

## Obesity

### Position statement on the treatment of obesity in the diabetes clinic



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Since the launch of *Diabetes Digest*, the main aim of my commentary has been to raise awareness among the diabetes community of the importance of obesity, and related problems, in combating type 2 diabetes. 'It's the obesity, stupid,' is a phrase that has sometimes jumped to mind.

However, in terms of adequately resourced weight-control strategies with skilled and motivated staff, few diabetes clinics in the UK, in either primary or secondary care, have services of any quality or efficacy to offer overweight and obese people with type 2

diabetes. The recent joint position statement of the American Diabetes Association, the North American Association for the Study of Obesity and the American Society for Clinical Nutrition reviews the central role of weight management in preventing and treating type 2 diabetes. It outlines the principal dietary and physical activity strategies currently recommended, also emphasising the key role of behavioural change.

Although not all of the suggestions are yet strongly evidence-based, they represent sound advice from a country 10 years ahead of the UK in its diabetes epidemic. This succinct statement is a timely reminder of the basic aims and priorities in treating people with type 2 diabetes, and should prompt us all to reflect on how we can improve our own practices.

### AMERICAN JOURNAL OF CLINICAL NUTRITION



### Weight loss and more exercise are still best practice

Readability	✓✓✓✓✓
Applicability to practice	✓✓✓✓✓
WOW! factor	✓✓

**1** The American Diabetes Association, the American Society for Clinical Nutrition and the North American Association for the Study of Obesity issued a statement about using lifestyle modification in the management and prevention of type 2 diabetes.

**2** Numbers of people with diabetes in the USA are rising in epidemic proportions.

**3** Obesity and being overweight are risk factors for the development of type 2 diabetes.

**4** Lifestyle modification in order to increase physical activity and decrease energy intake is the principal treatment for obese and overweight people with type 2 diabetes.

**5** Increased activity combined with moderate weight loss can improve glycaemic control and insulin sensitivity in people with type 2 diabetes and prevent it from developing in high-risk people (such as those with impaired glucose tolerance).

**6** The statement discusses the importance of long-term maintenance of weight loss and some strategies that are associated with successful long-term weight loss, like eating a low-calorie diet and frequently monitoring body weight.

**7** The end of the statement contains six specific recommendations for preventing and managing diabetes.

Klein S, Sheard NF, Pi-Sunyer X et al (2004) Weight management through lifestyle modification for the prevention and management of type 2 diabetes: rationale and strategies. A statement of the American Diabetes Association, the North American Association for the Study of Obesity, and the American Society for Clinical Nutrition. *American Journal of Clinical Nutrition* **80**: 257-63

### AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY



### Macrosomia delivery more likely with obesity and diabetes

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

**1** This study aimed to determine the contribution of abnormal pregravid maternal body habitus and diabetes on the prevalence of large-for-gestational-age infants, by reviewing neonatal and maternal records for singleton term deliveries from January 1997 to June 2001.

**2** Participants were characterised by BMI: underweight, normal, overweight and obese; diabetes was classified as gestational, treated with diet alone (A1GDM), treated with insulin (A2GDM) and pregestational diabetes (PDM).

**3** The risk of large for gestational age (LGA) delivery for underweight, overweight and obese women was

compared with that of women with normal pregravid BMI.

**4** Data for 12 950 deliveries were included (1640 underweight, 2991 overweight and 2928 obese).

**5** LGA delivery affected 11.8% of the study sample: 2.3% of participants had A1GDM, 0.7% had A2GDM and 1.6% had PDM.

**6** Obese and overweight women were at elevated risk for LGA delivery compared with normal BMI women, and diabetes was also a risk factor for LGA delivery.

**7** Parity and male gender were other risk factors for LGA delivery, but black race and low pregravid BMI were associated with a lower risk for LGA delivery.

**8** Pregestational diabetes and obesity are independently associated with an increased risk of LGA delivery and the impact of abnormal body habitus on birth weight grows as BMI increases.

**9** Diabetes has the greatest effect on the underweight and normal weight population.

Ehrenberg HM, Mercer BM, Catalano PM (2004) The influence of obesity and diabetes on the prevalence of macrosomia. *American Journal of Obstetrics and Gynecology* **191**: 964-68

## FAMILY MEDICINE

### Lost opportunities for diagnosis

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

**1** This study aimed to describe the prevalence of diabetes, obesity, hypertension and hypercholesterolaemia in a nationally representative sample of obese US adults.

**2** Undiagnosed disease prevalence was obtained by finding respondents in the 1999–2000 National Health and Nutrition Examination Survey who had findings consistent with a condition, but did not report being told they had that condition.

**3** The prevalence of undiagnosed diabetes, obesity, hypertension and hypercholesterolaemia in obese US adults is 11.3%, 22.9%, 16.1% and 37.7%, respectively.

**4** Undiagnosed obesity was significantly predicted by younger age and black race, and obese adults with excellent self-reported general health and lower BMI are less likely to have diagnosed obesity.

Diaz VA, Mainous AG, Koopman RJ, Geesey ME (2004) Undiagnosed obesity: implications for undiagnosed hypertension, diabetes, and hypercholesterolemia. *Family Medicine* **36**: 639–44

## AMERICAN JOURNAL OF CLINICAL NUTRITION

### A mechanism for the role of dietary patterns

Readability	✓✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓✓

**1** The hypothesis that dietary patterns are directly associated with markers of inflammation and endothelial dysfunction was evaluated.

**2** A validated food questionnaire was used in a total of 732 women from the Nurses' Health Study I cohort aged 43–69 years.

**3** A Western pattern was characterised by higher intakes of

## AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY

### Obesity and diabetes increase caesarean deliveries

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

**1** The study aim was to determine the influence of pregravid obesity and diabetes on the risk of caesarean delivery (CD).

**2** Participants comprised women with singleton pregnancies of  $\geq 23$  weeks gestational age undergoing labour between January 1997 and June 2001; records for 12 303 deliveries were evaluated.

**3** Obese and overweight women had a higher risk for CD compared with women of a normal weight; macrosomia, nulliparity, induction, diabetes and black race were other risk factors.

**4** Pregravid obesity and diabetes independently increase the risk for CD – because of the disparate prevalence of obesity and diabetes in the USA, body habitus has a larger impact on CD risk.

Ehrenberg HM, Durnwald CP, Catalano P, Mercer BM (2004) The influence of obesity and diabetes on the risk of cesarean delivery. *American Journal of Obstetrics and Gynecology* **191**: 696–74

red and processed meats, desserts, sweets, French fries and refined grains; a prudent pattern was characterised by higher intakes of fruit, vegetables, legumes, poultry, fish and whole grains.

**4** The Western pattern showed a positive relation with C-reactive protein (CRP), interleukin 6, E-selectin, soluble intercellular adhesion molecule 1 (sICAM-1) and soluble vascular cell adhesion molecule 1 (sVCAM-1).

**5** The prudent pattern was inversely associated with plasma concentrations of CRP and E-selectin.

**6** Dietary patterns probably influence heart disease risk through inflammatory mechanisms.

Lopez-Garcia E, Schulze MB, Fung TT et al (2004) Major dietary patterns are related to plasma concentrations of markers of inflammation and endothelial dysfunction. *American Journal of Clinical Nutrition* **80**: 1029–35

## DIABETES CARE

### Rapid rise in diabetes at BMI >35 kg/m<sup>2</sup>

Readability	✓✓✓✓
Applicability to practice	✓✓
WOW! factor	✓✓✓

**1** The aim of this study was to examine trends in the prevalence of undiagnosed and diagnosed diabetes and the proportion of total cases previously diagnosed, according to obesity status in the USA over the past 40 years.

**2** Diagnosed diabetes was ascertained and height and weight measured in people aged 20–74 years from five cross-sectional national surveys.

**3** In the US population aged 20–74 years between 1976–80 and 1999–2000, significant increases in the prevalence of diagnosed diabetes were accompanied by non-significant increases in undiagnosed diabetes.

**4** The increase in total diabetes and modest, non-significant increase in the proportion of cases diagnosed were trends that varied by BMI level.

**5** In people with a BMI of  $\geq 35$  kg/m<sup>2</sup>, diagnosed diabetes increased markedly (from 4.9% in 1960, to 8.6% during 1976–80, to 15.1% in 1999–2000), but undiagnosed diabetes decreased (from 12.5% during 1976–80 to 3.2% in 1999–2000).

**6** The proportion of total diabetes cases diagnosed increased from 41–83% in people with a BMI of  $\geq 35$  kg/m<sup>2</sup>, but changes in prevalence within BMI strata  $< 35$  kg/m<sup>2</sup> were modest and there was no increase in the percentage of total cases diagnosed.

**7** Over the last few decades, national surveys have found large increases in diagnosed diabetes (especially in obese and overweight people), and also large decreases in undiagnosed diabetes in people with BMI  $\geq 35$  kg/m<sup>2</sup>.

Gregg EW, Cadwell BL, Cheng YJ et al (2004) Trends in the prevalence and ratio of diagnosed to undiagnosed diabetes according to obesity levels in the US. *Diabetes Care* **27**: 2806–12

*‘The prevalence of undiagnosed diabetes, obesity, hypertension and hypercholesterolaemia in obese US adults is 11.3%, 22.9%, 16.1% and 37.7% respectively.’*

*‘Over the last few decades, national surveys have found large increases in diagnosed diabetes (especially in obese and overweight people).’*