

What's New in Diabetes?

A Look at the Canadian Diabetes Association Guidelines



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The Canadian Diabetes Association Guidelines are updated every five years. The title of the first session in the 2004 series was “What’s New in the 2003 Canadian Diabetes Association Guidelines—and the reasons behind the changes.” In comparing the 1998 and 2003 editions, the recent one is more comprehensive (it’s five times as long) and easier to navigate, as it now has chapter headings and an index.

Further, the new guidelines contain useful new sections, such as the diagnosis and management of Type 2 diabetes in children and adolescents, the management of hypoglycemia and recommendations for influenza and pneumococcal immunization.

As Type 2 diabetes is far more common than Type 1 diabetes and is reaching epidemic proportions in Canada (as elsewhere), it is appropriate the main focus of the recent guidelines is on Type 2 diabetes. Furthermore, as it is increasingly recognized that Type 2 diabetes can justifiably be termed “a heart attack waiting to happen,” management is now more focused on vascular protection. Emphasis has been placed on the important roles of controlling dyslipidemia and hypertension to help protect against the accelerated atherosclerosis that is a hallmark of the diabetic state. As well, the guidelines restate the important role blood sugar control has in reducing the risk of microvascular complication affecting the eye, kidney and nervous system.

There are several appendices which could be very useful as handouts. For example, “Diabetes and Foot Care: A Patient’s Checklist,” in which the appendix provides a useful algorithm outlining a logical, stepwise approach to pharmacotherapy in Type 2 diabetes. **1**

With respect to lipid treatment, these guidelines take a slightly different approach than the “Recommendations for the

1 It seems unfortunate that everything in the guidelines is copyrighted by the Canadian Diabetes Association (CDA) and can only be reproduced with written approval.

The most controversial change is that the target hemoglobin A1C should be 7%.

2 Currently, therefore, we have a paradox; while a small number of healthy, young people with diabetes are being treated (perhaps unnecessarily) with a statin, only 50% of the vast majority of people with diabetes who should be on a statin are receiving one and fewer still are at target lipid levels!

3 Perhaps it would have been more appropriate if the focus on glycemic targets had been on the benefit of any reduction in elevated glycosylated hemoglobin levels that can be safely achieved and maintained, rather than mandating a specific figure.

Management of Dyslipidemia and the Prevention of Cardiovascular Disease, 2003 Update,” developed by the working group on hypercholesterolemia and other dyslipidemias.¹

In the latter, all people with diabetes are classified as being at high risk for cardiovascular disease. While agreeing that most people with diabetes are indeed at high risk of a vascular event—so that the target level for low-density lipoprotein (LDL) is < 2.5 mmol/L with a total cholesterol to high-density lipoprotein (HDL) ratio of < 4 mmol/L—the CDA experts identify the small, but important, subset of younger people with diabetes, of shorter duration and who have no other risk factors for vascular disease. If all these criteria are met, the CDA recommendation is that the target LDL can be < 3.5 mmol/L with a total cholesterol to HDL ratio of < 5 mmol/L. 2

Perhaps the most controversial change in the 2003 recommendation is that the target hemoglobin A1C should be 7% for most patients and ≤ 6%, that is in the normal range for those in whom it can be achieved safely. While the evidence on which this recommendation is made is given an A grading with respect to microvascular disease, it only warrants a grade C evidence level with respect to macrovascular disease, which is the chief hazard in Type 2 diabetes.

The guideline authors do go on to state, “Treatment goals and strategies must be tailored to the patient and clinical judgement is required to determine which people can reasonably and safely achieve these targets.” The patient’s age, prognosis, the presence of diabetes complications or comorbidities and their risk for and ability to perceive hypoglycemia are all important factors to take into account when determining appropriate and safe blood sugar and hemoglobin A1C targets.

The lower the glycosylated hemoglobin level, the greater the likelihood that the Type 1 diabetic, in particular, but also the Type 2 diabetic treated with insulin and/or a secretagogue, will experience hypoglycemia. 3

Section on: Gestational diabetes

The section on gestational diabetes mellitus is unchanged from 1998. The CDA experts continue to recommend that all women be screened

4 In their analysis, neither universal nor selective screening results in a clear-cut benefit for either mother or child.

5 Most people with diabetes in Canada are 60 and over, so the fact that this chapter on diabetes and the elderly is now 1.5 pages long, compared to just two paragraphs in 1998, can be seen as a step forward in the recognition of this neglected area of understanding and practice.

for gestational diabetes in each pregnancy. In contrast, the Society of Obstetricians and Gynecologists of Canada, in 2002, revised their guidelines. **4**

The CDA guidelines are also out of step with those published by the American College of Obstetricians and Gynecologists and the American Diabetes Association. Such lack of consensus typifies the ongoing controversy about everything to do with gestational diabetes.

Section on: Diabetes and the elderly

5 The CDA guidelines are evidence-based (where such evidence exists). Perhaps the most important aspect of this section is that the best evidence that can be used is grade D, derived from expert opinion. In the experts' view, "the same glycemic targets apply to the otherwise healthy elderly as to younger people with diabetes. **6**

The costs and risks of targeting the glycosylated hemoglobin at 7% in this large and ever-increasing segment of the population is huge. **7**

The focus should be the avoidance of hypoglycemia and symptomatic hyperglycemia. In this area of clinical practice, above all others, clinical judgement and common sense remain paramount.

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References

1. Genest J, Frohlich J, Fodor G, *et al*: Recommendations for the management of dyslipidemia and the prevention of cardiovascular disease: Summary of the 2003 update. *CMAJ* 2003; 169(9):921-4.

6 No trial to date has satisfactorily addressed the important question concerning appropriate blood sugar level targets in the elderly.

7 The authors, however, do wisely go on to say that for the elderly with multiple comorbidities, with a high level of functional dependency and limited life expectancy—in other words, the frail elderly—the goal should be more conservative.