

## Translating dietary evidence into practice: quality advice for healthcare professionals



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**T**his report by the Nutrition Subcommittee of the Diabetes Care Advisory Committee of Diabetes UK, which was published in *Diabetic Medicine*, represents a consensus from its guideline writers. The challenge is for it to become a blueprint

for consensus amongst all healthcare professionals who care for people with diabetes. The greatest impact from this document, and the up-to-date evidence-based nutritional guidelines and technical reviews on which it draws, will result from the incorporation of its advice in the consultation and training programmes for healthcare professionals.

The bulk of the report is a restatement of the evidence behind dietary targets. The document does this in a patient-centred way and gives useful steps to harness the evidence on food composition to donate practical education and support for people with diabetes.

The greatest clinical problem for people with diabetes is accelerated coronary heart

disease and stroke, and these risks are already raised at the stage of impaired glucose tolerance. Effective diet and lifestyle interventions are needed as soon as blood glucose levels climb above normal and when central obesity begins in order to have the greatest impact on the health of populations. This is defined in the report as a waist circumference of 80 cm in women and 94 cm in men.

The report contains sections covering advice for special groups such as children and adolescents, people with eating disorders, women who are pregnant and have gestational diabetes, elderly people, ethnic groups, and diabetes in institutional care. It also has advice about the special situations of intercurrent illness, hospital care and parenteral nutrition. The conclusion discusses the provision of a district dietetic service.

This is a comprehensive and valuable report that summarises the current evidence on diabetes dietary matters. It gives sound advice to help incorporate the evidence into practice.

### DIABETIC MEDICINE



## Expansion of dietetic services needed

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

**1** Consensus-based recommendations for the practical implementation of nutritional advice in the UK are provided in this article, using the technical reviews of the European Association for the Study of Diabetes and other sources.

**2** The recommendations differ from those published previously as they include more flexibility in the proportions of energy derived from carbohydrates and monounsaturated fats, more active promotion of foods with a low glycaemic index and more emphasis on advice about lifestyle changes.

**3** Evidence is discussed about the effectiveness of advice provided by dietitians.

**4** The sub-committee conclude that dietetic services need to be expanded to implement the NSF for Diabetes and to prevent type 2 diabetes in the increasingly obese UK population.

Nutrition Subcommittee of the Diabetes Care Advisory Committee of Diabetes UK (2003) The implementation of nutritional advice for people with diabetes. *Diabetic Medicine* **20**: 786–807

type 2 diabetes had less than four times the risk of developing a MI compared with age-matched controls.

**8** Young adults had a much higher relative hazard of developing CVD compared with controls, although the absolute rate of CVD is higher in older adults with diabetes.

Hillier TA, Pedula KL (2003) Complications in young adults with early-onset type 2 diabetes (2003) *Diabetes Care* **26**: 2999–3005

### DIABETES CARE



## Higher risk of MI in early-onset type 2 diabetes

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

**1** This study aimed to determine if clinical outcomes differ in adults with early-onset type 2 diabetes (18–44 years in age) compared with usual-onset of type 2 diabetes at ≥ 45 years.

**2** Participants comprised 7844 adults newly diagnosed with type 2 diabetes.

**3** Clinical data were abstracted from electronic medical, laboratory and

pharmacy records.

**4** People with early-onset type 2 diabetes were 80% more likely to require insulin therapy than people with usual-onset type 2 diabetes, despite no difference in average time to insulin therapy.

**5** Microalbuminuria was 20% more likely in early-onset type 2 diabetes than usual-onset type 2 diabetes although the combined risk of microvascular complications did not differ overall.

**6** The hazard of macrovascular complications in early-onset type 2 diabetes compared with age-matched controls was twice as high in usual-onset type 2 diabetes.

**7** The hazard of developing a myocardial infarction (MI) in early-onset type 2 diabetes was 14-fold higher than in age-matched controls; people with usual-onset

‘Action is needed on a local and national level to raise the profile of diabetes, obesity and related health issues affecting south Asians.’

‘Men diagnosed with diabetes aged 40 years will lose 11.6 life-years; women will lose 14.3 life-years.’

## BRITISH MEDICAL JOURNAL

### Diabetes in south Asians: urgent action needed

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

- This comment discusses the current situation in the UK of the development of diabetes in south Asians.
- South Asians have the highest mortality rates of CHD in the UK; much of this risk is attributable to the increased risk of type 2 diabetes in this group.
- The western influence on the traditional south Asian diet and low levels of physical activity are partly to blame.
- The particular educational needs of south Asian communities need to be addressed and healthcare professionals need to understand better the risk of CHD and diabetes, and lower thresholds for intervention required in south Asians.
- Action is needed on a local and national level to raise the profile of diabetes, obesity and related health issues affecting south Asians.

Chowdhury TA, Grace C, Kopelman PG (2003) Preventing diabetes in south Asians: too little action and too late. *British Medical Journal* **327**: 1059–60

## JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

### People born in 2000 in the US have a high risk of diabetes

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

- This study aimed to estimate the age-, sex- and race-specific lifetime risk of developing diabetes in people born in the US in 2000.
- Data from the National Health Interview Survey were used to estimate age-, sex- and race-specific prevalence of diabetes in 2000; US Census Bureau data and data from an earlier study were

## JOURNAL OF DIABETES AND ITS COMPLICATIONS

### The VADT: design, and objectives

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

- This article outlines the design of the cooperative study on glycaemic control and complications in the diabetes mellitus type 2 Veterans Affairs Diabetes Trial (VADT)
- The objective of the VADT is to assess the effectiveness of intensive glycaemic treatment on CV events. Other objectives are to investigate the effects of glycaemic treatment on microangiopathy, quality of life and cost effectiveness.
- The trial is enrolling 1700 men and women, with previously poor control on insulin or maximum doses of oral agents.
- Accrual is 2 years and follow-up is 5–7 years, with visits every 6 weeks.
- The article discusses the randomisation of the participants, the measurements taken and the design and goals of the study.

Abraira C, Duckworth W, McCarren M et al (2003) Design of the cooperative study on glycaemic control and complications in diabetes mellitus type 2 Veterans Affairs Diabetes Trial. *Journal of Diabetes and its Complications* **17**: 314–22

used to estimate age-, sex- and race-specific mortality rates for people with and without diabetes.

- The risk of developing diabetes for people born in 2000 was 38.5% for women and 32.8% for men.
- The highest estimated lifetime risk of diabetes is among Hispanics.
- Those diagnosed with diabetes have a reduced life expectancy. Men diagnosed aged 40 years will lose 11.6 life-years; women will lose 14.3 life-years.
- People born in the US in 2000 have a substantial probability of being diagnosed with diabetes.

Narayan KM, Boyle JP, Thompson TJ, Sorensen SW, Williamson DF (2003) Lifetime risk for diabetes mellitus in the United States. *Journal of the American Medical Association* **290**(14): 1184–90

## DIABETES CARE

### Improved care in rural areas through outreach services

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

- People who live in rural areas may be at particular risk of suboptimal quality of care because of a lack of local resources or restricted access to multidisciplinary clinics and specialists.
- This study aimed to assess the effectiveness of a multidisciplinary diabetes outreach service for improving the quality of care for rural people with type 2 diabetes.
- Two adjacent rural health regions in Northern Alberta, Canada, were selected or randomly allocated to be the intervention or control group.
- The intervention comprised six monthly visits by a travelling team of specialist physicians, nurses, dietitians and a pharmacist; the control comprised usual care.

Data were collected before and 6 months after intervention; the primary outcome was a 10% improvement in blood pressure, total cholesterol or HbA<sub>1c</sub>.

- Participants consisted of 200 people with type 2 diabetes in the intervention group and 179 in the control group.
- The intervention was associated with a trend towards improvement in primary outcome at 6 months, a significant improvement in blood pressure and satisfaction with diabetes care.
- There were small, non-significant changes in cholesterol and HbA<sub>1c</sub>.
- A diabetes outreach service can potentially improve the quality of diabetes care for people in rural areas.

Majumdar SR, Guirguis LM, Toth EL et al (2003) Controlled trial of a multifaceted intervention for improving quality of care for rural patients with type 2 diabetes. *Diabetes Care* **26**: 3061–66