largely a moral failing, albeit one with biomedical consequences. This has interesting parallels with the public perception of causation of other illnesses in past times, e.g. epilepsy as a result of demonic possession and tuberculosis as a result of an artistic temperament. The past decade has seen an explosion of information regarding the mechanisms whereby body weight is controlled in mammalian species including humans. We have been able to establish that the molecules which control the process of energy balance in the more primitive species are also centrally involved in the control of those processes in humans and those defects in those molecular processes result in severe obesity in humans. Interestingly, the majority of those defects thus far determined affect the ability of a relatively primitive part of the brain, the hypothalamus, to sense satiation. It is highly likely that genetic variation involving the function or expression of those molecules underlie differential susceptibility of particular individuals to obesity under different environmental circumstances. The application of reductionist science to the problem of obesity provides the hope that our attitudes to this medical problem will emerge from the dark ages and that people with severe obesity will not only obtain useful therapy based on the knowledge of the causation of their problem but also will obtain the sympathy for their condition that is commonly afforded to other life threatening diseases.

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**About the Speaker** (Professor Stephen O’Rahilly MD FRS;  
Professor of Clinical Biochemistry & Medicine, University of Cambridge)

Stephen O’Rahilly graduated in Medicine from University College Dublin in 1981 followed by an internship at the Mater Hospital. From 1982-1991 he undertook postgraduate training in general medicine and endocrinology and in diabetes research in London, Oxford and Harvard. In 1991 he established his own laboratory in University of Cambridge at Addenbrooke’s Hospital where he was a Wellcome Trust Senior Fellow in Clinical Science. In 1996 he was appointed to a newly created Chair of Metabolic Medicine and in 2002 was appointed to the Chair of Clinical Biochemistry and Medicine at the University of Cambridge. His research has been concerned with the elucidation of the basic causes of Type 2 diabetes and obesity at a molecular level. His work has uncovered several previously unrecognised genetic causes of these diseases including some that are amenable to specific treatment. He has won many awards for his work including the Society for Endocrinology Medal, the Graham Bull Prize of the Royal College of Physicians of London, the European Journal of Endocrinology Prize, the Novartis International Award for Clinical Research in Diabetes, the Heinrich Wieland Prize and the Rolf Luft Award. He was elected to the Royal Society in 2003. While maintaining a large research laboratory he continues to be actively involved in clinical practice and the teaching of clinical medical students.

### **The Organising Secretary adds.....**

Obesity is a growing scourge; basically, in most cases, it comes down to taking in more calories than you need. But there are exceptions, and what I find particularly interesting is the possibility of understanding the molecular mechanisms behind satiety, and how this may be achieved without overeating.

I am mindful of cutting out the biscuits from our pre-prandial coffee, on this occasion.....

**Coffee (and maybe biscuits) available**, as usual, in the foyer outside the lecture theatre from ~7.00 p.m.

**As is now our custom, we shall charge non-members a nominal sum for entry.** These provide a valuable contribution to CSAR funds.

Richard Freeman  
CSAR Organising Secretary