



2008 Clinical Practice Guidelines Tool Kit for the Prevention and Management of Diabetes in Canada

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Canadian Diabetes Association

Our Mission

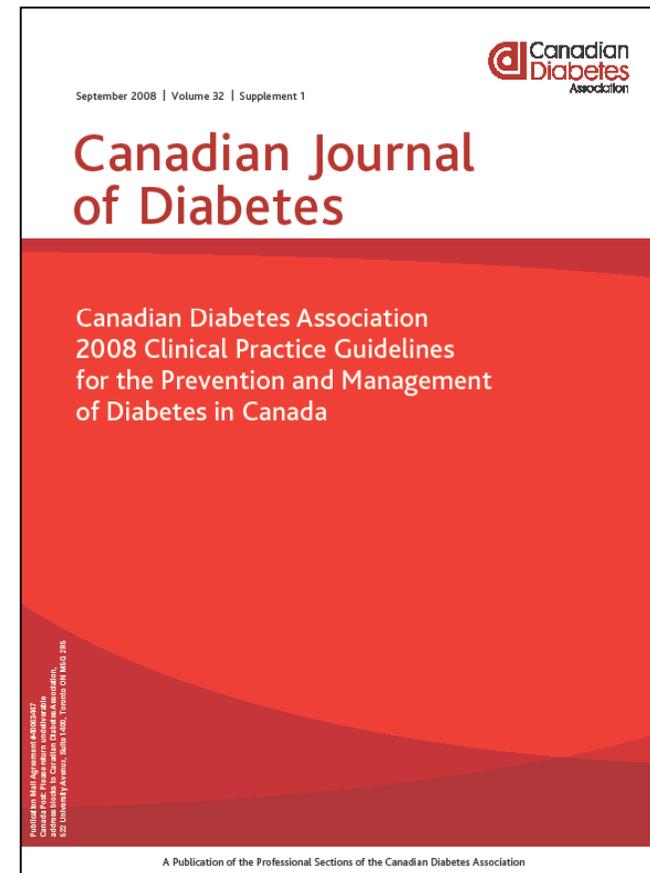
To lead the fight against diabetes by helping people with diabetes live healthy lives while we work to find a cure.

We will deliver our mission by:

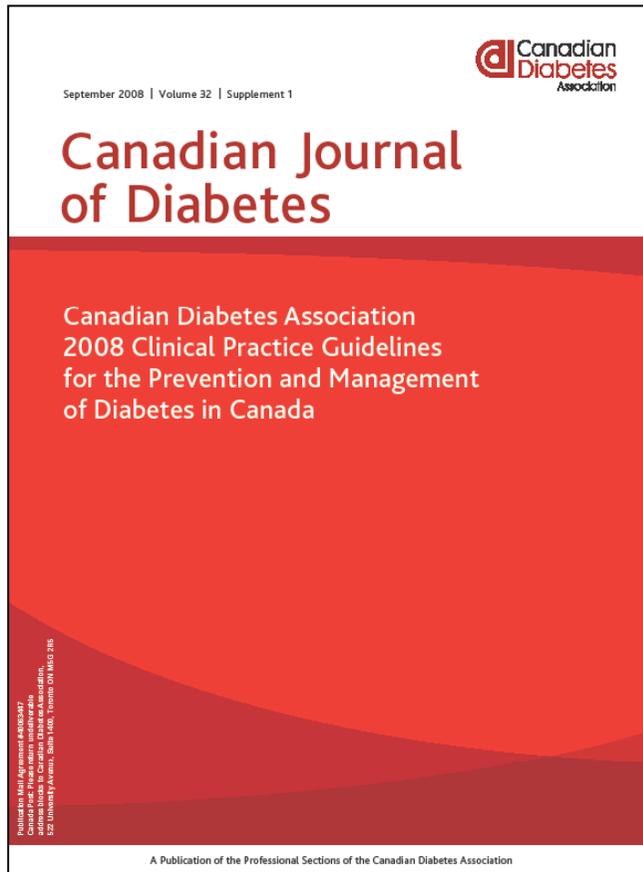
- Providing people with diabetes and healthcare professionals with education and services
- Advocating on behalf of people with diabetes
- Supporting research
- Translating research into practical applications

CDA Clinical Practice Guidelines

- Released September 2008
- Developed by an expert committee of 99 healthcare professionals from a broad range of disciplines
- Reviewed and updated every 5 years
- Comprehensive and evidence based
- Internationally recognized

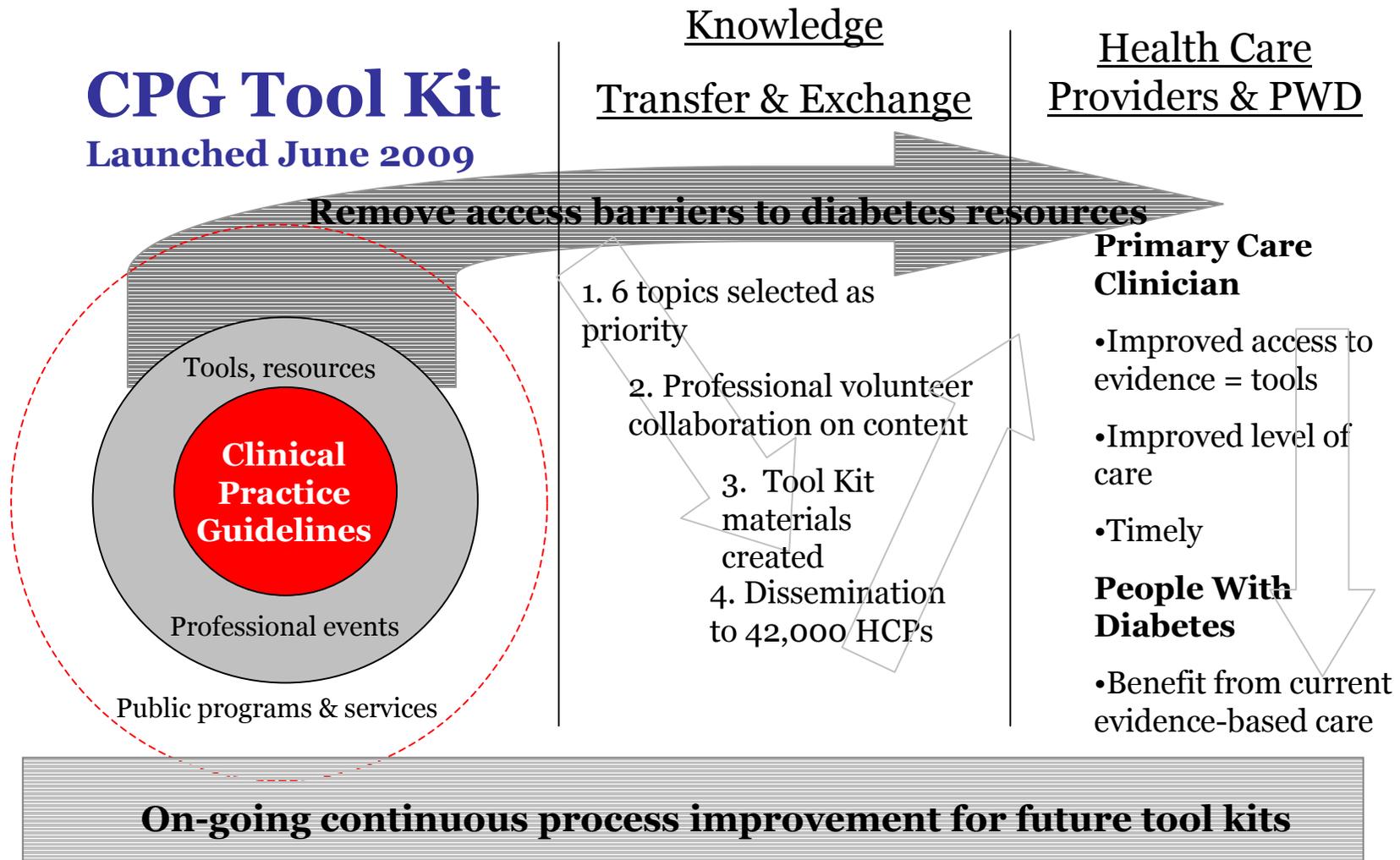


Why produce a Tool Kit?



CPG Tool Kit

Launched June 2009



2008 Clinical Practice Guidelines Tool Kit

THEME	DATES
Cardiovascular risk assessment and reduction	Jun 2009
Organization of care	Mar 2010
Protecting mothers and children	Sep 2010
Exercise	Mar 2011
Foot care	Sep 2011
Diabetes education	Mar 2012

Tool Kit Components

- Introductory letter
- CPG summary and physician/primary care team information
- Healthcare provider (HCP) tools
- Patient tools



Theme 1: Cardiovascular Risk Assessment and Reduction

- Identifying who is at high risk of vascular events and promoting vascular protection through a “package approach”

What does this mean?

- A multifactorial approach, including glucose control, blood pressure control, lipid control, ACE-inhibitor therapy, ASA therapy and lifestyle modification dramatically reduce micro- and macrovascular complications.

Screening for Presence of Coronary Artery Disease

Who should we screen? How should we screen?

<ul style="list-style-type: none">• Age > 40• DM > 15 years• Hypertension (regardless of age)• Nephropathy<ul style="list-style-type: none">– ACR \geq 2.0 in men, ACR \geq 2.8 in women• Reduced pulses• Vascular bruits	Resting ECG <ul style="list-style-type: none">• At diagnosis (baseline)• Every 2 years (if high risk)
<ul style="list-style-type: none">• Symptoms possibly due to CAD (including unexplained dyspnea)• Abnormal resting ECG (Q-waves, ST-T abnormalities)• Any vascular disease<ul style="list-style-type: none">– Peripheral arterial disease– Carotid bruit– TIA– Stroke	Stress test <ul style="list-style-type: none">• Exercise ECG or• Nuclear imaging or• Pharmacologic stress echocardiography
<ul style="list-style-type: none">• Ischemia at low exercise capacity on stress testing (< 5 METS)	Refer to Cardiac specialist

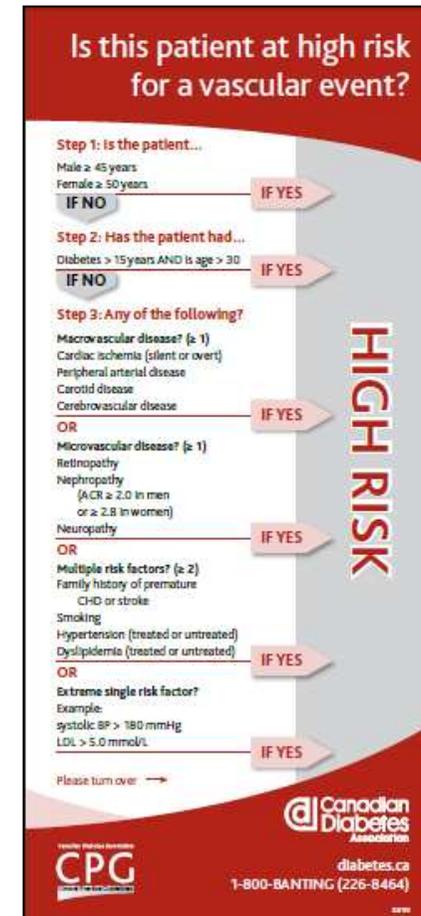
Cardiovascular Risk Assessment & Reduction: Patient tool

- Patient-focused tool to help Canadians living with diabetes better understand their risk of cardiovascular disease
- Video:
 - Do your part...protect your heart! Discovering and lowering your risk of heart disease



Cardiovascular Risk Assessment & Reduction: HCP tool

- Clinical tool (laminated two-sided card) with an algorithm to assist healthcare professionals with risk assessment, vascular protection, and screening
- Video:
 - Heart Disease and Diabetes: Tools and recommendations for vascular protection



Theme 2:

Organization of Care

- “Diabetes care should be systematic and incorporate organizational interventions”

What does this mean?

- Evidence indicates that when primary care practitioners have an organized approach to diabetes care, there is improvement in outcomes.

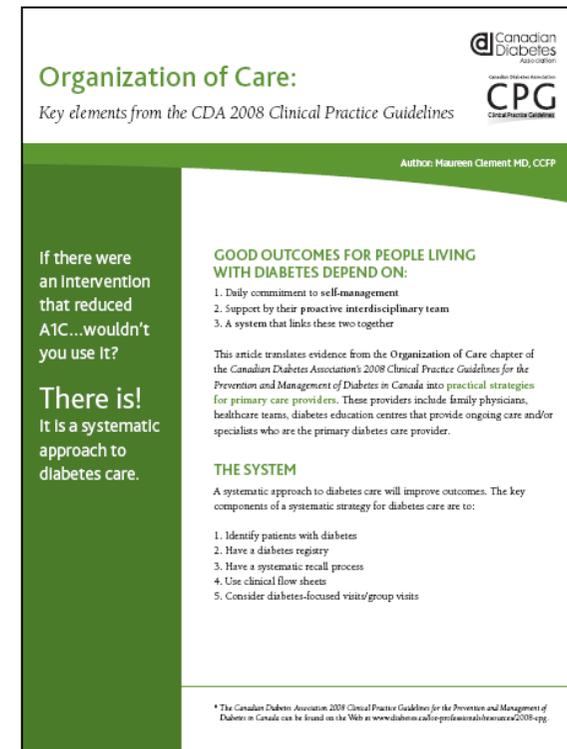
Interventions

What should an organized approach/ system include in **your practice?**

1. Registry and identification of patients with diabetes
2. Routine use of Patient Care Flow Sheets
3. Regular clinic visits focused on diabetes and diabetes complications (every 3-4 months)
4. Regular lab tests linked to prescriptions and diabetes review
5. A systematic recall strategy for patients

Organization of Care: HCP Tool

- HCP tool with practical information on office organization for diabetes care
- Video:
 - Eight-Minute Diabetes Focused Visit
 - covers all elements of a diabetes focused visit between physician and patient



Organization of Care: Patient Care Flow Sheet

- Invaluable when organizing information for care of patients with diabetes and other chronic diseases
- Available for download & printing
- <http://www.diabetes.ca/files/cpg2008/cpg-2008.pdf>, Appendix 2, page 209-210 or from some provincial medical association websites.

The image shows a sample of a Patient Care Flow Sheet form. The form is titled "Sample Chronic Patient Care Plan Worksheet" and is divided into several sections. The top section contains patient information fields such as Name, Address, Phone, and Date of Birth. Below this is a large grid with columns for dates and rows for different types of care (e.g., Medical, Nursing, Diet, Physical Therapy). The bottom section contains additional information fields and a signature line.

Organization of Care: Patient tool

- Tool to help patients prepare for, and know what to expect, from a diabetes-focused visit

Your diabetes-focused visit

It is important that certain visits with your healthcare team focus specifically on your diabetes.

WHAT TO EXPECT

- To be seen **four times a year** for diabetes care
- Review of recent **laboratory tests**
- Measurement of your **blood pressure**
- Examination of your **feet** at least once a year
- Referral to an **eye care professional** (usually once a year)
- Assessment of your **risk for heart attack and stroke**
- Conversation about **exercise, food choices, smoking, mood and sexual function**

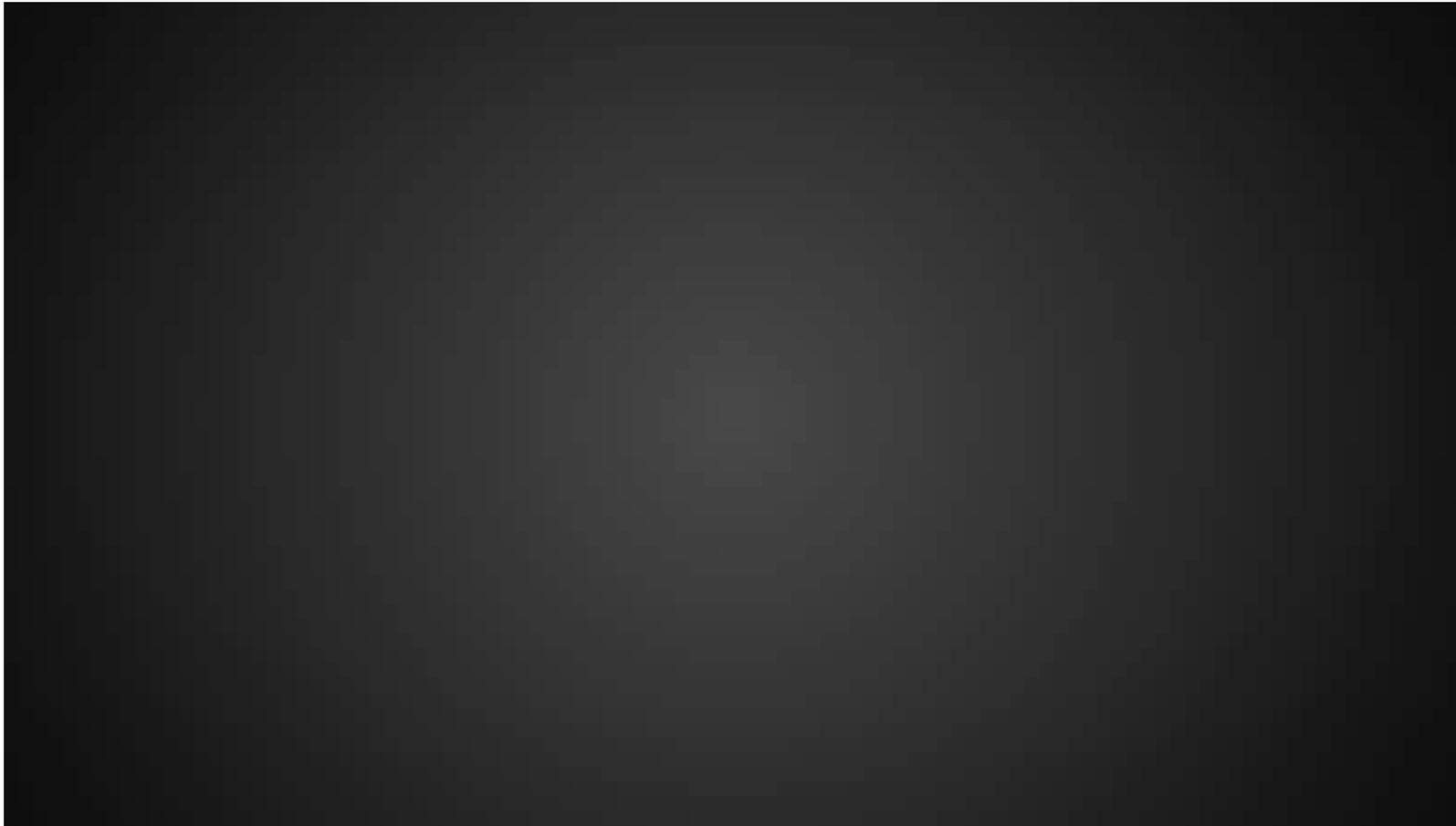
HOW TO PREPARE

- Have **laboratory tests** done prior to your visit.
- Bring **blood glucose records** with you (written down or printed from meter).
- Bring a list of **all medications** including non-prescription drugs and let team know which need to be refilled.
- Write down any **questions** about your diabetes.
- Save any **non-urgent, non-diabetes questions** for another visit. This will ensure that your diabetes gets full the attention it deserves.

diabetes.ca
1-800-BANTING (226-8464)

 Canadian Diabetes Association

Organization of care video sample



Theme 3:

Protecting Mothers and Children

- Woman who have had gestational diabetes (GDM) are at high risk of developing type 2 diabetes and should be screened
 - 6 weeks to 6 months postpartum,
 - when planning a future pregnancy, and
 - every 3 years (or more often depending on risk factors)

What does this mean?

- **For mothers:** Identifying woman with prediabetes or type 2 diabetes allows for targeted lifestyle intervention to reduce the risk of type 2 diabetes and reduce the risk for secondary complications

Theme 3:

Protecting Mothers and Children

- STAT action is required to prevent diabetic ketoacidosis (DKA) and save child's life
 - **Symptom recognition:** polyuria, polydipsia, nocturia, weight loss
 - **Test blood/urine immediately**
 - **Arrange a referral to a pediatric diabetes specialist**
 - **Treat with insulin today**

What does this mean?

- **For children:** DKA is always preceded by hyperglycemic-related symptoms. By recognizing the early symptoms of diabetes in a child or youth, STAT action can prevent life-threatening DKA and cerebral edema

Protecting Mothers: HCP Education

- HCP tool to reinforce the importance of postpartum screening for woman who have had GDM
 - Who can make a difference?
 - When?
 - Why?
 - How?

Gestational diabetes and postpartum screening

Canadian Diabetes Association

Key elements from the CDA 2008 Clinical Practice Guidelines*

CPG

Author: Jennifer Stryder PhD MSc

Gestational diabetes: gone but not forgotten

With their newborn in their arms, women who have had gestational diabetes mellitus (GDM) may be happy to leave behind the rigour of the diabetes clinic. However, these women require regular diabetes screening as they remain at high risk for developing type 2 diabetes.

WHEN should women who have had GDM be screened for type 2 diabetes?

- **Within 6 weeks to 6 months postpartum**, with a 2 hour 75 g oral glucose tolerance test (GTT)
- **Before a future pregnancy**
- **Every 3 years or more often**, depending on the presence of other risk factors for type 2 diabetes.

WHY focus on screening?

- As few as 25% of women who have had GDM receive appropriate postpartum screening.
- GDM increases the risk of developing type 2 diabetes later in life by up to 12 fold.
- Identifying women:
 - **With prediabetes** allows for targeted lifestyle intervention to reduce the risk for developing type 2 diabetes later in life.
 - **With type 2 diabetes** allows for targeted intervention to reduce the risk of end-organ injury and allows for optimized blood glucose control prior to any future pregnancies. Insufficiently controlled blood glucose increases the risk of congenital malformations, miscarriage and stillbirth.

Why the 2 hour GTT?

A postpartum fasting plasma glucose alone can miss up to 40% of dysglycemia

Undiagnosed or insufficiently controlled diabetes during pregnancy increases the risk of congenital malformations, miscarriage and stillbirth

Lifestyle modification can reduce the risk of developing type 2 diabetes by up to 60%

*The Canadian Diabetes Association 2008 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada can be found on the web at: www.diabetes.ca/2008cpge

Protecting Mothers: Patient Education

- Patient reminder tool to help woman who have had GDM understand their risk of developing type 2 diabetes and how to arrange a glucose tolerance test

As you take your baby in your arms, *take your health in your hands.*



You have had gestational diabetes which puts you at **increased risk of developing type 2 diabetes**. It is very important to diagnose and manage type 2 diabetes. Early diagnosis and proper management will help you:

- **Have healthy future pregnancies.** Undiagnosed diabetes in a pregnant woman increases the risk of miscarrying or having a baby born with a malformation.
- **Stay healthy and avoid diabetes complications** such as heart attack, stroke and damage to your eyes, kidneys and nerves.

You need to be tested (screened) for type 2 diabetes:

- Six weeks to six months after giving birth (This is done with a *glucose tolerance test*).
- When you are planning another pregnancy.
- Every three years (or more often depending on risk factors).



Protecting Children: HCP Education

- HCP tool focused on interventions for preventing DKA in children and youth

Prevention of diabetic ketoacidosis in children and youth

Canadian Diabetes Association

Key elements from the CDA 2008 Clinical Practice Guidelines*

CPG
Clinical Practice Guidelines

Author: Margaret Lawson MD MSc FRCP

DKA can be prevented!

STAT action is required to prevent DKA and save a child's life.

Symptom recognition
polyuria, polydipsia, nocturia, weight loss

Test blood/urine for glucose now
(blood glucose meter or urinalysis in the office or same day lab test)

Arrange referral to a pediatric diabetes specialist

Treat with insulin today!

39% of children and youth with new onset diabetes who present in DKA have seen a physician in the preceding week.^{1,2} This encounter represents a missed opportunity for earlier diagnosis and prevention of DKA!

Diabetic ketoacidosis (DKA) is the leading cause of death and permanent disability in children and youth with new onset diabetes. If you recognize the early symptoms of diabetes in a child or youth, STAT action can prevent life-threatening diabetic ketoacidosis.

WHY is prevention of DKA so important?

- Life-threatening cerebral edema occurs in up to 3% of episodes of DKA in childhood resulting in significant morbidity (up to 35%) and mortality (24%). Because the cause of cerebral edema isn't known, it can only be prevented by avoiding DKA.
- DKA is always preceded by hyperglycemic-related symptoms which have been misinterpreted or misdiagnosed by caregivers or healthcare providers. This represents a missed opportunity for earlier diagnosis and prevention of DKA.
- DKA can be prevented by identifying hyperglycemic-related symptoms and starting insulin before DKA develops.

WHO is at risk of DKA?

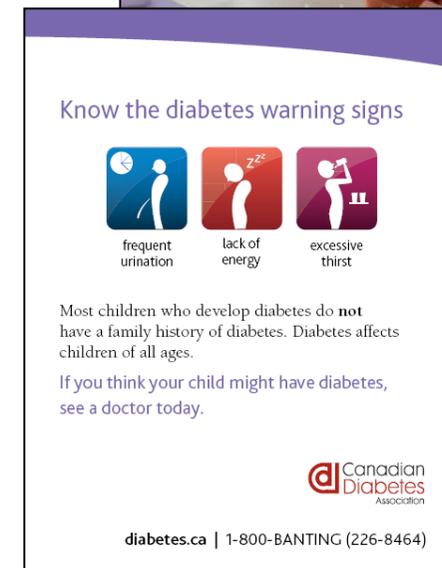
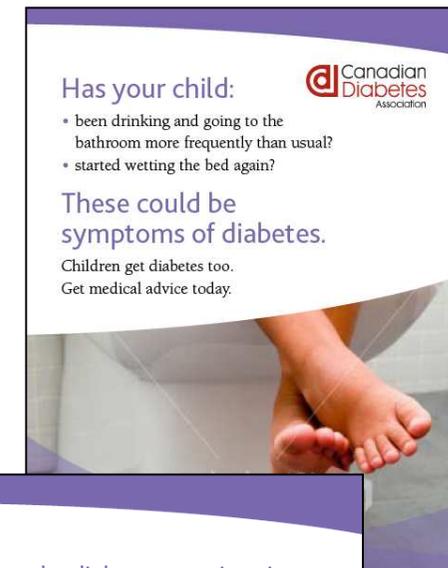
- DKA occurs in 15 – 29% of children and youth with new-onset diabetes^{3,4}.
- Preschool children are at highest risk of DKA but it occurs in all age groups:
 - 40% of children <3 years of age present in DKA, compared to 19% of 7 – 10 years olds and 12% of 15 – 18 year olds⁵.
 - Diabetes is increasing in children <3 years of age, the group at highest risk of DKA. Their presenting symptoms may be atypical leading to other diagnoses (e.g. UUTI, URTI, diarrhea/gastroenteritis, otitis media)⁶.
- DKA is more common in children and youth with type 1 diabetes – however, 10% of youth with type 2 diabetes present in DKA⁷.
- Overweight children can develop type 1 diabetes, as can children of all ages and ethnic backgrounds.



* The Canadian Diabetes Association 2008 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada can be found on the web at www.diabetes.ca/2008-cpg

Protecting Children: Public Awareness Tear Pad

- Public awareness tear pad to educate parents and caregivers on the early warning signs of diabetes



Where to find CPG Tool Kit Tools

Theme #1: Cardiovascular Risk Assessment and Reduction

- <http://www.diabetes.ca/for-professionals/cpg/cardio/>
- <http://www.diabetes.ca/diabetes-and-you/healthy-guidelines/cardio/>

Theme #2: Organization of Care

- <http://www.diabetes.ca/for-professionals/cpg/ooc/>
- <http://www.diabetes.ca/diabetes-and-you/healthy-guidelines/preparing>

Theme #3: Protecting Mothers and Children

- Coming soon to diabetes.ca!

Order your copy of the CPG Tool Kit from
<http://www.diabetes.ca/about-diabetes/order-desk>

Thank you!

