

Diabetes

AUTUMN 2019

Dialogue

FOOD INSECURITY AND DIABETES

Find out how a lack of nutritious food can affect your health—and how you can stretch your food dollar



Teaming up for self-management support

The scoop on glucose monitoring devices

PLUS: Time for brunch, diabetes and alcohol, tips for exercise success

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VIEW point

A time to give thanks—and help



EVERYONE DESERVES A NUTRITIOUS FOOD SUPPLY

Now that fall has arrived, Thanksgiving is just around the corner. This festive holiday is a time to give thanks for the blessing of the harvest, and possibly share a special meal with family and friends. The sad reality, though, is that it is also a time for food drives to help the many Canadians who suffer from food insecurity and cannot participate in this autumn festivity.

When I think of food insecurity, I think of Third World countries, not of a country like Canada. However, as the feature “Food Insecurity and Diabetes” describes, it is a real problem in our country, and governments must develop policies that help individuals who do not have adequate funds for food. Food insecurity can have significant negative health consequences for anyone, but if you live with a chronic disease such as diabetes, the issue is particularly troublesome, leading to both acute and chronic complications of diabetes. This can be a very expensive disease to manage. Some people with diabetes must choose between buying food or buying needed medications. This is not a choice Canadians should have to make.

This Thanksgiving, if you are able, I urge you to be generous in your donations to food banks as a way of acknowledging your gratefulness for being able to afford healthy and nutritious foods. This will be a beginning—although not a solution—to this public health issue. The federal government must step up and realize the seriousness of the problem, and invest in social policies that will provide an adequate income to all Canadians to address their nutritional needs. Food is a basic need for survival! Diabetes Canada advocates on your behalf, but we should all advocate for those living with diabetes.

Certified diabetes educators also continually advocate to improve the lives of people living with diabetes, and are a great source of knowledge and advice. They are true unsung heroes, and should be recognized for their dedication, expertise, and creativity in enhancing a patient’s journey with diabetes. The feature article “Making Life Easier” describes how two diabetes educators helped to set personalized goals for two patients to improve their health and sense of well-being.

With the cooler temperatures, you might be tempted to sleep in on the weekend and then enjoy brunch with family and friends. “Nutrition Matters” provides advice—and delicious recipes—so you can enjoy brunch while still managing your blood sugar. If you want to enjoy an alcoholic beverage with your meal, read this issue’s “On the Shelf” to learn how alcohol can affect blood sugar control.

After eating brunch, you may need some exercise! Many of us find it difficult to initiate, and stick with, an exercise program. “Fit Tip” provides five strategies to help you achieve exercise success. Walking in the crisp autumn air is a great place to start your exercise program.

Diane Donat MD MSc MEd FRCPC
Editor-in-Chief

LETTERS TO THE EDITOR

We welcome your ideas and opinions about what you read in *Diabetes Dialogue*. We would also like to hear about your activity routine and, in future, may feature a collection of your ideas. Write to us at dialogue@diabetes.ca.



Gestational diabetes and type 1 diabetes in children

FINDING MAY LEAD TO EARLIER DIAGNOSIS FOR KIDS

By Elizabeth McCammon

Children whose moms had gestational diabetes during pregnancy could be at increased risk of developing type 1 diabetes, according to a **study** funded by Diabetes Canada and published in the April 2019 issue of the Canadian Medical Association Journal.

Researchers have long known that children whose mothers or fathers have either type 1 or type 2 diabetes are more likely to develop the disease themselves. In this study, Dr. Kaberi Dasgupta and her team at the Research Institute of the McGill University Health Centre in Montreal wanted to find out if having a mother who had gestational diabetes (a type of diabetes that occurs during pregnancy) also increases a child's risk of developing diabetes later in life.

The McGill team looked at the health records of 73,180 mothers in Quebec who had given birth to a child between 1990 and 2012. Half of the mothers had gestational diabetes during their pregnancy; half did not. The researchers found that a child or teen whose mother had gestational diabetes was nearly twice as likely to develop type 1 diabetes before the age of 22 compared to those whose mothers did not have gestational diabetes.

"This study is important, as we try to understand risk factors for type 1 diabetes," says Dr. Jan Hux, president and CEO of Diabetes Canada. She adds that this research may encourage health-care providers to promptly test children for type 1 diabetes if they show typical symptoms (such as

excessive thirst, frequent urination, or weight loss) and their mothers had gestational diabetes. Earlier diagnosis of type 1 diabetes may reduce the risk of children developing dangerous conditions such as diabetic ketoacidosis, a potentially life-threatening complication of diabetes that can occur when the body starts running out of insulin.

"Diabetes Canada looks forward to improving the lives and outcomes of children through greater research in this area," says Hux.



BROKEN BONES AND TYPE 1 DIABETES

Risk not as high for those with good blood sugar control

Researchers from the University Hospital Basel in Basel, Switzerland, have found that people with type 1 diabetes and poor blood sugar control have a higher risk of breaking a bone (resulting from a fall from standing height or less) than those whose blood sugar is well controlled.

In the **study**, published in the *Journal of Clinical Endocrinology & Metabolism* (May 2019), the researchers also looked at whether blood sugar control affects the risk of a broken bone in people with type 2 diabetes. They compared the health records for 3,329 people newly diagnosed with type 1 diabetes and 44,275 people newly diagnosed with type 2 diabetes. These records

included the participants' A1C levels (the average blood sugar levels over a two- to three-month period) for three years. The target A1C for most people with diabetes is 7%. For this study, "poor control" was defined as a three-year average A1C over 8%.

While having either type of diabetes was a factor in the risk for broken bones, the risk did not seem to change based on blood sugar control for people with type 2 as it did for people with type 1 diabetes. In fact, the risk of fractures was higher among those who took certain oral diabetes drugs compared to people who did not take them.

Taxes and labels reduce sugar intake

STRATEGIES ENCOURAGE HEALTHIER FOOD AND DRINK CHOICES

Foods and drinks that are high in sugar have been linked to obesity and certain chronic diseases, including type 2 diabetes. Researchers at the University of Waterloo recently examined several labelling and tax strategies to see which were most effective in encouraging people to make healthier choices that could reduce their risk of developing these diseases.

The study included 3,584 Canadians aged 13 years and older. They were given \$5 and then shown images of 20 drinks and 20 snacks they could buy. The products featured different types of labels on the front of the packages, such as “high in” labels that warned of high levels of sugar, sodium, saturated fat, or calories (this is the type of nutrition label currently proposed by Health Canada). Other labels featured a multi-coloured traffic light, a health star rating, a nutrition grade, or no nutritional information at all. The labels also included information about a “sugar tax,” depending on the amount of sugar the product contained.

The researchers found that when prices increased due to taxes, or packages displayed nutrition information, people bought products with less sugar, sodium, saturated fat, and calories. The “high in” warning labels were most effective in encouraging healthier choices compared to the other types of labels.

“Taxes on sugary drinks and better nutrition labels are the types of measures that can help reverse increasing rates of obesity and chronic disease from unhealthy diets,” says David Hammond, a professor in the School of Public Health and Health Systems at the University of Waterloo, and co-author of the [study](#), which was published in the May 2019 issue of the *International Journal of Behavioral Nutrition and Physical Activity*.

DID YOU KNOW?

• **Diabetes Canada recommends that the Government of Canada introduce a tax on sugar-sweetened beverages** and use the money raised to promote the health of Canadians. Read more at [Sugar & Diabetes](#).

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MEDITERRANEAN DIETS MAY SUPPORT MIND AND MEMORY

Improvements tied to good blood sugar control

The Mediterranean diet has many health benefits, including a reduced risk of heart disease, stroke, and type 2 diabetes. New [research](#) suggests that the diet (which is high in vegetables, fruits, whole grains, beans, nuts, seeds, olive oil, and fish) may also help boost the mental abilities and memory of people with type 2 diabetes.

In the study, published in May 2019 in *Diabetes Care*, researchers from the Harvard T.H. Chan School of Public Health in Boston looked at two years’ worth of information, including eating habits and blood sugar levels, for 913 participants in the Boston Puerto Rican Health Study. Almost half of the participants had type 2 diabetes. All participants’ mental skills and memory were measured over the two years using tests such as word recognition, clock drawing, and remembering a series of numbers.

People with type 2 diabetes who more closely followed a Mediterranean diet had greater improvements in their mental skills and memory than people who did not follow the diet. However, these benefits were limited to people who had well-controlled blood sugar at the start of the study or whose blood sugar control improved during the two-year study, say the researchers. Their conclusion? Following a Mediterranean diet and effectively managing blood sugar may support brain health for people with type 2 diabetes.

DID YOU KNOW?

• You can learn more about the Mediterranean diet in Diabetes Canada’s [“The Mediterranean Diet: Is It Right for You?”](#) webinar.



KALEB DAHLGREN: Surviving—and thriving— with positivity

Despite life challenges, he continues to inspire kids and adults both on and off the ice By Mark Witten

Kaleb Dahlgren recalls being diagnosed with type 1 diabetes at age four. “After about four months of rebelling, I finally accepted it and realized I needed to have the needles and take care of myself to survive.” For the 22-year-old, that positive attitude eventually helped him overcome the pain of being a survivor of the Humboldt Broncos bus crash in 2018.

TAKING CONTROL EARLY IN LIFE

Raised in Moose Jaw and Saskatoon, Dahlgren was encouraged early on by his parents (both nurses) to develop healthy food habits and take an active role in managing his diabetes. “In Grade 4, I started giving myself insulin injections at lunch. At 13, I took over my diabetes care, and my parents helped only when I needed it. I felt independent and was able to get good numbers,” he says.

Dahlgren had started playing hockey at age three, before his diagnosis, and has continued to play at elite levels since then. That meant learning how to change his diabetes care to meet the physical demands of competition and training, which can cause blood sugar levels to fluctuate more dramatically. By working with an endocrinologist, he also figured out an effective formula for food and insulin during and after games. When he was 10, a top team let him go because of his diabetes, but Dahlgren did not give up. “Another triple A team picked me up, and I scored a hat trick [three goals in one game] against the team that cut me.”

His positive attitude and coping skills helped after the crash on April 6. He spent 21 days in hospital, recovering from a fractured skull, brain injury, broken vertebrae, and other injuries. “I used the resiliency I gained from my diabetes experience to fight back and overcome the physical and emotional challenges, which helped with my healing after the accident.”

After he began intensive physiotherapy, his blood sugar levels went “wonky,” he says, so he talked to an endocrinologist about making treatment adjustments. “It’s important to seek extra help if you can’t solve the problem on your own.”

DID YOU KNOW?

- It is important to be prepared and know what to expect before being admitted to hospital, whether the visit is planned or an emergency. Visit [Guide to Hospital Stays](#) for tips on managing diabetes while in hospital.

Do you know someone who you think is a Diabetes Champion? Let us know at dialogue@diabetes.ca.

INSPIRING KIDS WITH DIABETES

When Dahlgren joined the Broncos in 2017 as a forward and assistant captain, he created Dahlgren’s Diabeauties to show kids with type 1 diabetes that the disease does not have to affect their abilities or stop them from living. At each home game, one child was treated like a star, including dropping the puck in a ceremonial faceoff; Dahlgren also kept in touch with everyone afterwards through social media.

“It was amazing to see the impact this had on their lives,” Dahlgren says. “One young boy, who was super-shy and tried to hide his diabetes, spoke in front of the whole school about it.”

Dahlgren received Diabetes Canada’s 2019 Kurt Kroesen National Inspiration Award, which recognizes an individual or family who has overcome great odds to manage their diabetes and who continue to live a fulfilling, active, and inspiring life. “Kaleb is a cool guy in [kids’] lives and gives them strength. Parents see they can put their kids into hockey, soccer, and other sports safely, without holding them back,” says Sherri Pockett, who nominated Dahlgren. She is also membership chair for Diabetes Canada and secretary of the Winnipeg professional chapter.

FUEL FOR THE SOUL

Dahlgren is now attending York University in Toronto, where he trains with the hockey team and is working hard to be cleared by the medical staff to start playing hockey again. He is studying business, and his career goal is to become a chiropractor, specializing in sports. “I’d like to eventually move back to Saskatchewan and work with elite athletes on professional and university teams,” he says.

He is also continuing the Dahlgren’s Diabeauties program at home games for the York Lions (the university’s hockey team). “It helps me feel like I am making a difference in our world, and the smiles on the children’s faces make it all worthwhile,” he says. “I found that, after the accident, giving back helped me heal.”

Kaleb
Dahlgren



THE GENE FACTOR

Researcher suggests some people may be more likely to get type 2 diabetes and related conditions because of their genes

By Rosalind Stefanac

WHO: Dr. Satya Dash, assistant professor, Division of Endocrinology, Toronto General Hospital

RESEARCH HIGHLIGHTS/DISCOVERIES:

- Studying patients who have severe obesity, a risk factor for type 2 diabetes
- Finding that some patients have changes in their genes that put them at risk for mental health conditions and increased weight gain

How did you get interested in diabetes and genetics?

During my Endocrinology training, I was lucky to do my PhD under the supervision of Sir Stephen O’Rahilly, a leader in the research of obesity and insulin resistance. In my first paper, we described the first human genetic mutation [found in one family] that affects how glucose [sugar] is taken up by muscle and fat, and causes severe insulin resistance. Environmental factors—such as body weight, pregnancy, and puberty—worsened the effects of the mutation. A fundamental question to answer is, why do some people get insulin resistance and diabetes if they have excess weight?

How do you think insulin resistance, diabetes, and excess weight are connected?

Obesity, which increases your risk of diabetes, is to a large extent influenced by genes. We now have more than 250 obese patients [with a body mass index, or BMI, of more than 50] enrolled in our study. In our early findings, we have found that 15 per cent of them have genetic mutations which predispose them to mental health concerns. We also think that these genetic changes play a role in obesity. Now we’re looking at what is happening in the other 85 per cent of the people in the study: Interestingly, many have not developed diabetes or insulin resistance. We think genetic factors are important in protecting these patients from diabetes, and are working to find what those factors are.

What do you want to learn from your research?

There is still a lot of stigma associated with excess weight and diabetes—and mental health. I’m hoping our findings will make people realize it doesn’t always come down to a lack of willpower or choice. Bariatric surgery is the most effective weight-loss treatment for type 2 diabetes, but we don’t understand how it works. Genetic factors are important in how people respond to surgery, so we are interested in finding these factors to better understand why this surgery works for people with type 2 diabetes.



Dr. Satya Dash

What else are you working on now?

We’re studying how body weight and blood sugar are regulated, using treatments that act on the brain. Unfortunately, most people who lose weight, regain it. One major reason is that the amount of energy spent by the body goes down. A treatment that increases the amount of energy spent would be useful, but none currently exist. Glucagon is a hormone that can increase the energy that is spent by the body when given as an injection, but it also raises blood sugar. We recently showed that giving glucagon as a spray [instead of an injection] increases energy without raising blood sugar for 90 minutes by potentially acting on the brain. The effects were most prominent within the first 25 minutes, but it would be interesting to see what effects longer-acting preparations would have.

THE LAST WORD

“Dr. Dash is contributing to a growing body of research that is demonstrating [that] type 2 diabetes is not people’s fault. It’s in their genes.”
—Dr. Jan Hux, President and CEO, Diabetes Canada

Visit [Research](#) to read about the research projects and awards funded by Diabetes Canada.

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DR. SATYA DASH AT A GLANCE

- > Received a Diabetes Investigator Award from Diabetes Canada (2017)
- > Awarded the Reuben and Helene Dennis Scholarship, Banting & Best Diabetes Centre (2016)
- > Moved to Toronto to join the Banting & Best Diabetes Centre at University of Toronto (2011)
- > Earned his PhD from Cambridge University, England (2011)
- > Awarded a Medical Research Council Clinical Research Fellowship, Cambridge University (2006)
- > Earned his medical degree from St. Bartholomew’s Hospital Medical College, London (England) (2000)

FOOD INSECURITY & DIABETES

Find out how not having nutritious food can affect
your health—and how to stretch your food dollar

By Elizabeth McCammon

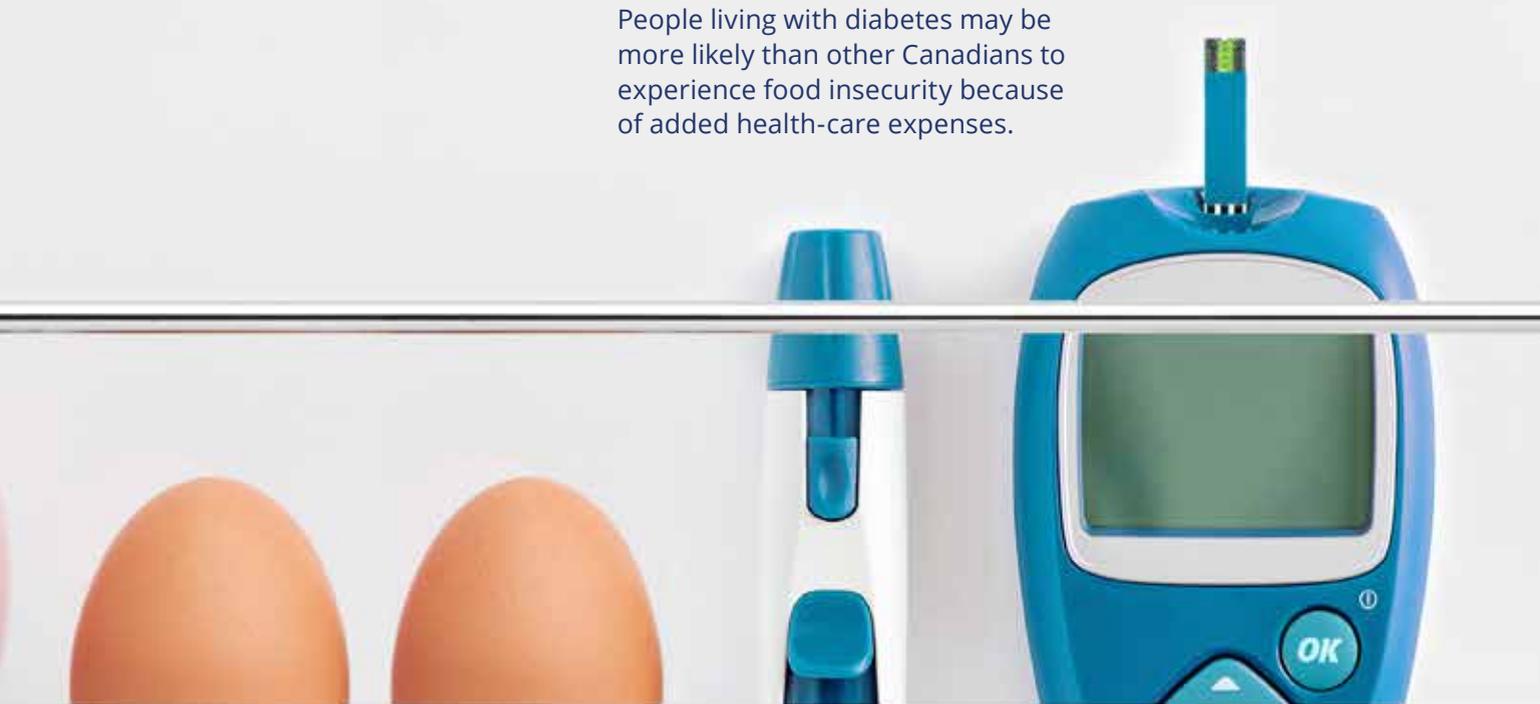


If you live with type 1 or type 2 diabetes, you probably already know that eating healthy meals can help manage your blood sugar levels and weight, while also reducing the risk of diabetes-related complications such as heart attack and stroke. A well-balanced, nutritious diet can also help prevent the development of type 2 diabetes.

Yet many Canadians cannot regularly get enough nutritious food for their overall health and well-being (a situation known as “food insecurity”). People living with diabetes may be more likely than other Canadians to experience food insecurity because of added health-care expenses—for medications, devices, and supplies—which competes with the need to buy healthy food. In order to save money, they also put off filling prescriptions, reuse needles, and check their blood sugar less often than recommended.

Rates of food insecurity vary across the country. According to **Statistics Canada**, the lowest rates of household food insecurity in 2011/12 (the most recent information available) were in Manitoba and Newfoundland, while the highest rates were in the Northwest Territories and Nunavut.

People living with diabetes may be more likely than other Canadians to experience food insecurity because of added health-care expenses.



ADDRESSING A PUBLIC HEALTH ISSUE



Diabetes Canada recently issued a policy statement about **Food Security**, which says all Canadians should have access to affordable, culturally appropriate, sufficient, safe, and nutritious food.

Diabetes Canada recommends that the federal government:

- > invest in social policies aimed at expanding access to employment, housing, and food for people living in poverty so that they will have sufficient income to provide for their nutrition needs
- > develop price policies to help make healthy foods more affordable, such as vouchers for fresh fruits and vegetables, or subsidizing fresh fruits and vegetables so they are cheaper than carbohydrate-laden, nutrient-poor food
- > work to improve the Nutrition North program to increase the availability of affordably priced foods in Canada's remote northern regions

"The availability and cost of healthy and nutritious food is a public health issue," says Krista Banasiak, research and public policy manager with Diabetes Canada. "As Diabetes Canada shifts our focus toward a population impact approach, it is important that we focus on the issues that impact populations."

Indigenous Canadians have high rates of food insecurity. "Canada's colonial policies and practices—including residential schooling, loss of culture, marginalization, relocation to remote northern regions, and unsettled land claims—have impacted food insecurity by severely limiting access to traditional diets," says Krista Banasiak, research and public policy manager with Diabetes Canada. "Among other social and environmental considerations, these have contributed to rates of diabetes that are three to five times higher for Indigenous Canadians than the non-Indigenous population."



Krista Banasiak

"We often think that people choose what foods they want to eat on any given day. However, not everyone has access to the same choices. People with fewer resources struggle to access healthy food. This is one reason that diabetes disproportionately affects individuals living with lower income."

—Krista Banasiak, research and public policy manager, Diabetes Canada

HOW LIMITED FOOD CHOICES AFFECT BLOOD SUGAR LEVELS

Bonita Nowe-Matheson regularly sees clients who struggle to eat healthy food. As a diabetes outreach dietitian with the Saint John Region Horizon Health Network in New Brunswick, she also sees how food insecurity affects their diabetes management.

"The foods that we recommend for good diabetes management—whole foods, higher-fibre, lower-sodium foods—cost more. When people lack money, their food choices are limited," she says.

When budgets are tight, people tend to eat fewer fruits and vegetables because they cost more than foods that are high in calories but low in nutrition. That could mean buying cheaper white bread instead of whole-wheat pita, which will cause blood sugar levels to rise.

"Many of my clients often have to decide between buying medication or food; between using bus fare to go to a medical appointment or to the grocery store. This isn't an issue of budgeting. There simply is no money."

—Bonita Nowe-Matheson, registered dietitian

When they cannot afford to buy enough food, some people may even skip meals, causing their blood sugar levels to drop. Nowe-Matheson says many of her clients are more likely to experience hypoglycemia (dangerously low blood sugar) toward the end of the month, as their money and food run low. "It is hard for people to reach their blood sugar targets if they don't have regular access to healthy foods. Over the long term, they are at risk of developing diabetes-related complications earlier," she says.



Bonita Nowe-Matheson

WHY FOOD BANKS ARE NOT THE ANSWER

Food banks are vital for people on low incomes, but they are often limited in their ability to serve clients with special health needs, such as those with diabetes. Many food banks do not have refrigerators, and so they rely largely on donations of food that will last longer and does not need to be refrigerated—meaning food that is packaged and non-perishable rather than fresh fruits and vegetables, dairy, or meat.

This creates a problem for Marleane Davidson, which she faces every two weeks when she gets a package of food from a Toronto food bank. Davidson, 53, has type 2 diabetes, high blood pressure, celiac disease (a digestive disorder in which

the body cannot handle gluten, a protein found in wheat and many packaged foods), and other food allergies. She is unable to work due to degenerative spine disease, and she struggles to cover her rent and other bills with the limited money she receives from the Ontario Disability Support Program (ODSP). She needs the food bank to stretch the few groceries she can afford, but she is dismayed by the quality of the food.

"I've had to skip meals, sometimes eating only once a day. I've passed out in the street because my blood sugar was so low."

—Marleane Davidson, person living with type 2 diabetes

"There are hardly any vegetables or fruits. Most of the food is processed and really high in salt, which I shouldn't have because of my blood pressure," Davidson says. Recent packages have included a bag of sugar, candies, and Cocoa Puffs cereal.

Davidson would like to see dietitians work with food banks to ensure their offerings follow *Canada's Food Guide* and meet the nutritional and health needs of their clients. She notes that some food banks now offer their clients gift cards for local grocery stores, allowing them to choose the food that best suits their needs. "Just because there are food banks, that doesn't mean everyone can get the food they need. For me and so many people like me, it is an everyday challenge to get something appropriate to eat."

STRETCHING LIMITED RESOURCES

Registered dietitian Bonita Nowe-Matheson offers advice to people living with diabetes and food insecurity:

- > Do not be embarrassed to talk with your health-care provider about your concerns regarding food security. They may be able to connect you with helpful resources in your community.
- > Ask your health-care provider to refer you to a social worker. Social workers usually have the most up-to-date information about government assistance programs.
- > Ask your diabetes care professionals to show you how to adjust your insulin or diabetes medication for different times of the day or month when you have less food.
- > Try to eat a meal or snack three times a day. If all you can afford is a box of mac and cheese, it is better to divide it into three portions spread throughout the day. Eating it all at once will cause your blood sugar to rise.
- > Drink water instead of pop, juice, or coffee—it is not only healthier, but cheaper, too.
- > Try to eat from at least three food groups each day. To balance your blood sugar between meals, include lower-cost protein such as eggs, peanut butter, lentils, or beans.
- > Add one additional serving of fruit a day. If you are currently eating none, add one; if you are eating one, try to eat two.
- > Buy frozen or canned fruits and vegetables, which are often cheaper but just as nutritious as fresh. Drain and rinse canned foods to remove some of the salt.



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**DIABETES
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Making Life Easier

CERTIFIED DIABETES EDUCATORS CAN HELP YOU KEEP YOUR DIABETES MANAGEMENT ON TRACK

By Anne Bokma

Certified diabetes educators are an important part of your diabetes team, especially if you are newly diagnosed with diabetes or are experiencing changes in your diabetes treatment, general health, or life circumstances. They can play an important role in helping you set goals, and can identify strategies that will help you manage your diabetes and live a happier and healthier life.

DEALING WITH MEMORY ISSUES

Garry Mallel was worried about his mother, Hilda, who has lived with type 1 diabetes since she was diagnosed at age six. Hilda, now 80, has age-related memory loss, which means she would often forget to take her insulin or, more commonly, would give herself too many doses. Her son's concern was natural given that Hilda was constantly in and out of hospital. Once, she even broke her hip due to a fall she suffered because of low blood sugar. "We got so used to her going to the hospital that it became the new normal," says Garry, 58, who lives in Vancouver, not far from the seniors' building where his mother lives in her own apartment. "I felt like she was in constant danger."

Garry made an appointment for his mother to see endocrinologist Dr. Tom Elliott of BC Diabetes, a diabetes specialty clinic. To help Hilda better manage her diabetes, last year Elliott assigned Gerri Klein, a registered nurse and certified diabetes educator, to her case. "The first thing I did was a home visit, and I found all these little notes around the house that Hilda had written to remind



Hilda Mallel and Gerri Klein

herself to take her medication," says Klein, who discovered that Hilda was taking too much insulin. "She would check her blood sugar, see that it was high, forget that she had already taken her insulin and give herself another dose."

"Age-related forgetfulness in people with diabetes means they can be at risk of overdosing or underdosing."

—Gerri Klein, registered nurse
and certified diabetes educator

With the family's permission, Klein used a lockbox to prevent Hilda from taking her insulin on her own, and put a plan in place to ensure her medication is carefully monitored. Now Hilda's insulin is placed inside the lockbox, which has a combination that can only be opened by one of the licensed practical nurses on staff at Pier Health Resource Centre pharmacy, who visit daily to check Hilda's blood sugar and administer her insulin. (The \$33 daily fee for this service is covered by the income-based B.C. Fair PharmaCare Plan.) Hilda also now wears a flash glucose monitor, which automatically measures and stores blood sugar readings for up to eight hours. "The pharmacy staff drills into this data and contacts me to let me know if she is on target, and we make adjustments to her dosage accordingly," says Klein, who also does a home visit with Hilda once a month. "This is a real partnership," says Klein. "The nature of my job is to take on patients who require extra care. I love the challenge."



Calysta Priddy and Alanna Quewezance

The system means Hilda can continue to live in her apartment rather than going into a long-term care residence. “Her life has really improved,” says Garry, although he admits that his mother is sometimes frustrated by the fact that she can no longer access her medication on her own. “For 74 years she’s had total control over her insulin usage, and now someone has to unlock it for her.” But Hilda knows this is for her safety. “Everything is locked up now and I don’t know the code. But that means I won’t give myself any extra injections. When I broke my hip, I had low blood sugar and fell off my chair. My neighbour heard me screaming and called the paramedics. I feel a lot more confident now.”

Life is now easier and less stressful for both Hilda and Garry. “Gerri has helped my mom by the system she has implemented,” says Garry. They used to have to call 911 or visit the hospital emergency room “at least once a month” because of Hilda’s low blood sugar levels—something they have not had to do since Klein set up the new system. “This enables her to continue living independently,” Garry says. “It also means I don’t have to panic if I don’t hear from her by a certain time.”

“There have been many times when I’ve had low blood sugar and collapsed. I don’t want that to happen again.”

—Hilda Mallel, who lives with type 1 diabetes

A FULL-TEAM APPROACH

Alanna Quewezance, a member of the Yellow Quill First Nation, is more confident about managing her health today thanks to the help she has received from Calysta Priddy, a registered dietitian and certified diabetes educator at the Westside Community Clinic in Saskatoon. After being diagnosed with type 2 diabetes at the age of 18 and then suffering a stroke two years ago at age 31 that left her with a feeling of weakness in her legs, Quewezance wanted help getting back on her feet so she could go back to her job as an educational assistant at the Catholic school board in Saskatoon.

“I am getting stronger and am able to do things that I couldn’t do before.”

—Alanna Quewezance, who lives with type 2 diabetes

Priddy did a chronic disease management assessment for Quewezance, and discovered she was frequently experiencing low blood sugars that were causing dizziness. “She was having a lot of anxiety around having these lows and with her history of stroke, this made her anxiety even higher,” says Priddy, who recommended that Quewezance be switched to a newer once-a-day insulin that has stabilized her blood sugars. Currently, Quewezance’s care team is looking at adding an SGLT-2 inhibitor (which reduces sugar levels in the body by increasing the amount

of sugar passed in the urine) to her medication plan since the drug offers important cardiovascular protection; the drug would be fully covered under Quewezance's health plan.

Priddy, along with other members of the diabetes team, also helped to connect Quewezance with an occupational therapist who arranged access to a scooter to allow for greater independence, and a physical therapist to improve her physical strength. She is now able to walk short distances, and is working on building her strength by using the treadmill at her local gym and swimming at the YMCA.

“Alanna trusted us to support her in making a medication change and to help her feel more confident in her ability to manage her diabetes.”

—Calysta Priddy, registered dietitian and certified diabetes educator

Priddy describes herself as a “non-diet/weight-inclusive dietitian” who works with her clients to emphasize healthy living strategies such as carb counting, meal balance, and mindful eating. “Many clients struggle with body image and may feel blamed or shamed for their weight. It’s important to remember that healthy bodies come in all shapes and sizes and we need to take the focus off the number on the scale,” she says. “Part of my role is to help clients understand the aspects of their lives that they can build upon that will bring them joy and help them feel their best. If we build healthy behaviours, we will see improvements in health independent of weight loss.”

Quewezance feels hopeful about the future, and is determined to work at improving her health and building her strength so she can go back to her job. Working with Priddy “has been amazing,” she says. “I am doing so much better—my energy level is good and I am getting back to my old self.”

Priddy describes their relationship this way: “We are driving in the same car—Alanna is the driver and I’m along for the ride. Sometimes I’ll point out something interesting or we’ll decide together to take a different path. Sometimes I provide the directions when [Alanna] needs help,” she says. “At the end of the day, my job is to help patients like Alanna have the knowledge they need to support good self-management.”

DID YOU KNOW?

You can find information on everything from tips on meal planning, reducing stress, and diabetes-related complications, to webinars with expert speakers and inspirational stories at [Managing My Diabetes](#).

Make the most of expert advice

The *Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada* offer key messages to help people with diabetes better manage the disease, including:

> **ASK FOR DIABETES SELF-MANAGEMENT EDUCATION AND SUPPORT** when you are first diagnosed, as well as whenever there are changes in your diabetes treatment, general health, or life.

> **WORK WITH YOUR DIABETES TEAM TO SET PERSONALIZED GOALS** for caring for your diabetes and overall health.

> **CHOOSE THE LEARNING APPROACH THAT WORKS FOR YOU:** A variety of diabetes education and support programs are available, including group classes and individual counselling sessions, as well as strategies that use technology (such as Internet-based computer programs and mobile phone apps).

For more information, go to [Self-Management Education & Support](#).



TIME FOR brunch



ENJOY THIS SOCIAL TIME WITH FRIENDS AND FAMILY

By Rosie Schwartz, RD, FDC

Brunch has been a popular weekend event since it was first introduced, some historians believe, in 1890s Britain. Originally, this meal was meant to replace the traditional heavy Sunday luncheon by combining breakfast and lunch with a relaxing social time and a lighter meal. Nowadays, though, brunch can end up being a feast that makes other meals look like a snack. But with a little know-how, you can enjoy this pastime with your family and friends without dealing with possible challenges afterwards.

BRUNCH AROUND THE WORLD

While this mid-morning meal varies as you travel the globe, eggs appear to be a favourite whether it is omelettes in North America, a tomato-based shakshuka (poached eggs) in the Middle East, or tapsilog (a fried egg plus other dishes such as fried rice) from the Philippines. In the Caribbean, ackee (a fruit that looks like scrambled eggs) and saltfish are often served with fried dumplings.

Dumplings are also a big part of Chinese dim sum, which features steamed and fried dough with savoury or sweet fillings. In other parts of Asia, soups and curries may be on the menu at any meal of the day, including breakfast.

WHAT IS ON YOUR MENU?

Because brunch is a combination of two meals, the temptation is to eat as much in one sitting as you would normally eat in two meals, says Joanne Lewis, a registered dietitian and certified diabetes educator, and director of healthy eating and nutrition programming at Diabetes Canada. “[This] can be manageable for some people with diabetes,” she says, “especially if they are able to dose insulin according to their carb intake.” But eating a big meal rather than smaller amounts of food throughout the day does not give your body time to digest and handle the sugar (glucose) from carbohydrates before you eat the next meal.

A big concern, according to Lewis, is that “the traditional offerings at brunch are generally carb-heavy. There can be breads, pastries, waffles, pancakes, and/or potatoes on the menu, which may [have] a high glycemic index [and which

could raise your blood sugar very quickly]. In addition to the carbs, there are often high-sodium and high-saturated-fat items, such as sausage and bacon.”

The good news? There are many healthier alternatives. You can keep carb counts down by filling up on low-carb vegetables, such as salads and cooked dishes that include veggies, and choosing smaller portions of high-carb veggies. Eating more protein and whole grains will also help you stay within your carbohydrate budget (the amount of carbs your body can handle at one time in order to keep your blood sugar at target two hours after you eat).

OTHER BRUNCH TIPS

Brunch can vary from mid- to late morning. If you will be eating closer to noon, Lewis suggests having a light meal when you wake up to prevent low blood sugar, especially if you are taking oral diabetes medications or a fixed dose of insulin in the morning (such as a premixed insulin). But even if you are not taking any medication for diabetes, being too hungry can cause you to overeat once you do sit down for brunch.

To avoid mindless eating or the temptation to eat more, put your knife and fork on the plate and push it away from you, to signify to yourself and others that you have finished eating.

Once brunch is over, Lewis suggests taking a walk, which can help to reduce post-meal blood sugar readings.

DID YOU KNOW?

- **Carbohydrate counting is a flexible way to plan your meals.** To learn more, visit [Basic Carbohydrate Counting for Diabetes Management](#).

Turn the page for three delicious brunch dishes. For more ideas, visit [Recipes](#).



You can keep carb counts down by filling up on low-carb vegetables, such as salads and cooked dishes that include veggies, and choosing smaller portions of high-carb veggies.



Mexican Baked Eggs on Black Beans

This recipe, courtesy of canolainfo.org and featured

on [Diabetes Canada](http://DiabetesCanada.org), is a favourite of brunch diners at many eateries—but making it at home allows you to control the amount of various ingredients such as sodium. The dish can also be prepared in a two-quart (2.25 L) casserole dish.

- 1 tbsp (15 mL) canola oil
- ¾ cup (175 mL) minced onion
- 1 tsp (5 mL) chili powder
- ½ tsp (2 mL) ground cumin
- ½ tsp (2 mL) crushed red pepper flakes (or to taste)
- 1 can (541 mL/19 oz.) low-sodium black beans, rinsed and drained
- 1 can (541 mL/19 oz.) low-sodium diced tomatoes
- 6 eggs
- ¼ cup (50 mL) grated cheddar cheese

In a large saucepan, heat canola oil over medium heat. Add onion and sauté for about 5 minutes. Add chili powder, cumin, and red pepper flakes; stir for 2 minutes. If you like it extra spicy, add more red pepper flakes to taste.

Add black beans and tomatoes. Stir. Bring to a simmer, cover, and cook for 15-30 minutes, until thickened to desired texture. While mixture cooks, preheat oven to 350°F (180°C).

Lightly brush 6 ramekins (placed on a baking sheet) with cooking oil spray or a little canola oil. Mash bean mixture well and evenly divide among the dishes. Make a shallow well in the middle of each one.

Carefully crack 1 egg on top of each well. Sprinkle lightly with cheese. Bake for 15 minutes or until egg is cooked to desired doneness.

Makes 6 servings

Nutritional breakdown per serving:
19 g carbohydrate, 12 g protein, 9 g total fat, 2.5 g saturated fat, 5 g fibre, 300 mg sodium, 190 calories



Crustless Apple & Roasted Fennel Quiche

Here is another offering courtesy of canolainfo.org

and featured on [Diabetes Canada](http://DiabetesCanada.org). This crustless quiche saves on carbohydrates, which allows you to choose other selections and still stay within your carbohydrate budget. Fennel offers a sweet and mellow flavour that complements the apples beautifully.

- 3 cups (750 mL) diced fresh fennel (use both the white and green stalks)
- 2 tbsp (30 mL) canola oil, divided, plus extra to oil the quiche pan
- ¼ tsp (1 mL) freshly ground pepper, divided
- 1 medium onion, chopped
- 3 eggs
- 6 egg whites
- 1 cup (250 mL) skim milk
- 1 apple, unpeeled, coarsely grated
- ½ cup (125 mL) grated low-fat Swiss cheese

Preheat oven to 400°F (200°C). Line a baking sheet with parchment paper.

Toss fennel in 1 tbsp (15 mL) of the canola oil and season with ⅛ tsp (0.5 mL) pepper. Place on baking sheet and roast for 25 minutes.

In a saucepan, heat the remaining 1 tbsp (15 mL) of canola oil. Sauté onion for 5-6 minutes. Remove from heat.

In a large bowl, whisk eggs and egg whites. Add milk and continue to whisk. Add remaining ⅛ tsp (0.5 mL) pepper.

Add roasted fennel, onions, grated apple, and cheese to eggs; stir to combine. Transfer to an oiled 9-in. (22 cm) round deep-dish pie pan or quiche pan, and bake for 35 to 40 minutes or until set.

Makes 4 servings

Nutritional breakdown per serving:
20 g carbohydrate, 16 g protein, 12 g total fat, 2.5 g saturated fat, 4 g fibre, 170 mg sodium, 250 calories



African Peanut Soup

This recipe offers lots of flavour and nutrition using peanut butter in a different way. It is

from *Nourish, Whole Food Recipes* (Whitecap) by Nettie Cronish and Cara Rosenbloom, RD.

- 1 tbsp (15 mL) extra-virgin olive oil
- 1½ tbsp (22 mL) fresh ginger, grated
- 3 garlic cloves, minced
- 1 red onion, diced
- 1 medium sweet potato, peeled and diced
- 1 tsp (5 mL) ground cumin
- ¼ tsp (1 mL) crushed red pepper flakes
- 1 can (156 mL/5.5 oz.) tomato paste
- ½ cup (125 mL) natural chunky peanut butter
- 5 cups (1.25 L) no-added-salt vegetable broth
- 4 cups (1 L) spinach, cut into strips
- ¼ cup (50 mL) fresh cilantro, chopped
- ½ cup (125 mL) unsalted roasted peanuts

In a large saucepan, heat olive oil over medium heat. Sauté ginger and garlic for 1-2 minutes or until soft and fragrant. Add onion and sweet potato; sauté for about 5 minutes, or until onion is softened. Stir in cumin and red pepper flakes.

Add tomato paste and peanut butter, and stir until everything is evenly mixed. Add vegetable broth and stir to dissolve the thick paste-peanut butter mixture.

Bring to a boil; reduce heat to low and simmer for 15-20 minutes, or until sweet potatoes are soft. Once soft, mash about half the sweet potatoes to help thicken the soup. Add spinach and cook another 2-3 minutes, or until spinach wilts. Serve garnished with cilantro and peanuts.

Makes 6 servings

Nutritional breakdown per 1½ cup (325 mL) serving: 26 g carbohydrate, 11 g protein, 19 g total fat, 3 g saturated fat, 6 g fibre, 141 mg sodium, 305 calories



Diabetes & Drinking

HERE IS WHAT YOU
SHOULD CONSIDER

By Alyssa Schwartz

From Ontario's "Buck-a-Beer" plan to B.C.'s recent move to allow the sale of wine in grocery stores, alcohol is becoming more available across Canada. If you live with diabetes, you might think you should not or cannot drink—but as a general rule, you can. However, there are some things to keep in mind.

If you take insulin or certain oral medications that can cause hypoglycemia (low blood sugar), alcohol can increase your risk of having a low. "Alcohol can keep the liver busy breaking down the alcohol, and that prevents the liver from releasing blood sugar when it's needed to prevent a low," explains Erin Krusky, a registered dietitian and the manager of education and outreach at Diabetes Canada.

Alcohol can also have other effects on your blood sugar. "Some alcoholic drinks, such as wine coolers, liqueurs, or mixed drinks that contain regular pop or juice, may have added sugar. Beer can also contain some carbohydrates because it is made from barley and/or other grains," says Krusky. This makes it even more important to monitor your blood sugar when drinking, and to have something on hand (such as glucose tablets or regular pop) to treat lows if they occur. It also helps to have alcohol with a meal or snack that includes a carbohydrate, and to alternate between water and alcohol to reduce your risk of becoming dehydrated (meaning the body has lost a large amount of water).

Another concern is that if you have been drinking—especially if you drink more than recommended limits—you may not think clearly, making you less likely to recognize and respond to a low, says Krusky.

Low blood sugar is not the only health concern when it comes to alcohol. "In all people, alcohol can increase blood pressure and certain cholesterol levels," says Krusky.

"People with diabetes [already] have an increased risk of cardiovascular diseases like heart attacks and strokes. Drinking more than the recommended amount of alcohol can push that risk up even further."

For women, the recommended limit is no more than two standard drinks per day (see "Did You Know?" for the definition of a "standard drink"), to a maximum of 10 per week; for men, no more than three standard drinks per day, or less than 15 total drinks per week. (These recommendations apply to everyone, whether or not you live with diabetes.) "For those with high blood pressure [whether or not they have diabetes], the recommended daily intakes are lower: one standard drink per day for women, and two or less standard drinks per day for men," says Krusky.

Balance is key, and so is enjoyment. "There aren't any foods or drinks that you need to avoid completely," says Krusky. "It's important that you feel you can join in a toast for a friend or family member at a special celebration if you want to."

DID YOU KNOW?

Differences in alcohol concentration mean the size of a drink will depend on the type of booze being poured, even though one standard drink will always contain 10 grams of alcohol. One standard drink is:

- 341 mL/12 fluid ounces of beer
- 43 mL/1.5 fluid ounces of spirits
- 142 mL/5 fluid ounces of wine

Learn more by visiting [Alcohol and Diabetes](#).

Stick with it!

Five tips for creating exercise success

By Barb Gormley

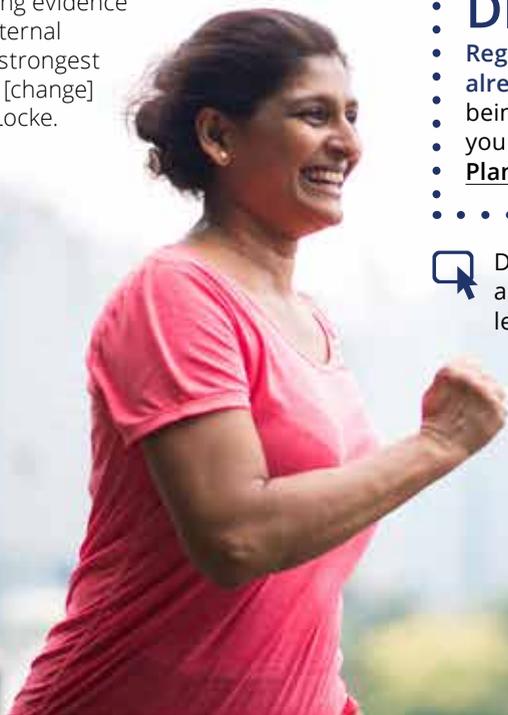
Being active has long been championed as a route to better blood sugar (glucose) control. But it can be easier said than done for people living with diabetes or prediabetes (a condition where blood sugars are higher than normal but not yet high enough to be diagnosed as type 2 diabetes).

“Some people find exercising incredibly challenging, especially if they don’t believe they’ll be able to stick to a fitness routine,” says Sean Locke, a post-doctoral fellow in the School of Health and Exercise Sciences at the University of British Columbia’s Okanagan campus in Kelowna, B.C. Locke is also a counsellor with UBC’s “Small Steps for Big Changes,” a one-on-one, three-week fitness and counselling program that helps people make changes to their diets and exercise routines. Under the supervision of associate professor Mary Jung, and with funding from Diabetes Canada, his research focuses on strategies to help people become physically active and lower their risk of developing type 2 diabetes.

If you are finding it tough to get going, here are Locke’s top five strategies:

- 1 BELIEVE IN YOURSELF** Self-confidence is one of the most important factors in your exercise success. Fortunately, you can develop this positive feeling; each one of your successes, no matter how small, will help. “If your confidence in starting an exercise program is low, begin with a simple 10-minute walk a few times a week, and add five minutes per week,” Locke says.
- 2 BE CLEAR ABOUT YOUR “WHY?”** What are the benefits of being active for you: more energy, losing weight, feeling fewer muscle aches and pains? Thinking about what you will get from exercise may help inspire you to get started with a routine and to keep going.

“There’s very strong evidence to suggest that internal motivation is the strongest motivator to help [change] behaviour,” says Locke.



External motivation—such as a suggestion from your doctor—might be well-meaning but may not inspire you to create a lifetime exercise habit.



Sean Locke

- 3 CHANGE NEGATIVE SELF-TALK** Beware of biased thoughts about exercise and negative self-talk, says Locke. For example, he says, “Don’t automatically jump to the conclusion that you don’t have time for exercise because you feel busy. Instead of talking yourself out of exercise, ask yourself, ‘Am I really too busy to walk for even just a few minutes?’ It’s important to distinguish between when we’re actually too busy versus when we feel busy but could be active.”
- 4 FIND A BUDDY** Even if you are the most dedicated exerciser, some days you just may not be able to stick to your schedule. On days when you may not “feel like it,” it helps to have someone supportive on your side. A workout buddy, a personal trainer, or a fitness counsellor can provide motivational support when you need it.
- 5 GET REAL** Do not set exercise targets and goals that are too hard for you to live up to. “Understand that illness and unexpected interruptions are going to come up,” says Locke. “If you miss a workout, don’t feel guilty or let it throw you off track. Instead, think back to why exercising is important to you, let your response be more self-compassionate, and realize that tomorrow is another day.”

DID YOU KNOW?

Regular physical activity can be something you already do: for example, gardening or walking. Just being more regular with your activity will benefit your diabetes. If you need help getting started, visit [Planning for Regular Physical Activity](#).



Do you have a story about the difference physical activity has made for you and your health? Please let us know at dialogue@diabetes.ca.

PAYING FOR GLUCOSE MONITORING DEVICES

Learn how these devices can improve the quality of life for people with diabetes, and why we need improved access

By Laura Tennant



Ann Besner

Monitoring your blood sugar (glucose) levels can help you manage your diabetes better and, for many people, it can even prevent life-threatening emergencies and complications. However, monitoring can be expensive—devices and supplies may cost up to several thousands of dollars yearly, depending on the system and testing frequency. The

full cost of monitoring is often not covered by insurance plans, and some people have no coverage at all—this is something Diabetes Canada is working hard to change. *Diabetes Dialogue* spoke with Ann Besner, research and policy analysis manager at Diabetes Canada, to learn more about this issue.

What kinds of glucose monitoring devices are available?

Many people use a glucometer: This involves drawing a small drop of blood from the fingertip and applying it to a test strip fed into a glucometer, which provides a reading within seconds. The meters of today are more sophisticated. Many of them can log hundreds of readings and include features such as information uploads to smartphone apps.

Within the past 20 years, some people, particularly those with type 1 diabetes, have started using a continuous glucose monitoring system [CGM], which automatically monitors glucose levels every five minutes using a sensor inserted under the skin, and wirelessly sends these readings to a receiver, smartphone, or insulin pump. The device can alert you to highs and lows, tell you which way your glucose is heading and how quickly it is rising or falling. A flash glucose monitoring system, another fairly recent innovation, also uses a sensor worn on the skin to continuously measure glucose levels, detect trends, and track patterns; users can access their glucose readings at any time by scanning the device with a special reader or compatible smartphone app.

What difference do these devices make for people with diabetes?

They can save lives! One of the newest technologies, the hybrid closed-loop system, intended for people over seven years old with type 1 diabetes, combines CGM with an insulin pump. When the monitor detects that your glucose level is approaching a preset low limit, the

pump can stop the insulin infusion to help the person avoid hypoglycemia [low blood sugar], which can be life-threatening. The pump automatically restarts insulin when glucose levels have recovered.

The great thing is that there are so many different glucose monitoring systems now on the market! You should work with your health-care team to find the device that best meets your needs.

How does a person's insurance coverage affect whether they can afford various devices?

Insurance plans differ in what and how much they cover, how often coverage is provided, and what the eligibility criteria are for coverage. Most public plans cover a portion of the cost of test strips, but in certain provinces, the number of strips that are reimbursed is lower than what Diabetes Canada would recommend. Also, none of the provincial plans have yet approved coverage of continuous or flash glucose monitoring devices. We are actively working to address both of these situations.

Private insurance plans are often more generous than public plans in what they will cover, but they are still expensive: There may be co-pays, deductibles, or yearly maximums on plans, and whatever isn't reimbursed must be paid by you. We know many Canadians have to adjust their personal budgets or borrow money so they can afford the expense of monitoring. And, unfortunately, lots of people simply aren't able to monitor as often as they'd like or use the technology that's most appropriate for them, because of the cost.

Diabetes Canada believes everyone with diabetes has a right to the tools and treatments that will help them best manage their disease. That's why we are advocating for enhanced access, through governments and private insurers, to various monitoring systems and supplies. Visit [Advocacy & Policies](#) to learn how you can help.

DID YOU KNOW?

- Since 2013, Canada has been without a diabetes strategy to help address the epidemic. Learn more
- about Diabetes 360° and [email your candidate](#) today.

How can you help us fund research, projects, and campaigns that change lives? [Donate](#) now!



Diabetes hurts all Canadians.

With 11 million Canadians now living with diabetes or prediabetes, and health care costs nearly \$30 billion per year, diabetes is a disease that impacts every Canadian. Without a nation-wide plan, the toll diabetes takes will continue to grow.

Help us end the epidemic.

Call on federal political parties to support a nation-wide diabetes strategy now.

Diabetes 360° is the solution!

www.diabetes.ca/strategy

DIABETES
CANADA