

## Management & prevention of type 2 diabetes

### Prevalence, care and outcomes in patients with diet-controlled diabetes in general practice



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**D**iet-controlled diabetes was in the past often labelled as just 'mild diabetes'. Such thinking can lead to the idea that people with diet-controlled diabetes do not need to be reviewed very often or have their risk factors for complications managed aggressively. This study

suggests that such thinking may still be prevalent in general practice.

In this cross-sectional study, diabetes care was studied in 7870 people with type 2 diabetes from 42 practices in the UK. They found that those controlled on diet alone were less likely to have recordings of HbA<sub>1c</sub>, blood pressure, cholesterol, smoking status, microalbuminuria testing, and foot pulses in their notes than those on medication. They were more likely to have a raised cholesterol and raised blood pressure and less likely to be on blood pressure-lowering medication or a statin than those on medication. In the study, 38.4% of people with type 2

diabetes on medication had an HbA<sub>1c</sub> level above 7.5% as compared with 17.3% of those treated with diet only. The authors conclude that those people treated by diet alone do not receive the intensive follow-up and coronary heart disease (CHD) risk reduction strategies given to those on insulin and/or tablets.

This paper should not be used as an argument that everyone should go on tablets as soon as they are diagnosed with type 2 diabetes. Rather, that the most effective and powerful therapy in type 2 diabetes – that of diet and exercise – should be applied properly, and that people on this treatment should be regularly reviewed and their CHD risk properly assessed and managed. People with type 2 diabetes treated by diet alone must not be treated as 'second class citizens'.

The Quality and Outcomes framework clinical indicators for diabetes in the new GP contract apply equally to those treated by diet alone and those treated with tablets. Hopefully this will mean that the inequalities outlined in this study will become a thing of the past.

LANCET

### Practice care and outcomes in diet-controlled diabetes

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

**1** In patients with type 2 diabetes, tight glycaemic control has been shown to reduce microvascular complications.

**2** The authors aimed to ascertain the proportion of patients managed by diet alone, their complication levels, quality of care and interpractice variation in medication use compared to patients on hypoglycaemic medication.

**3** Patients with type 2 diabetes (n=7870) from 42 general practices were included in this UK cross-sectional study.

**4** Patients managed by diet only accounted for 31.3% of those with type 2 diabetes, and were much less likely to have recorded measurements of HbA<sub>1c</sub>, blood pressure, cholesterol, microalbuminuria, smoking or foot pulse screening.

**5** Of patients treated with diet alone, 17.3% had an HbA<sub>1c</sub> above 7.5% compared to 38.4% of those on medication.

**6** Diet-controlled patients were less likely to be on antihypertensive medication or lipid-lowering therapy although they were more likely to have raised blood pressure and cholesterol.

**7** Diabetes-related complications in those on medication (80%) were more common than in those with diet-controlled diabetes (68%); however, this rate is much higher than for people without diabetes.

**8** In general practice, patients managed by diet have significant complication rates and are less likely to be monitored than those on medication.

Hippisley-Cox J, Pringle M (2004) Prevalence, care, and outcomes for patients with diet-controlled diabetes in general practice: cross sectional survey. *Lancet* **364**: 423–28

### DIABETIC MEDICINE

#### Initiating glucose-lowering therapy in general practice

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

**1** Here, patient-related factors determining glucose-lowering therapy initiation in general practice and effect of initiation timing on future glycaemic control were studied.

**2** Clinical files of 603 patients in a Dutch town with type 2 diabetes diagnosed between 1994 and 2000 were studied for factors associated with initiation of glucose-lowering therapy.

**3** Over half (53%; n=319) were started on oral therapy within a

month of diagnosis. This increased to 71%, 75% and 81% at one, two and three years respectively after diagnosis.

**4** Cox regression analyses showed that timing of drug therapy initiation was not related to age, body weight, blood pressure, gender, total serum cholesterol or history of cardiovascular disease but was strongly related to glucose level at diagnosis.

**5** ANOVA analysis showed that future glycaemic control was not related to immediate initiation of glucose-lowering medication.

**6** Diabetes severity at diagnosis, measured by degree of hyperglycaemia, is a major factor in initiation of glucose-lowering drugs and achievement of glycaemic control targets in the future.

Spolestra JA, Stolk RP, Klungelt OH, et al (2004) Initiation of glucose-lowering therapy in type 2 diabetes mellitus patients in general practice. *Diabetic Medicine* **21**: 896–900

# Type 2 diabetes

## AMERICAN JOURNAL OF CLINICAL NUTRITION

### Management of weight through lifestyle modification

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

**1** The risk of developing type 2 diabetes increases with increased body mass index (BMI), therefore overweight and obesity are important risk factors for type 2 diabetes.

**2** This paper is a consensus statement from the North American Study of Obesity, American Diabetes Association and American Society for Clinical Nutrition.

**3** In the USA, both BMI and diabetes prevalence have increased over the past 10 years.

**4** It is harder to manage diabetes in patients who are obese.

**5** The main therapy for patients with type 2 diabetes who are

overweight or obese is an increase in physical activity and reduction of energy intake.

**6** Weight loss can reduce blood pressure and risk of cardiovascular disease, and improve serum lipid concentrations.

**7** Use of a low-calorie diet is recommended for most patients by the National Heart, Lung, and Blood Institute Obesity Education Initiative Expert Panel.

**8** Insulin sensitivity and glycaemic control are improved with moderate weight loss (5% of body weight) combined with increased exercise in those with type 2 diabetes. In those with impaired glucose tolerance and at high risk, diabetes can be prevented by these measures.

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

## ANNALS OF INTERNAL MEDICINE

### Policy implications: T2D prevention by lifestyle intervention

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

**1** The number of Americans who have diabetes has risen to over 18 million and the number of diagnosed cases is expected to rise by 165% over the next 50 years.

**2** Diabetes is the most common cause of end-stage renal disease, nontraumatic amputations and, in those under 65, blindness. It is also the sixth most common cause of death.

**3** Estimated lifetime risk of diabetes for those born in 2000 is over one in three.

**4** African Americans, Hispanic/Latino persons, Alaska Natives,

American Indians, Asian and Pacific Islanders are predicted to have the greatest relative increases in diabetes prevalence over the next 50 years.

**5** In high risk groups, lifestyle change prevents or delays type 2 diabetes onset. There are as many people at high risk of diabetes as those who are currently diagnosed.

**6** Randomised, controlled trial evidence has established that modest weight loss and maintenance through diet and increased physical activity reduces type 2 diabetes incidence by 40–60% over three to four years.

**7** This paper presents a summary of scientific evidence for the benefits of lifestyle intervention in preventing type 2 diabetes and discusses major policy challenges for broad implementation in the health system.

Centres for Disease Control and Prevention Primary Prevention Working Group (2004) Primary prevention of type 2 diabetes mellitus by lifestyle intervention: Implications for health policy. *Annals of Internal Medicine* **140**: 951–57