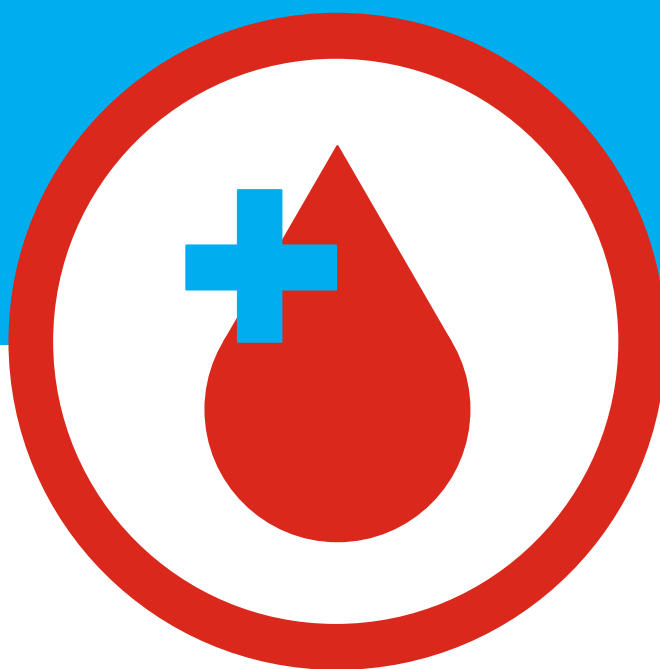


# PREVENTING AND MANAGING DIABETES IN OLDER PERSONS

INFORMATION FOR OLDER ADULTS, FAMILIES,  
AND CAREGIVERS



## READ THIS PAMPHLET TO LEARN:

- What diabetes is and what types of diabetes there are
- How to prevent diabetes
- How to manage your diabetes and prevent complications



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Healthy Ageing  
and Geriatrics



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## WHAT IS DIABETES?

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Diabetes is a disease which causes your body to not produce insulin or not be able to properly use the insulin it produces. The role of insulin, a hormone produced by your pancreas, is to regulate your blood glucose (sugar) levels. There are over three million Canadians living with diagnosed diabetes, a figure that increases 3.3 per cent each year. Over half of all Canadians living with diabetes are adults aged 65 years and older.



## WHAT ARE THE TYPES OF DIABETES?

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There are three main types of diabetes including type 1, type 2 and gestational diabetes. Gestational diabetes, which can occur during pregnancy, will not be discussed further in this pamphlet. Additionally, prediabetes is a condition which indicates an increased risk of developing type 2 diabetes.

### TYPE 1

Type 1 diabetes is an autoimmune disease which is usually first experienced in childhood/adolescence but can also develop in both adults and older adults. People with type 1 diabetes are unable to produce their own insulin, and therefore must take insulin injections or use an insulin pump to control their blood sugar levels. Approximately 10% of people living with diabetes have type 1 diabetes.

### TYPE 2

Approximately 90% of people living with diabetes have type 2 diabetes. Type 2 diabetes is where your pancreas can't produce enough insulin or your cells are not able to use insulin properly. This type of diabetes is most commonly developed in adulthood and older adults are especially likely to develop this type of diabetes due to a variety of factors that impact the ability of our bodies to process sugars. However, there are things that can be done to prevent type 2 diabetes and successfully manage it. For example, there are supports available to help you eat healthy and exercise. This pamphlet will primarily focus on how to prevent and manage type 2 diabetes.

## PREDIABETES

Prediabetes is a condition where blood glucose levels are higher than normal but not high enough to be diagnosed as type 2 diabetes. If not managed, this condition may cause you to develop type 2 diabetes. Adopting a healthy lifestyle and taking steps to manage your blood glucose levels can help to prevent or delay the onset of type 2 diabetes.

## SYMPTOMS OF DIABETES

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Common symptoms of type 1 and type 2 diabetes can include:

- Increased thirst
- Frequent urination (sometimes as often as every hour)
- Unusual weight loss or weight gain
- Extreme fatigue or loss of energy
- Blurred vision
- Frequent or recurring infections
- Wounds that heal slowly
- Numbness or tingling in the feet or hands
- Sexual dysfunction
- Diabetic ketoacidosis (DKA)



The symptoms of prediabetes are roughly the same as type 1 and type 2 diabetes, except for diabetic ketoacidosis (DKA), which is a symptom of type 1 and type 2 diabetes only.

Not everyone who has diabetes will show symptoms. This is why it is important for older adults to get regular blood sugar tests. It is recommended that if you are over the age of 40, you should be tested at least once every 3 years. If you have contributing factors that increase your chances of developing type 2 diabetes, you should be tested more frequently. Public Health Agency of Canada (PHAC) also offers a [free online tool](#) called CANRISK to help you evaluate your risk of developing diabetes.

# WHAT ARE SOME CONTRIBUTING FACTORS FOR DEVELOPING DIABETES?

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## TYPE 1

- Family history of diabetes
- Age: typically type 1 diabetes develops in children, teens, and young adults but can also develop in adults and older adults

## TYPE 2

- Age: type 2 diabetes most often develops in people over the age of 45
- Lack of physical activity
- Poor eating habits due to access and affordability of healthy foods
- Obesity
- Tobacco use
- Ethnicity: it has been shown that Indigenous, African, East African, and South Asian individuals are at a higher risk of developing type 2 diabetes
- Family history of diabetes
- Determinants of health related to income, education level, employment and working conditions, food security, early childhood development, social support and connectedness, the built environment, and access to the internet, technology, and health care services

It is well acknowledged that where you live, your income, access to health care, and/or whether you experience discrimination can impact your likelihood of developing chronic diseases, like diabetes, in later life. These are examples of the social determinants of health and represent broader factors that contribute to some Canadians, such as Indigenous Peoples, having a greater risk of developing diabetes.

# WHAT COMPLICATIONS ARE ASSOCIATED WITH DIABETES IN OLDER ADULTS?

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Below is a list of common complications experienced by older adults who have diabetes.



## HIGH BLOOD PRESSURE

Diabetes puts people at an increased risk of high blood pressure. Older adults who have high blood pressure are at an increased risk for experiencing heart attacks and strokes. High blood pressure can also impact your circulation, kidneys, and vision.



## DEPRESSION

Living with diabetes can be stressful, which may contribute to depression.



## FALLS

Having diabetes can increase the likelihood of falling because diabetes can cause complications that impact vision and balance.



## URINARY INCONTINENCE

Diabetes can cause a loss of bladder control because it damages nerves in your bladder.



## MEMORY PROBLEMS

Older adults living with diabetes are at an increased risk of cognitive impairment, which can affect your ability to think clearly, recall, remember, and use good judgement, including around being able to independently manage your diabetes care needs.



## NERVE PAIN

Diabetes can cause nerve damage, called neuropathy. It can cause feelings of burning, tingling, and numbness.



## **MULTIPLE MEDICATION COMPLICATIONS**

Many older adults take several medications. Taking multiple medications in addition to diabetes medications can increase the risk of medication-related complications.

It is important to speak to your primary health care provider if you are experiencing any symptoms related to these complications. They can advise you on what options are available for you to manage and/or reduce your chances of developing these complications.

## **HOW CAN YOU BE SCREENED AND TESTED FOR DIABETES?**

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Your primary health care provider can use one or more of the following tests to diagnose diabetes:

### **FASTING BLOOD GLUCOSE TESTING**

In this test, blood is drawn after a fast of 8 hours to test blood glucose levels. The test is usually repeated a second time.

### **ORAL GLUCOSE TOLERANCE TEST**

A blood sample is taken before you drink a sugary beverage and 2-3 hours afterwards to test blood glucose levels.

### **CASUAL OR RANDOM BLOOD GLUCOSE TEST**

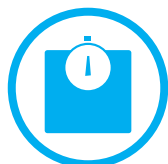
This test is performed in-office by taking a drop of blood from your finger.

### **HEMOGLOBIN A1C TEST**

This blood test is used both to diagnose diabetes and to monitor the disease (typically performed every 3 months).

# STRATEGIES TO ENABLE HEALTHY AGEING AND REDUCE YOUR RISK OF DEVELOPING TYPE 2 DIABETES

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## MANAGING YOUR WEIGHT

Living overweight is a leading cause of diabetes. Losing weight can help if your weight is above the healthy weight range.



## HAVING A HEALTHY DIET

Choose whole grain products over refined and other highly processed carbohydrates, avoid sugary drinks, choose healthy fats and limit red meat and processed meat. Instead, choose beans, nuts, whole grains, poultry, or fish.



## EXERCISING REGULARLY

Engage in exercise that aligns with your physical abilities and if possible for at least 150 minutes a week.

# HOW CAN YOU AND YOUR CAREGIVER(S) HELP TO PREVENT AND MANAGE YOUR PREDIABETES/DIABETES?

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Glycemic control (controlling your blood glucose levels) is the most important aspect of preventing and managing diabetes and preventing complications associated with diabetes. Here are some ways that you and/or your caregivers can manage your blood sugar levels:

## LIFESTYLE AND MANAGEMENT

- Choose healthy, low-calorie foods
- Exercise regularly
- Be able to recognize the symptoms of high blood glucose and low blood glucose
- Manage your stress levels
- Understand your medications, including non-diabetes medications. You can check in with a pharmacist to understand your medications better. Questions to ask can include:
  - Why you are taking it?
  - How and when should you take it?
  - What are common side effects?



## MEDICAL CARE AND TREATMENTS

- Insulin and non-insulin medications
- Monitor your blood glucose levels
- Determine your Hemoglobin A1c Level Target
  - As we age, our blood glucose targets change. Talk to your primary care provider to determine the target that is right for you.





# PREVENTING COMPLICATIONS OF DIABETES

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Over time, high levels of sugar (glucose) in your bloodstream can damage your nerves and small blood vessels in your kidneys, eyes, and heart. This can put you at a higher risk for visual impairment, blindness, heart and kidney problems. Preventing and managing risk factors for these complications is important. Let's look at ways of preventing common complications.



## HEART DISEASE

Heart problems and cardiovascular disease are very common with diabetes. To prevent and manage risk factors for heart disease, older adults are advised to:

- Lose weight if necessary
- Increase physical activity
- Quit smoking



## FOOT CARE

Diabetes can cause problems with circulation and blood vessels. This means that people living with diabetes have a high risk of serious foot complications. To prevent this, ensure that your health care provider examines your feet at least once a year, and self-examine your feet daily. If you see any changes to your feet or signs of damage, including ulcers, discoloured toes, or sores, tell your primary care provider immediately. Additionally, take good care of your toenails to prevent foot infections.



## EYE CARE

Blood vessel and circulation problems can also affect your eyes. Get your eyes examined by an eye doctor each year or as recommended.



## OTHER STEPS TO PREVENT DIABETES COMPLICATIONS

- Review the medications you are taking which might increase your blood glucose levels.
- Have a urine test each year. Having a protein called albumin in urine can be a sign of kidney damage.
- See your dentist twice a year to keep your teeth and gums healthy.
- Get a flu shot every year and check annually to ensure you are up to date on all of your vaccines.
- Protect your skin from the sun.
- Take care of bruises and cuts to prevent infections.

# TIPS FOR CAREGIVERS: MANAGING DIABETES WITH COGNITIVE IMPAIRMENT/DEMENTIA

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## SUPPORTING AND ENABLING INDEPENDENCE

Cognitive impairment and dementia can make managing food intake, medicines and physical activity very difficult.

In the early stages of dementia, older adults may be able to manage their self-care tasks by following simple, daily routines and using written reminders as well as other strategies. However, over time these tasks may need to be completed by their caregivers or care providers.



## BLOOD GLUCOSE MONITORING

It is important to be able to recognize the signs of low or high glucose levels. A blood glucose diary may help you spot patterns and make sense of the readings. The Canadian Diabetes Association has a downloadable [daily blood glucose diary](#) template. You can also use technological options such as a continuous glucose monitor (CGM).

Although hypoglycemia and hyperglycemia can happen to anyone living with diabetes, this is a particularly important area for caregivers to understand because older adults living with cognitive impairment or dementia may not be to recognize and treat these conditions by themselves.



## HYPOGLYCEMIA

Learn how to use a blood glucose meter to identify hypoglycemia, then learn how to manage it and when to seek medical attention.



## **HYPERGLYCEMIA**

Ensure that you are familiar with the symptoms and signs of hyperglycemia specific to the person you are caring for. If you are concerned that they have hyperglycemia, check their blood glucose levels and report this information to their primary care provider.



## **MANAGING MEDICINES**

People living with only a mild cognitive impairment or mild dementia may benefit from following a daily routine so that they know when to take their medications. Prompts such as diaries, calendars, and phone alarms may help them to remember when to take medication(s).

If you are caring for someone living with dementia, here are some tips that can make medicine management easier:

- Create a routine by keeping medicine times the same each day.
- Put medicine out at mealtimes.
- If the person does not want to take their medicine, try to give it to them later.
- Some people find it easier to take all of their medications at once each day, but others have difficulty taking more than one medication at a time. If that is the case, try giving them their other medications separately at a later time.
- If the person does not like the taste or look of medications or has difficulty swallowing them, ask their primary care provider if their medicines can be crushed or provided in a different way.



## **EATING AND NUTRITION**

Eating regular meals and snacks throughout the day is important for people with diabetes to keep their blood glucose levels stable. Having a nutritionist prepare a meal plan can be helpful for people living with diabetes and cognitive impairment or dementia. This meal plan will have to be reviewed on a regular basis for people living with dementia as their symptoms worsen.

As a person's dementia progresses, they may forget to eat or drink and it may be necessary to have someone there at meal times to ensure they have an adequate, healthy diet. Loss of appetite and poor nutrition can be common in a person living with dementia. Here are some more tips that can help you support a person living with diabetes and dementia:

- Make healthy snacks easily accessible in their house.
- Put pictures on cupboard doors to help the person find the food they want.
- Serve familiar food.
- Allow enough time for eating.
- Minimize distractions during meal times.
- Serve small portions.
- Offer sugarless drinks such as water.
- Ensure that the person does not have problems swallowing. If they do, talk to their primary care provider.



### **SUPPORTING PHYSICAL ACTIVITY**

Physical activity can affect a person's blood glucose levels, and if they use insulin or a class of medications called Sulfonylureas, physical activity may increase their risk of hypoglycemia. Here are some ways you can reduce their risk

- Before they do a physical activity, check their blood glucose level. If their blood glucose is low, get them to eat something before they start.
- After they finish the activity, check their blood glucose level again. If hypoglycemia occurs, treat it immediately.
- Take caution with physical activity if blood sugar levels are very high (over 15mmol/L) as this may indicate hyperglycemia.

## TIPS AND CONSIDERATIONS FOR MANAGING DIABETES WITH OTHER CHRONIC DISEASES

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- Make sure your primary and specialist health care providers and care coordinators understand your priorities for care.
- Get as much information about your treatment options as possible.
- Ask questions about trade-offs between the risks and benefits of treatments.
- If a treatment is not working or is causing issues, let your primary and specialist health care providers know as soon as possible.
- Tell your primary and specialist health care providers if your treatment plan is too complicated to manage.
- If you are experiencing side effects related to a treatment, talk to your primary and specialist health care providers about treatments that have fewer side effects.



## WHERE CAN I FIND MORE INFORMATION?

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### DIABETES CANADA

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Diabetes Canada provides diabetes education, resources, research and services. They provide information on how to reduce your risk of developing diabetes, manage your diabetes, and prevent/treat complications.



<https://www.diabetes.ca/>



416-363-3373

### HEALTHINAGING.ORG

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Healthinaging.org offers information and tips on a variety of subjects pertaining to older adults who have diabetes.



<https://www.healthinaging.org/a-z-topic/diabetes>

### UHN - COMMUNITY RESOURCES FOR PEOPLE LIVING WITH DIABETES

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University Health Network has created a guide for community resources in Ontario for people living with diabetes. Their guide has information about mental health, community, financial, social, recreational and legal support services.



<https://bit.ly/3Nnig3R>

### TORONTO DIABETES CARE CONNECT

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Toronto Diabetes Care Connect (TDCC) is a program of South Riverdale Community Health Centre (SRCHC) that provides system level support around access to and delivery of diabetes care within the Toronto region.



<https://www.torontodiabetesreferral.com/>



416-778-0676

## JUVENILE DIABETES RESEARCH FOUNDATION (JDRF) CANADA

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JDRF Canada is a nonprofit organization that funds type 1 diabetes research and provides a broad array of community and activist services to the type 1 diabetes population.



<https://www.jdrf.ca/>



1-877-287-3533

## DIABETES ACTION CANADA

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Diabetes Action Canada is a pan-Canadian research organization. They offer a wide variety of resources and information for people living with diabetes.



<https://diabetesaction.ca/>



416-340-4800 ex. 2522



## RELEVANT RESOURCES IN OUR SERIES

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- Living Longer, Living Well – Your Guide to Healthy Ageing

### **ADDITIONAL HEALTH RESOURCES IN OUR SERIES:**

- Advance Care Planning: How to Approach the Conversation
- Alcohol and Your Health
- Calcium, Vitamin D and Bone Health
- General Tips for Managing Memory Problems
- Improving Nutrition as You Age
- Improving Urinary Incontinence
- Managing Caregiver Stress
- Managing Chronic Pain
- Managing Common Mental Health Conditions in Older Adults
- Managing Constipation
- Managing Mild Cognitive Impairment, Alzheimer’s Disease & Other Dementias
- Managing Multiple Chronic Health Conditions
- Managing Sedative-Hypnotic Use Among Older Adults
- Managing Substance Use and Addictive Disorders As You Age
- Preventing Falls at Home
- Recognizing and Managing Anxiety
- Recognizing and Managing Delirium
- Recognizing and Managing Depression
- Recognizing and Managing Hearing Loss
- Safe Medication Use for Older Adults
- Staying Active as You Age
- Substitute Decision Makers and Powers of Attorney
- Understanding Your Palliative Care Options

### **ADDITIONAL COMMUNITY RESOURCES IN OUR SERIES:**

- Community Transportation Options
- Driving Assessment Services
- Elder Abuse
- Funding for Mobility Aids from the Assistive Devices Program
- Housing Options for Older Adults
- How to Register for Wheel-Trans
- Meals on Wheels

Visit [www.sinaigeriatrics.ca/healtheducation](http://www.sinaigeriatrics.ca/healtheducation) for additional resources for older adults, families and caregivers.

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