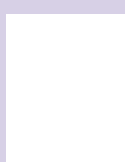


Lifestyle and complementary therapies

Comparing the benefits of intensive and passive education



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Diabetes education is currently a hot topic, with the publication of the DAFNE trial results (DAFNE Study Group, 2002) and the recent NICE guidelines on the management of blood glucose (Royal College of General Practitioners Effective Clinical Practice Unit, 2002). The latter includes a review of educational interventions and concludes that

education is better than no education. However, because of a lack of definitive evidence, it does not specify how education should be delivered.

The study by Raji et al (2002) adds to the debate. The finding that intensive and passive education had similar effects on glycaemic control furthers the notion that the type of education is less important; what appears to matter is that it takes place at all. Passive education involved sending educational materials to individuals' homes. The reduction in HbA_{1c} was virtually as good as that achieved following an intensive 3.5 day programme, involving several (expensive) healthcare professionals.

However, there are some cautionary notes. This was a small study, with only 106 participants randomised into two groups: those receiving passive education (56) and those receiving intensive (50) education. The other concern is that 99% of the participants were men. Unfortunately, no information is given about why women declined involvement in the study. It seems somewhat bizarre that only men were motivated to learn more about their diabetes!

If it transpires from further studies that the method of diabetes education is relatively unimportant for the well-motivated, this has profound implications for service delivery and cost-effectiveness. It might be that cheaper methods of diabetes education, such as written information, are appropriate for some individuals, so long as that information is comprehensive. Vast amounts of staff time could be saved, allowing staff to focus on the less well-motivated patients. This, of course, raises the difficult question of how to motivate people!

DAFNE Study Group (2002) Training in flexible, intensive insulin management to enable dietary freedom in people with type 1 diabetes: dose adjustment for normal eating (DAFNE) randomised controlled trial. *British Medical Journal* 325: 746-9
 Royal College of General Practitioners Effective Clinical Practice Unit, University of Sheffield (2002) Clinical Guidelines for Type 2 Diabetes: Management of Blood Glucose. (http://www.nice.org.uk/pdf/NICE_full_blood_glucose.pdf)

ARCHIVES OF INTERNAL MEDICINE



Intensive vs passive education

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

- The study investigated whether an intensive education programme would produce a greater improvement in HbA_{1c} levels in people with diabetes than passive education.
- A total of 106 patients were randomised to either an intensive or a passive education group.
- The intensive group received 3.5 days of a structured programme, involving a nurse, physician, nutritionist, pharmacist, exercise physiologist and social worker.
- The passive group received mailed information every 3 months; this provided basic information on topics related to diabetes management.
- Patients continued care with their diabetes care provider during the study period.
- Levels of HbA_{1c} were measured at baseline, and at 3, 6 and 12 months after randomisation.
- Mean HbA_{1c} levels fell significantly from baseline (by approximately 2%) in both intensive and passive groups; there was no difference between the two groups at any evaluation time.
- The study therefore concluded that patients showed a sustained improvement in HbA_{1c} levels after receiving education intervention, irrespective of whether this was passive or intensive.

JOURNAL OF INVESTIGATIVE MEDICINE



Smoking, HbA_{1c} and BMI

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

- This study investigated whether smoking affects HbA_{1c} levels and body mass index (BMI) in patients with type 2 diabetes.
- A questionnaire was given to 102 outpatients with type 2 diabetes. HbA_{1c} levels, and microalbumin-creatinine and cotinine-creatinine ratios were measured.
- There was no significant difference in microalbumin-creatinine ratios between smokers and nonsmokers.
- Smokers and nonsmokers were similar with respect to HbA_{1c} levels, BMI and duration of diabetes.
- These results therefore suggest that smoking did not have a significant direct affect on BMI or HbA_{1c} levels in patients with type 2 diabetes.
- Additional studies need to be undertaken to determine the relationship between smoking and insulin resistance in patients with type 2 diabetes.

McCulloch P, Lee S, Higgins R, McCall K, Schade DS (2002) Effect of smoking on hemoglobin A_{1c} and body mass index in patients with type 2 diabetes mellitus. *Journal of Investigative Medicine* 50(4): 284-7

Raji A, Gomes H, Beard JO, MacDonald P, Conlin PR (2002) A randomized trial comparing intensive and passive education in patients with diabetes mellitus. *Archives of Internal Medicine* 162: 1301-4

JOURNAL OF EPIDEMIOLOGY AND COMMUNITY HEALTH



Alcohol and diabetes

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

1 This study examined the relationship between alcohol and type 2 diabetes, and attempted to determine whether serum insulin and HDL-cholesterol mediate this relationship.

2 A cohort of 5221 men with no history of coronary heart disease, diabetes or stroke were followed up for an average of 16.8 years. In this time, there were 198 cases of type 2 diabetes. The control group consisted of occasional drinkers.

3 There was a non-linear relationship between alcohol intake and age-adjusted risk of diabetes, with the risk lowest in light and moderate drinkers and highest in heavy drinkers. Further adjustment for body mass index decreased the risk in heavy drinkers.

4 Alcohol intake was inversely associated with serum insulin and positively associated with HDL-cholesterol. Adjustment for these factors slightly reduced the 'protective' effect in moderate drinkers. This suggests that part of the 'protective' effect of alcohol on both type 2 diabetes and CHD might be mediated via the effects of alcohol on insulin sensitivity.

5 The adverse effect of heavy drinking seemed to be partially mediated through its effect on body weight.

6 Further clinical/physiological studies are needed to explore the complex interrelationships between alcohol intake, body weight and obesity, insulin resistance, and lipid metabolism.

Wannamethee SG, Shaper AG, Perry IJ, Alberti KGMM (2002) Alcohol consumption and the incidence of type II diabetes. *Journal of Epidemiology and Community Health* 56: 542-8

JOURNAL OF HUMAN HYPERTENSION



Non-dipping

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

1 Non-dipping is more prevalent in diabetic than nondiabetic subjects.

2 To find out why, the study authors undertook 24-hour ambulatory blood pressure monitoring in 23 diabetics and 23 controls.

3 In both diabetics and nondiabetics, the blood pressure decline during afternoon naps was of a similar magnitude to the night-time decline.

4 This decline was significantly blunted in diabetics, demonstrating that non-dipping is caused by the blunted effect of sleep itself, and can therefore be seen as another facet of autonomic dysfunction in diabetics.

Perk G, Mekler J, Ben Ishay D, Bursztyn M (2002) Non-dipping in diabetic patients: insights from the siesta. *Journal of Human Hypertension* 16: 435-8

JOURNAL OF PEDIATRIC PSYCHOLOGY



Intervention in adolescents

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

1 Psychosocial risks might be greater for patients with type 1 diabetes introduced to intensive treatment in later adolescence than for those introduced in early adolescence.

2 To investigate this, the study authors used self-reports of 224 adolescents entered into the Diabetes Control and Complications Trial.

3 Young adolescents (age 13-15 years) assigned to the intensive intervention group reported greater increases in school dissatisfaction than their conventionally treated peers.

4 Patients entering the trial in later adolescence (ages 16-18 years)

INTERNATIONAL JOURNAL OF OBESITY



Eating behaviours

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

1 This study aimed to assess the prevalence of eating disorders and eating disorder symptoms in obese patients with type 2 diabetes.

2 Patients were grouped into obese and overweight type 2 diabetics (DM), obese, nondiabetics seeking weight-loss treatment (OC) and a non-clinical sample of obese subjects (OP).

3 Prevalence of binge eating disorder was <5% in all three groups. Median eating disorder examination (EDE) scores in females were significantly higher in the OC and OP groups than in the DM group, whereas diabetics showed the highest scores on restraint.

4 In patients with type 2 diabetes, HbA_{1c} was significantly correlated with EDE total scores, and with shape concern, eating concern and weight concern scores.

5 The study concludes that the prevalence of eating disorders in overweight and obese patients is independent of type 2 diabetes.

Mannucci E, Tesi F, Ricca V et al (2002) Eating behavior in obese patients with and without type 2 diabetes mellitus. *International Journal of Obesity* 26: 848-53

reported marginal elevations in distress from psychiatric symptoms when assigned to the intensive intervention group.

5 Intervention and prevention efforts sensitive to adolescent development could therefore optimise the wellbeing of these patients.

Madsen SD, Roisman GI, Collins WA (2002) The intersection of adolescent development and intensive intervention: age-related psychosocial correlates of treatment regimens in the Diabetes Control and Complications Trial. *Journal of Pediatric Psychology* 27(5): 451-9

'Non-dipping is caused by the blunted effect of sleep itself, and can be seen as another facet of autonomic dysfunction in diabetes.'

'The prevalence of eating disorders in overweight and obese patients is independent of type 2 diabetes.'