

EDITOR'S NOTE

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The topic of adaptive thermogenesis with variations in body weight from a physiologic 'setpoint' has been a topic of significant debate in the scientific literature. The paper by

Major *et al.*, in this issue provoked strongly conflicting reviews regarding its conclusions. The Editors invited Dr Abdul Dulloo, an expert in the field, to comment on the paper. We welcome comments regarding this debate as Letters to the Editors.

RL Atkinson and I Macdonald

EDITORIAL

Suppressed thermogenesis as a cause for resistance to slimming and obesity rebound: adaptation or illusion?

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According to Hippocrates (400 BC), the obese should '*eat less and exercise more*'. This ancient prescription has never ceased to be the cornerstone approach in the treatment of obesity, and will remain so for the foreseeable future despite its well-documented failures. Indeed, several long-term follow-up studies conducted over the past decades have repeatedly demonstrated that the overwhelming majority (>90%) of patients who manage to lose weight will have returned close to their starting weight within 1–5 years – findings which are encapsulated in a commentary made by Albert Stunkard¹ some 50 years ago, to quote:

Most obese persons will not stay in treatment for obesity. Of those who stay in treatment, most will not lose weight and of those who do lose weight, most will regain it.

Yet every year, scores of millions of people, who are fatter than they want to be, attempt to lose weight on some form of diet and/or exercise therapy, encouraged by their families and friends, health professionals, media that promote a slim image, and a diet-industry that in the US and Europe alone has an annual turnover in excess of \$150 billion. At the same time, those who have tried dieting with or without exercise, and who have experienced that it does not work, will keep asking the same old questions: 'Why is weight loss so

difficult to achieve? Why is maintaining the lost weight an even greater challenge?'

Self-regulatory failure

According to the classical theory, resistance to slimming and obesity recidivism occur because the patients sooner or later revert back to the same lifestyle of 'gluttony and sloth' that made them obese in the first place. Psychologists, however, prefer an explanatory mechanism that is inferred by work on dietary restraint, and which centres upon terms like 'disinhibition' or 'loss of inhibition' to describe self-regulatory failure.² Such periodic disinhibition by restrained eaters has been argued as a laboratory analogue of binge eating (i.e. periods of dietary restriction alternating with episodes of uncontrolled overeating) – a notion that is strongly supported by several prospective studies in adolescent girls and young adults.² These studies have indicated that moderate dieters are two to five times more likely than their non-dieting peers to develop an eating disorder, and that dieting, restrained eating or exercise for weight control actually predict weight gain. Whether these findings can be interpreted as dieting (or exercise) will facilitate subsequent weight gain – or to put it bluntly: 'Dieting makes you fat'³ – is debatable.^{2–4} It is clear, however, that the willpower to sustain dieting/exercise therapy that prevailed during the process of weight loss withers away in the face of environmental influences that promote obesity. In more clinical