**WorldWIDE**

Worldwide Initiative for Diabetes Education

WorldWIDE news

Lifestyle issues in diabetes

A message from the Chairman

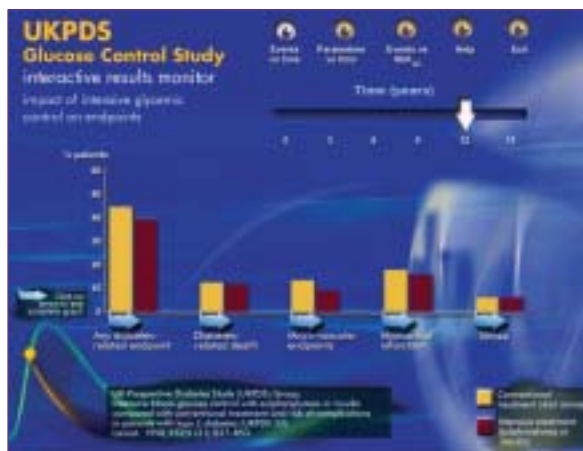
Welcome to the sixth issue of WorldWIDE News. In this issue we look at lifestyle issues related to diabetes, and review the new ADA guidelines on medical nutrition therapy. Lea Sorensen discusses diet and the need for flexibility. We also examine treatment issues in everyday life, and present the major findings from the CARDIA study published earlier this year.

Slide resource now available at worldwidediabetes.com

The WorldWIDE slide resource is now available on the WorldWIDE website. The slide resource consists of two parts. The first part is a PowerPoint slide kit with accompanying lecture notes of the major diabetes intervention studies (UKPDS, SDIS, DCCT, Kumamoto, HPS) and a summary of treatment guidelines. There is also an online slide selector which allows you to browse the slide kit and create and download your own presentation.

The second part of the slide resource is an interactive teaching tool to help demonstrate the importance of glycaemic control in preventing the complications associated with diabetes and is based on results from the UKPDS.

Please visit the website at worldwidediabetes.com and have a look at the slide resource. If you would like any other studies included in the slide kit then please let us know!



And finally, don't forget to visit the WorldWIDE symposium at EASD 2002. The symposium takes place on Sunday 1 September from 9.00 to 11.30 am in the Red Hall at the Budapest Fair Centre (the main congress site). The symposium will consist of two inter-related sessions: 'Insulin — good and bad' and 'Insulin — simple or intensive?', and we do hope you can join us for what promises to be a lively and thought-provoking debate.

Insulin for People with Type 2 Diabetes — A WorldWIDE Symposium

Sunday 1 September
9.00–11.30 am
Red Hall, Budapest Fair Centre

Co-chairs: Philip Home and Robert Heine

A WorldWIDE welcome *Philip Home*

Session 1: Insulin — good and bad

Lead chair: *Robert Heine*

The rationale for early insulin use *Rüdiger Landgraf*

Insulin therapy: cautions and concerns? *Jens Sandahl Christiansen*

Session 2: Insulin — simple or intensive?

Lead chair: *Philip Home*

Practical solutions to the wider use of insulin therapy *Robert Heine*

New insulins, new technologies, and new approaches *Julio Rosenstock*

We want to know what you think!

The aim of WorldWIDE is to enhance professional education on diabetes through the provision of practical and relevant information. This is the sixth edition of WorldWIDE News and we hope you find the newsletters useful. We always appreciate your feedback so please take the time to complete the questionnaire enclosed. Let us know your opinion about the previous five issues, what type of articles you like, and what topics you would like to see covered in future issues of WorldWIDE News.

Philip Home
Chairman, WorldWIDE

Visit the **WorldWIDE**
Satellite Symposium at EASD 2002
on Sunday 1 September, 9.00–11.30 am in the Red Hall, Budapest Fair Centre





Diet and diabetes: flexibility and choice

Lea Sorensen is a diabetes educator who works at the Royal Prince Alfred Hospital in New South Wales, Australia. Lea believes that helping people develop skills to manage a progressive and demanding disease such as diabetes is an exciting aspect of patient education, but helping them achieve confidence remains a challenge.

A historical perspective — the 80s, 90s and 2000

In the 1980s, a 'prescription approach' for weight loss or maintenance was employed and diabetes diets were based on portions of food types. Carbohydrates were described as either simple sugars or starches. The message was to **avoid all sugars**, but there were no other dietary restrictions. In the 1990s, the situation changed a little — emphasis shifted to a diet higher in carbohydrate and lower in fat. The concept of glycaemic index (GI) was introduced, which referred to how quickly foods raise blood glucose; low GI foods were encouraged, but quantities were not an issue. The message then and now is **sugar is not so bad and acceptable in small quantities**. In 2000, a great emphasis was placed on fat intake, leading to confusion as patients believed that fat increased blood glucose levels. Those patients who have been diagnosed with diabetes for several years have received much conflicting advice and many, understandably, are now sceptical about dietary recommendations. The message today is **all carbohydrate**

foods raise blood glucose and intake should be spread out over the day.

Medical goals vs patient priorities

From a medical point of view, dietary management is used in the treatment of glycaemic control, lipid improvement or maintenance, blood pressure control, weight reduction, and manipulating diet to improve insulin sensitivity. Patient priorities, however, can often be very different. Eating appropriately can be a social and cultural issue: people want to eat foods they like — foods that are readily available and affordable.

Patients need an individualised approach and a food history is required. Healthcare professionals need to determine the actual eating patterns of people with diabetes. The majority of people with Type 2 diabetes are overweight and accustomed to overeating, yet many of them share the perception that they are not.

Changing diet is a major lifestyle change. Goals should be achievable and mutually agreed by the individual and the healthcare provider. Some general guidance can be given; however, even simple advice can be difficult to implement — for example, people often misinterpret advice on snack times as an instruction to increase food consumption overall.

Lea Sorensen

Royal Prince Alfred Hospital, Camperdown, New South Wales, Australia

Dietary advice

- All carbohydrate foods raise blood glucose and intake should be spread out over the day
- Spread meals and snacks throughout the day
- Losing some weight helps to reduce blood glucose
- Avoid saturated fats like butter, cream, meat fat, chicken skin and fried foods
- Use mono- or polyunsaturated fats (eg olive oil)

Talking point — Treatment issues in everyday life

Treatment of diabetes can be a complex programme involving a specific diet and exercise regimen and medication. For a person with diabetes, self-management skills are the key to success. Although eating the same amount of food at the same time each day, exercising every day, and taking the medication exactly as prescribed is an ideal scenario, doing all of these things perfectly for the rest of an individual's life is not realistic.

Successful diabetes management places a considerable burden on the individual, and it is not difficult to imagine how treatment can be tiresome and, at times, inconvenient. People with diabetes often have to interrupt daily activities regularly to have a snack or to perform complex treatment regimens such as self-monitoring of blood glucose and, eventually, many people with diabetes have to inject themselves with insulin. They may have to take many multiple

medications, not only for blood glucose control, but also for dyslipidaemia, hypertension, or other complications associated with diabetes. Regular hospital visits, possibly requiring time off from the workplace, also impact on everyday life.

Although healthcare professionals can provide recommendations on treatment, ultimately the patient is in control and decides which self-care strategies to put into practice and then experiences the consequences of these decisions. The role of the healthcare professional is to ensure that the person with diabetes is equipped with the appropriate knowledge and materials to make the right choices. Management regimens that are based on individual circumstances and where patient priorities and concerns are taken into account in the decision-making process are most likely to result in treatment regimens that attempt to lessen the burden of diabetes care in the everyday lives of people with diabetes.



ADA guidelines for medical nutrition therapy

Medical nutrition therapy (MNT) is an integral component of diabetes management, yet many misconceptions exist concerning nutrition and diabetes and nutrition recommendations that have little or no supporting evidence. Recent ADA guidelines provide evidence-based recommendations for diabetes MNT (American Diabetes Association, 2002).

The new guidelines examine carbohydrate, protein and fat in diabetes.

- When referring to carbohydrates, the terms sugars, starch and fibre are preferred; terms such as simple sugars, complex carbohydrates, and fast-acting carbohydrates should be avoided.
- With regard to the glycaemic effects of carbohydrates, the total amount of carbohydrate in meals or snacks is more important than the source or type of carbohydrate.



'Carbohydrate and monounsaturated fats together should provide 60–70% of energy intake'

- In people with controlled Type 2 diabetes, protein does not increase plasma glucose concentrations even though protein is an equally potent stimulant of insulin secretion as carbohydrate. Intake of protein in the usual range (15–20% of average energy intake) does not appear to be associated with the development of diabetic nephropathy. The long-term effects of consuming >20% of energy as protein have not been determined and should therefore be avoided.

'There is no evidence to suggest that usual protein intake (15–20% of total daily energy) should be modified if renal function is normal'

- The primary dietary fat goal in people with Type 2 diabetes is to limit saturated fat and dietary cholesterol intake. If weight loss is not another goal, energy derived from saturated fat can be replaced with either carbohydrate or monounsaturated fat.

'Less than 10% of energy intake should be derived from saturated fats'

'Dietary cholesterol intake should be <300 mg/day'

- Given that many people with Type 2 diabetes are obese, recommendations for weight loss are important. Weight loss in people with Type 2 diabetes is associated with decreased insulin resistance, improved glycaemia and dyslipidaemia, and reduced blood pressure.

'When dieting to lose weight, fat is probably the most important nutrient to restrict <30% of daily energy'

Diabetes prevention

- The importance of prevention of diabetes in high-risk individuals is highlighted by the global increase in prevalence of diabetes in recent years. Reduced intake of total fat, particularly saturated fat, may reduce the risk for diabetes. Increased intake of whole grains and dietary fibre may also reduce the risk.

'Lifestyle changes, reduced fat and energy intake and regular physical activity can produce long-term weight loss and reduce the risk for developing diabetes'

Despite these new ADA guidelines, dietary advice should still take into account individual circumstances, preferences, and cultural and ethnic preferences; the person with diabetes should be involved in the decision-making process. Translation of these recommendations into everyday clinical practice and encouraging people with diabetes to incorporate these recommendations into their diabetes self-management regimen remain a challenge.

Reference

American Diabetes Association. Evidence-based nutrition principles and recommendations for the treatment and prevention of diabetes and related complications. *Diabetes Care* 2002;25:S50–S60.

Come and visit us
at the WorldWIDE booth
at EASD 2002
to receive more WorldWIDE educational materials



The CARDIA study

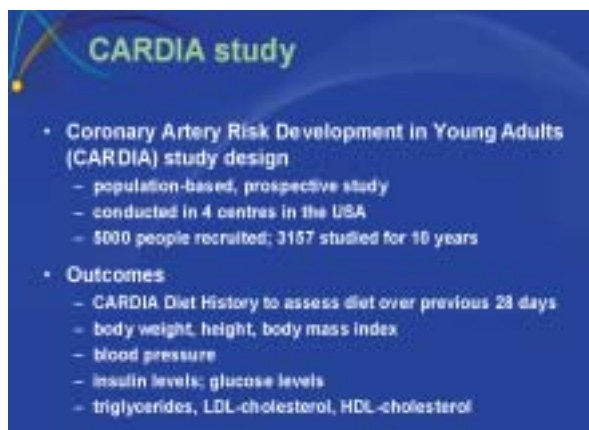
The risk of Type 2 diabetes is influenced by a number of lifestyle factors. In recent years, increasing attention has focused on insulin resistance syndrome (IRS). Although various lifestyle issues such as smoking and physical inactivity are known to promote insulin resistance, the effect of dietary composition on IRS was undetermined prior to the CARDIA (Coronary Artery Risk Development in Young Adults) study.

Study objectives

The aim of the CARDIA study was to examine associations between dairy intake and the incidence of IRS, adjusting for confounding lifestyle and dietary factors.

Study design

The CARDIA study was a population-based prospective study conducted in 4 centres in the USA. In 1985, over 5000 people were recruited and, of these, 3157 people were studied for 10 years. People were excluded if two or more components of IRS (obesity, abnormal glucose homeostasis, elevated blood pressure, dyslipidaemia) were positive at baseline. The CARDIA Diet History was used to assess diet over the previous 28 days. Clinical measurements included body weight, height, body mass index (BMI), blood pressure, insulin levels, glucose levels, triglycerides, high-density lipoprotein cholesterol and low-density lipoprotein cholesterol.



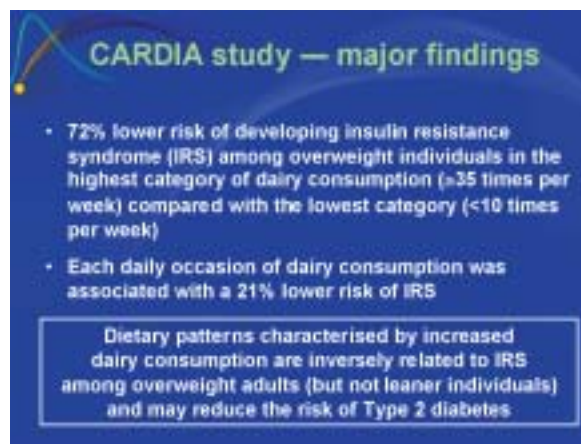
CARDIA study

- Coronary Artery Risk Development in Young Adults (CARDIA) study design
 - population-based, prospective study
 - conducted in 4 centres in the USA
 - 5000 people recruited; 3157 studied for 10 years
- Outcomes
 - CARDIA Diet History to assess diet over previous 28 days
 - body weight, height, body mass index
 - blood pressure
 - insulin levels; glucose levels
 - triglycerides, LDL-cholesterol, HDL-cholesterol

Major findings

- Dairy consumption was inversely related to the incidence of all IRS components among individuals who were overweight (BMI ≥ 25.0 kg/m²) at baseline, but not leaner individuals (BMI < 25.0 kg/m²).

- 72% lower risk of developing IRS among overweight individuals in the highest category of dairy consumption (≥ 35 times per week) compared with the lowest category (< 10 times per week).
- Each daily occasion of dairy consumption was associated with a 21% lower risk of IRS.
- Other dietary factors, including macronutrients and micronutrients, did not explain the association between dairy intake and IRS.



CARDIA study — major findings

- 72% lower risk of developing insulin resistance syndrome (IRS) among overweight individuals in the highest category of dairy consumption (≥ 35 times per week) compared with the lowest category (< 10 times per week)
- Each daily occasion of dairy consumption was associated with a 21% lower risk of IRS

Dietary patterns characterised by increased dairy consumption are inversely related to IRS among overweight adults (but not leaner individuals) and may reduce the risk of Type 2 diabetes

Conclusions

Dietary patterns characterised by increased dairy consumption have a strong inverse association with IRS among overweight adults and may reduce the risk of Type 2 diabetes.

Study implications

Changing dietary patterns may play an important role in the epidemic of Type 2 diabetes. Trends in dietary intake behaviours over the past few decades have revealed a decreasing intake of dairy products, especially milk, and increasing amounts of soda consumption and snacking. These findings reported in the CARDIA study suggest that dietary patterns characterised by increased dairy consumption may protect overweight individuals from the development of IRS, a key risk factor for Type 2 diabetes.

Reference

Pereira MA, Jacobs DR Jr, Van Horn L, Slattery ML, Kartashov AI, Ludwig DS. Dairy consumption, obesity and the insulin resistance syndrome in young adults. The CARDIA Study. *JAMA* 2002;287:2081–2089.

Do you have a case history or discussion topic that may be of interest to your colleagues? We would like to hear from you.

Although we cannot guarantee that your case history or topic will be discussed, we hope to be able to feature them in future issues of WorldWIDE News and on the www.worldwidediabetes.com website.

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By post: WorldWIDE, c/o Adelphi Communications, 32–38 Osnaburgh Street, London NW1 3ND, UK

Don't forget to include your contact details!

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