

Chapter Organization - Prevention

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- 10 steps to improve your eating habits and reduce your risk of developing T2DM that you can start today (custom info sheet, spark)



You can make a change for life!





Type 2 Diabetes Prevention: Reducing the Risk of Developing Diabetes – CPG 2018 Summary

Key Messages:

- ➔ Currently there are no preventive therapies for type 1 diabetes
- ➔ Healthy behaviour interventions resulting in weight loss of about 5% of initial body weight can reduce progression from prediabetes to type 2 diabetes by 60%
- ➔ Medication can also be used to reduce progression by about 30%
- ➔ A registered dietitian can educate you about dietary changes that may help reduce risk of developing type 2 diabetes
- ➔ Regular physical activity is important to reducing risk of type 2 diabetes

Reducing the Risk of Developing Type 2 Diabetes

There are 3 primary approaches to preventing diabetes on a population level

- 1) Programs targeting high risk individuals (ie. People with obesity)
- 2) Programs targeting high-risk sub-groups such as high risk ethnic groups
- 3) Programs for the general population to promote physical activity and healthy eating in both adults and children.

Healthy Behaviour Interventions

Multiple health behaviour interventions have been evaluated, including the Finnish Diabetes Prevention Study and the Diabetes Prevention Program to determine their effectiveness. In both studies risk for diabetes was reduced by 58% after 4 years. The interventions included low calorie, low fat, low saturated fat, high fibre diets with 150 minutes of moderate intensity physical activity per week. Participants lost about 5% of their starting body weight and experienced health benefits for the following 10 years. The important take away from these studies is support for the fact that physical activity and nutrition are effective ways to reduce ones risk of developing type 2 diabetes.

Nutrition Therapy

Nutrition therapy and counselling is essential for treating prediabetes and preventing the progression to type 2 diabetes. By making dietary changes healthy weight loss can take place which reduces risks of developing diabetes. Studies have shown weight loss success with the Mediterranean and DASH diets but the name of an eating pattern isn't what matters – it's the components to it that have positive health effects. Whole grains, fruits, vegetables, nuts,

legumes, olive oil, white meat/seafood, little alcohol, reduced intake of red and processed meats and sugar-sweetened beverage.

Studies show association between whole grain consumption and a significantly reduced risk of type 2 diabetes. Study participants who consumed more than 2 servings of whole grains per day showed 43% less cases of type 2 diabetes compared to participants who consumed no whole grains.

Physical Activity

Higher levels of leisure time physical activity are also associated with lower rates of type 2 diabetes. In recent studies people who are active for 150 minutes per week show a 26% risk reduction for type 2 diabetes.

Diabetes Prevention in High-Risk Ethnicities

Certain ethnic groups such as the Indigenous population experience high rates of type 2 diabetes. There are many reasons for this such as genetic susceptibility, differences in fat storage, and higher rates of metabolic syndrome. Many Indigenous populations experience diabetes at a younger age as well and have associated complications by the time they are diagnosed. This is a sign that screening should be done more frequently so as to diagnose type 2 diabetes or prediabetes as soon as possible to prevent complications and/or the progression to diabetes in the case of prediabetes. Health behaviour promotion not only reduces the risk of type 2 diabetes but also has positive health effects for everyone. Cultural sensitivity and respect must be kept in mind when delivering health behaviour interventions to be most effective in adoption and ultimately prevention of type 2 diabetes.

Population Level Interventions for Prevention of Type 2 Diabetes

On a population level the epidemic of type 2 diabetes is linked to urbanization, environmental transitions, sedentary occupations, increased mechanization, improved transportation, and increased accessibility to unhealthy high-calorie, low nutrient oversized food options. Men and women around the world are gaining weight and becoming less physically active. These behaviours are two factors that largely influence the development of type 2 diabetes. The good news is that with some healthy lifestyle behaviour changes we can all eat a little better, move a little more, and reduce our risks of developing type 2 diabetes. Public policies that support health promotion such as improving physical activity and nutrition education in schools, improving food labelling on packaged foods, and taxing sugar sweetened beverages are examples that may help reduce incidence of type 2 diabetes.

Type 2 Diabetes Prevention: Teaching Tool

Prediabetes is the state the body is in when blood glucose (blood sugar) levels are higher than normal but not quite high enough yet to be diagnosed with type 2 diabetes (ie. a fasting plasma glucose of 7.0 mmol/L or A1C of 6.5% or higher). Not everyone with prediabetes will develop type 2 diabetes but many will. Instead of waiting to see if this will happen – make an active change. There are many ways to improve food habits and increase activity levels which can help prevent type 2 diabetes from developing and even reverse prediabetes.

Wouldn't it be nice if the human body had an "early alert system" that advised us when something was about to go wrong with our health? Prediabetes offers a warning and gives us a chance to change the future

It is important to know if you have prediabetes because research has shown that long term complications are associated with diabetes. Heart disease for example may begin during prediabetes.

Unsure if you have Diabetes?

Here are some signs that you may be living with diabetes

- Feeling very thirsty
- Frequent urination (having to pee often)
- Sudden weight loss or change in weight
- Feeling more tired than usual
- Having blurred vision
- Cuts and bruises heal slowly, you experience frequent infections
- Tingling or no feeling in your hands or feet

If you are experiencing a combination of these signs speak to a health care provider so they can run some tests to determine whether or not you are in fact living with diabetes.



Are you at risk?

You could be one of many Canadians who have type 2 diabetes and don't know it.

You are at risk for type 2 diabetes if:

- you are age 40 or over, or
- you are an individual at high risk on a risk calculator*

and you should be tested at least every three years.

If you check any of the boxes to the right, you should be tested for diabetes earlier and/or more often.

Today, more than ever before, people with diabetes can expect to live active, independent and vital lives if they make a lifelong commitment to careful management of the disease.

It is important to be tested for type 2 diabetes if you are at risk. Left untreated or improperly managed, diabetes can result in a variety of complications, including:

- Heart disease
- Kidney disease
- Eye disease
- Problems with erection (impotence)
- Nerve damage

My risk assessment

- I have a parent, brother or sister with diabetes.
- I am a member of a high-risk group (African, Arab, Asian, Hispanic, Indigenous or South Asian descent, low socioeconomic status).
- I have health complications that are associated with diabetes.
- I gave birth to a baby that weighed over 4 kg (9 lb) at birth.
- I had gestational diabetes (diabetes during pregnancy).
- I have been told I have prediabetes (impaired glucose tolerance or impaired fasting glucose)
- I have high blood pressure.
- I have high cholesterol or other fats in my blood.
- I am overweight (especially if I carry most of my weight around my middle).
- I have been diagnosed with any of the following conditions:
 - Polycystic ovary syndrome
 - Acanthosis nigricans (darkened patches of skin)
 - Psychiatric disorders: schizophrenia, depression, bipolar disorder
 - I have obstructive sleep apnea
 - I use glucocorticoid medication

Don't ignore these risk factors.

The earlier you are diagnosed, the sooner you can take action to stay well – now and in the future. If you already have type 2 diabetes, your children, brothers and sisters are at risk. Urge them to be tested for diabetes.

*The Canadian Diabetes Risk (CANRISK) calculator (available at <http://www.healthycanadians.gc.ca/diseases-conditions-maladies-affections/disease-maladie/diabetes-diabete/canrisk/index-eng.php>).

What are the symptoms?

Signs and symptoms of diabetes include the following:

- Unusual thirst
- Frequent urination
- Weight change (gain or loss)
- Extreme fatigue or lack of energy
- Blurred vision
- Frequent or recurring infections
- Cuts and bruises that are slow to heal
- Tingling or numbness in the hands or feet
- Trouble getting or maintaining an erection

It is important to recognize, however, that many people who have type 2 diabetes may display no symptoms.

Diagnosis of diabetes

Show your doctor this fact sheet and ask him or her to test you for diabetes using one of the following tests. The amount of glucose (sugar) in your blood is measured in mmol/L.

Fasting blood glucose

You must not eat or drink anything except water for at least eight hours before this test. A test result of 7.0 mmol/L or greater indicates diabetes.

OR

A1C

This test may be done at any time, regardless of when you last ate. A test result of 6.5 % or greater (in adults) and in the absence of factors that affect the accuracy of the A1C indicates diabetes.

OR

Oral glucose tolerance test

You will be given a special sweetened drink prior to this blood test. A test result of 11.1 mmol/L or greater taken two hours after having the sweet drink indicates diabetes.

OR

Random blood glucose

This test may be done at any time, regardless of when you last ate. A test result of 11.0 mmol/L or greater, plus symptoms of diabetes, indicates diabetes.

A second test must be done in all cases (except if you have acute signs and symptoms). Once diabetes has been diagnosed, ask your doctor to refer you for diabetes education. Diabetes Canada also has many resources to help you understand diabetes better and live a long and healthy life.

Date: _____ **1st test:** _____

Date: _____ **2nd test:** _____

Related article: *Diabetes, Type 2 diabetes: the basics, Type 1 diabetes: the basics and Prediabetes*

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Type 2 Diabetes Prevention: Teaching Tool

Prevention: Can you prevent type 1 diabetes?

Unfortunately type 1 diabetes is not preventable. Type 1 is linked to the body's inability to produce insulin, a hormone made in the pancreas. For now science does not know why this occurs but research is trying to discover possible answers.

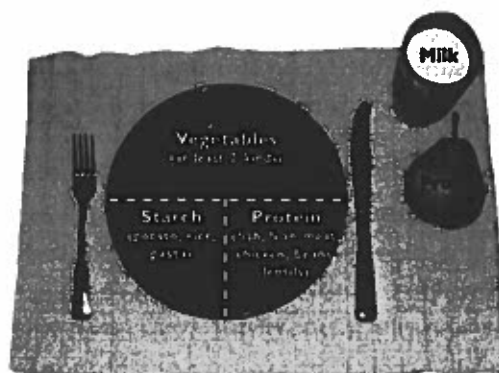
Prevention: What can you do to prevent type 2 diabetes?

There are two main lifestyle changes one can make that will dramatically reduce the risk of developing type 2 diabetes. First, make healthier food choices and second increase physical activity.

Healthy Food choices

Good nutrition is central to preventing & managing type 2 diabetes. By eating in a way that keeps blood sugars balanced throughout the day risks of poor glucose control associated with type 2 diabetes are reduced. Eating well also helps control weight and can prevent obesity which is a major risk factor of type 2 diabetes.

Healthy eating means consuming whole grains, lots of fruits and vegetables, lean meats and proteins, as well as healthy sources of fat. It also means staying away from ultra-processed foods high in salt, sugar, and fat. This means reducing or eliminating sugar sweetened beverages, processed meats, and ultra-processed foods. Instead choosing foods high in fibre, vegetables in a variety of colours, and selecting healthy portions. Here is an example of a healthily portioned balanced plate: half vegetables with at least 2 different kinds, a quarter protein, and a quarter starches. If you're looking for something sweet add a fresh piece of fruit and choose beverages like milk or water.



To make healthy eating a bit easier try planning out your meals. Eat balanced meals (with all of the food groups) at regular times in healthy portions. Write a meal plan and grocery list before shopping for food, this may help make sure you buy healthy options and limit the amount of unnecessary snacks you consume. Keep fruit and cut up vegetables in the fridge so that when

you do have an urge to snack healthy options are available. Learn more about nutritious eating in the Nutrition chapter.

Physical Activity

Help prevent type 2 diabetes by moving your body regularly. Being physically active helps lower blood sugar and blood pressure, and also helps the body achieve and maintain a healthy weight. Activity gives you more energy, strength, flexibility, and balance while also, improving sleep, confidence, and wellbeing. Plus it can be a whole lot of fun! Being physically active does not have to be complicated – it can be as easy as going for a moderately intense walk 30 minutes a day 5 days a week. It is recommended that every adult gets at least 150 minutes of moderate-intense activity each week (2.5 hours).

What is moderate aerobic activity? Moderate activity makes you breathe a little harder and makes your heart beat faster. You should be able to talk but not sing.	What is intense aerobic activity? Intense activity makes your heart rate and breathing rate increase even more. It would be difficult to say more than a few words without needing to catch your breath	What are strength activities? Muscle strengthening activities build your muscles and increase bone strength. In these exercises your muscles push against your bones making them stronger.
Walking quickly or up a hill, skating, bike riding, dancing, swimming	Running, playing basketball or soccer, cross country skiing, jumping	Push-ups, sit ups, lighting weights or heavy objects, climbing stairs, digging in the garden. Bone strengthening activities include yoga, running & walking as well.

Pick a few different activities to do 150 minutes of per week, and add your own to this list! Set aside time to be active even if it's only for 10 or 15 minutes at a time, every minute counts as you doing something good for your body & mind & for the prevention of type 2 diabetes.

Smoking is also associated with an increased risk for type 2 diabetes and its complications. On average smoking rates among Indigenous populations are twice as high as those in non-Indigenous Canadians. In 2013 this meant 41.1% of First Nations, 36.8% of Métis, and 49% of Inuit peoples self-reported as smokers. Smoking cessation reduces ones risk of developing type 2 diabetes and also reduces the complications often associated with diabetes. Smokers have an increased risk for damaged blood vessels that are responsible for feeding the heart, brain, eyes, kidneys, and nerves. If you are smoking – quit the habit and never quit quitting. Transitioning from being a smoker to non-smoker is not easy but making the change will dramatically improve your overall health. Quit today, if you need help ask an ADI worker for information smoking cessation assistance programs.

What events can you host, support, or attend to help prevent type 2 diabetes in your local community?

- 1) **Community Walk, hike, bike, run, or cross country ski days**
 - These activities could be hosted as a one-time event or a regular monthly occurrence. Think about partnering with a local school to get kids involved. Bringing people together to engage in something active may not only be beneficial in terms of helping prevent type 2 diabetes but also can be a social event that really brings the community together.
- 2) **Community Yoga (indoors or outdoors)**
 - Slowing down, relaxation, and flexibility for mobility all have tremendous physical and mental benefits. Yoga can be done outside on a patch of grass or indoors in a gymnasium or community center space. You don't even need mats to do this outdoors plus there is the added benefit of spending time in nature. All you really need is an instructor to lead the class and you are good to go!
- 3) **Community Dancing Circles**
 - Dance is an incredible way to get moderate aerobic activity! It is also an opportunity to connect to ones roots and culture by performing a traditional dance.
- 4) **Community Gardening**
 - Growing produce from seeds or seedlings in a community setting allows people access to healthy foods.
- 5) **Community Cooking Classes**
- 6) **Weekly Walking Groups**
- 7) **Lunch & Learn**
- 8) **Healthy Behaviour Change Support Group**
 - Making behaviour changes such as changing the foods you eat, increasing physical activity, and losing weight can be challenging. It helps to talk to others making similar changes to feel supported and heard. Hosting a behaviour change conversation circle will allow people an opportunity to discuss changes they are making, challenges they are facing, and share solutions to overcoming barriers. Change can be slow, may have ups and downs, and might not be easy – talking about these things will help the process along.
 - Perhaps pair a healthy behaviour change support group with a healthy dinner to encourage people to come. Included in this package is a guide to facilitating behaviour change and self-help/support groups.
- 9) **Smoking Cessation Group**

What is self-help? How do I start a support group?

Adapted from the Ontario-Self Help Network Workshop: Understanding self-help and starting a peer-support group

1. What are the goals of this support group?
 - To facilitate self-help & a supportive communication space for people initiating behavior changes (ie. healthy eating & physical activity) as they pertain to preventing and/or managing diabetes.

2. What is self-help?
 - The process of sharing common experiences, situations, or problems
 - Participation based involving getting help for oneself while helping others
 - Sharing knowledge, approaches, methods to approaching healthy lifestyle changes
 - Free of charge to participate in, financially accessible to all
 - Self-help groups are largely run by and are for participants meeting on a semi-regular basis voluntarily
 - Primary topics to focus on: emotional support, practical support, and information exchange

3. A support group may not necessarily be a self-help group
 - If an ADI worker is facilitating the group, or if the group has a facilitating leader in general this is a little different from self-help
 - A group would also not be self-help if it was facilitated by someone who does not have diabetes

4. Why do people come to support groups?
 - For information
 - To have support, to talk to people going through a shared experience
 - To normalize some of their feelings and struggles
 - To socialize, have a good time, and feel good

**** Ask the group early on what they hope to achieve by attending and participating. This will help people feel valued, want to come back, and get the most out of your support or self-help group.**

The First Meeting

- This is an important occasion, things don't need to run perfectly but they should facilitate an overall positive experience so that people want to come back!
- You are the host, make the environment inviting, comfortable, welcoming, and accessible
- Welcome the participants individually

- Use an icebreaker activity to have everyone introduce themselves and feel a little more at ease
- Discuss any guidelines. This is a place for respect, acceptance, and confidentiality. Personal information discussed with people in the room should remain in the room so as to keep everybody's privacy protected
- Help participants relax by explaining what the support group is meant to do, what people should expect. Maybe have a healthy snack to help people feel welcome and comfortable
- Check in with participants and make a list of their expectations. Go around the room and find out why everyone decided to come today and what they hope to achieve through being there
- Ask open ended questions
 - o What is 1 behaviour change you are trying to make right now?
 - o How is that going for you?
 - o Why did you decide to make that change, why is this important to you?
 - o What challenges are you currently facing?
 - o Has anyone experienced a similar situation?

Moving Forward

- Try to have meetings once a month (or every 2 weeks if the group is up for that!)
- Ask people about their goals, ask them to record change or progress over time
- Ideally these conversations will flow, a leader will start the conversation and hopefully the group gets comfortable and opens up
- You can decide as the weeks go on if you'd like to have specific themes for each meeting, consult the group to see how they feel about that
- Invite participants to bring friends or family members also trying to prevent diabetes or adopt healthy behaviour changes

Each person holds so much power within themselves that needs to be let out. Sometimes they just need a little nudge, a little direction, a little support, and the greatest things can happen.

– Pete Carroll



Risk factors for type 2 diabetes

- Being 40 years of age or older;
- Having a close relative (parent or sibling) who has type 2 diabetes;
- Being a member of a high-risk population, such as those of African, Arab, Asian, Hispanic, Indigenous or South Asian descent, low socioeconomic status;
- Having a history of prediabetes (impaired glucose tolerance or impaired fasting glucose);
- Having some evidence of the complications of diabetes, such as eye, nerve or kidney problems;
- Having heart disease;
- Having a history of gestational diabetes mellitus;
- Having high blood pressure;
- Having high cholesterol;
- Being overweight, especially around your abdomen.
- Having a history of giving birth to a baby that weighed over 4 kg (9 lb) at birth;
- Having obstructive sleep apnea;
- Having a history of using glucocorticoid medication

Wouldn't it be nice if the human body had an "early alert system" that advised us when something was about to go wrong with our health? Prediabetes offers a warning and gives us a chance to change the future.

Prediabetes refers to blood sugar levels that are higher than normal, but not yet high enough to be diagnosed as type 2 diabetes (i.e. a fasting plasma glucose level of 7.0 mmol/L or A1C of 6.5% or higher). Although not everyone with prediabetes will develop type 2 diabetes, many people will.

It is important to know if you have prediabetes, because research has shown that some long-term complications associated with diabetes – such as heart disease – may begin during prediabetes.

Risk factors

Like type 2 diabetes, prediabetes can occur without you knowing it, so being aware of your risks and being tested are important. This is especially true if you have prediabetes as part of the "metabolic syndrome," meaning you also have high blood pressure, high levels of LDL cholesterol (the "bad" cholesterol) and triglycerides, low levels of HDL cholesterol (the "good" cholesterol) and excess fat around the waist.

The risk for type 2 diabetes is higher as you grow older. If you are age 40 or over, or you are an individual at high risk using a risk calculator*, Diabetes Canada recommends screening by testing fasting plasma glucose and/or A1C every three years. If you have additional risk factors that increase the likelihood of developing type 2 diabetes, you should be tested more frequently or start regular screening earlier.



* The Canadian Diabetes Risk (CANRISK) calculator (available at <http://www.healthy Canadians.gc.ca/diseases-conditions-maladies-affections/disease-maladie/diabetes-diabete/canrisk/index-eng.php>).

The good news

Research has shown that if you take steps to manage your blood sugar when you have prediabetes, you can delay or prevent type 2 diabetes from developing. You may be able to reduce blood sugar levels with simple lifestyle changes, such as increasing your physical activity and enjoying a healthy, low-fat meal plan.

Losing even a modest amount of weight (5 to 10 per cent of total body weight) through healthy eating and regular physical activity can make a huge difference in your health and quality of life.

When lifestyle changes are not enough to normalize blood sugar, your health-care provider might recommend that you use oral medication.

If you have prediabetes, you are at increased risk for heart disease or stroke. Your doctor may also wish to treat or counsel you about cardiovascular risk factors such as tobacco use, high blood pressure and high cholesterol.

The important thing to remember about prediabetes is that it doesn't always lead to diabetes. If you have prediabetes, taking steps to manage your blood sugar gives you a chance to change your future to one that does not include type 2 diabetes.



Related articles: *Diabetes, Type 2 diabetes: the basics, Physical activity and diabetes, Managing weight and diabetes, and Just the basics (tips for healthy eating)*

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More than three million Canadians have diabetes

There are three main types of diabetes.

Type 1 diabetes, usually diagnosed in children and adolescents, occurs when the pancreas is unable to produce insulin. Insulin is a hormone that controls the amount of sugar in the blood. Approximately 10 per cent of people with diabetes have type 1 diabetes.

The remaining 90 per cent have **type 2 diabetes**, which occurs when the pancreas does not produce enough insulin or when the body does not effectively use the insulin that is produced. Type 2 diabetes usually develops in adulthood, although increasing numbers of children in high-risk populations are being diagnosed.

A third type of diabetes, **gestational diabetes**, is a temporary condition that occurs during pregnancy. It affects approximately 2 to 4 per cent of all pregnancies (higher in the indigenous population) and involves an increased risk of developing diabetes for both mother and child.

Is diabetes serious?

If left untreated or improperly managed, diabetes can result in a variety of complications, including:

- Heart disease
- Kidney disease
- Eye disease
- Problems with erection (impotence)
- Nerve damage

The first step in preventing or delaying the onset of these complications is recognizing the risk factors, as well as signs and symptoms of diabetes.

What are the risk factors for diabetes?

If you are aged 40 or older or you are an individual at high risk on a risk calculator*, you are at risk for type 2 diabetes and should be tested at least every three years. If any of the following risk factors apply, you should be tested earlier and/or more often:

Being:	<ul style="list-style-type: none"> • a member of a high-risk group (African, Arab, Asian, Hispanic, Indigenous or South Asian descent, low socioeconomic status) • overweight (especially if you carry most of your weight around your middle)
Having:	<ul style="list-style-type: none"> • a parent, brother or sister with diabetes • health complications that are associated with diabetes • given birth to a baby that weighed more than 4 kg (9 lb) • had gestational diabetes (diabetes during pregnancy) • prediabetes (impaired glucose tolerance or impaired fasting glucose) • high blood pressure • high cholesterol or other fats in the blood • been diagnosed with any of the following conditions: <ul style="list-style-type: none"> – polycystic ovary syndrome – acanthosis nigricans (darkened patches of skin) – psychiatric disorders: schizophrenia, depression, bipolar disorder – obstructive sleep apnea – you use glucocorticoid medication

* The Canadian Diabetes Risk (CANRISK) calculator (available at <http://www.healthy Canadians.gc.ca/diseases-conditions-maladies-affections/disease-maladie/diabetes-diabete/canrisk/index-eng.php>).

What are the signs and symptoms of diabetes?

Signs and symptoms of diabetes include the following:

- Unusual thirst
- Frequent urination
- Weight change (gain or loss)
- Extreme fatigue or lack of energy
- Blurred vision
- Frequent or recurring infections
- Cuts and bruises that are slow to heal
- Tingling or numbness in the hands or feet
- Trouble getting or maintaining an erection

It is important to recognize, however, that many people who have type 2 diabetes may display no symptoms.

Can you prevent diabetes?

Research shows that lifestyle changes can help prevent or delay the onset of type 2 diabetes. A healthy meal plan, weight control and physical activity are important prevention steps.

How is diabetes treated?

People with diabetes can expect to live active, independent and vital lives if they make a lifelong commitment to careful diabetes management, which includes the following:

Education:

Diabetes education is an important first step. All people with diabetes need to be informed about their condition.

Physical Activity:

Regular physical activity helps your body lower blood sugar levels, promotes weight loss, reduces stress and enhances overall fitness.

Nutrition:

What, when and how much you eat all play an important role in regulating blood sugar levels.

Weight Management:

Maintaining a healthy weight is especially important in the management of type 2 diabetes.

Medication:

Type 1 diabetes is always treated with insulin. Type 2 diabetes is managed through physical activity and meal planning and may require medications and/or insulin to assist your body in controlling blood sugar more effectively.

Lifestyle Management:

Learning to reduce stress levels in day-to-day life can help people with diabetes better manage their condition.

Blood Pressure:

High blood pressure can lead to eye disease, heart disease, stroke and kidney disease, so people with diabetes should try to maintain a blood pressure level below 130/80. To do this, you may need to change your eating and physical activity habits and/or take medication.

Related article: *Type 2 diabetes: the basics, Type 1 diabetes: the basics, Prediabetes, and Are you at risk*

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What can I do to prevent Type 2 Diabetes?

1. Be physically active! Move your body every day. Run, walk, skip, jump, play, ride bikes, skate, swim, play sports, dance

There are many benefits of being physically active. You build strength, endurance, a stronger heart, improve mood and self-esteem, sleep better, and it helps keep weight under control

Eat a variety of nutritious foods: fruits, vegetables, whole grains, and proteins. Game meat such as caribou, moose, and deer are excellent sources of lean proteins. Also try incorporating plant based proteins & avoid foods high in sodium, sugar, and added fat.

2. Eat a healthy balanced diet by following Canada's Food Guide

3. Achieve and maintain a healthy weight

Obesity is a major risk factor to developing type 2 diabetes. Achieve and maintain a healthy weight by eating healthily and being active



10 steps to improve your eating habits & reduce your risk of developing type 2 diabetes that you can start today!

1. Eat whole grains

Whole grains are often a great source of fibre and low in fat. Fibre improves blood sugar control, helps control weight, makes us feel full longer, and promotes healthy bowel movements.

4. Nuts

One 1/4 cup serving of nuts is considered a healthy meat alternative. Nuts contain healthy sources of fat the body needs & helps protect your heart from diabetes related complications like heart disease.

7. White meat/Seafood

Fishing, hunting, & gathering are all traditional ways of accumulating food with a variety of health benefits. Canada's food guide recommends at least 2 servings of fish per week. Try salmon, trout, mackerel, herring, or char today!

10. Reduce Sugar Sweetened Beverages

Soft drinks and fruit drinks are the main sources of sugar in the Canadian diet. Avoiding beverages high in sugars can help reduce overall sugar intake, protect against cavities, and may reduce risks of type 2 diabetes and obesity.

2. Fruits

Fruits also contain fibre which may reduce risks of diabetes, heart disease, and obesity. Most people do not consume enough servings of fruit & vegetables try substituting your current mid day snack with a piece of fruit!

5. Legumes

Legumes such as peas, beans, and lentils have low glycemic indexes and are good ways to regulate blood sugar especially for people living with diabetes. They may also help lower cholesterol and blood pressure.

8. Little alcohol

Alcohol provides an extra source of calories with no nutritional benefit. This can lead to weight gain. If consuming alcohol do so in moderation: no more than 2 drinks/day for women or 3 drinks/day for men.

3.

Vegetables

Try eating a variety of colours of vegetables throughout the day. The recommended amount of vegetables & fruit per day is 7 - 10. Choose vegetables prepared with little or no added fat, sugar, or salt.

6. Olive oil

is another healthy source of fat. Olive oil can be used in a delicious salad dressing, to cook meats, & to roast vegetables!

9. Reduce Red & Processed meats

Processed foods are often high in sodium, sugars, and saturated fat. These should be avoided and replaced with lean meats & plant based proteins.

