IPTN
INSTITUTE FOR PERSONALIZED THERAPEUTIC NUTRITION

REMISSION POSSIBLE

THE SCIENCE & STRATEGIES TO IMPROVE BLOOD SUGAR

TREATING TYPE 2 DIABETES WITH FOOD

DO YOU HAVE TYPE 2 DIABETES?
THIS GUIDE CAN HELP TREAT IT WITH A FOOD-FIRST APPROACH

Have you recently been given a type 2 diabetes diagnosis by your doctor? Or, perhaps you've had the condition for a while but it's steadily getting worse? Maybe you're worried about future complications or the need to increase your medications? You want alternatives.

This ebook can help. It invites people like you, living with type 2 diabetes, to think differently about their diabetes. It describes how to improve your blood glucose levels (a.k.a blood sugar) and even put your condition into remission. How? **By changing how and what you eat**.

In less than 12 weeks, *Elisabeth put her type 2 diabetes into remission by cutting out sugar, ultra-processed foods, and all foods that rapidly digest to sugar. She focused on eating satisfying meals featuring plenty of protein with lots of vegetables, salads, and low-sugar fruits like blueberries and raspberries. Not only did her blood glucose levels rapidly return to normal, she lost 15 pounds and 3 inches from her waist. "I now feel better than I've felt for years."*

You can do it, too!

Changing what you eat, like Elisabeth, may sound hard at first, but a growing number of people are doing just that! They are following a few simple guidelines and eating delicious, nourishing, whole foods. They are putting their type 2 diabetes into remission, lowering their blood glucose, feeling great, and often losing weight, too.

Work with your doctor

This ebook is a self-care tool, but it does not replace medical care. Rather, you will work with your healthcare provider to monitor your condition and adjust any medications.

Medications must be reduced or monitored

If you take any prescription drugs for your type 2 diabetes, you must speak to your healthcare provider before trying any of the approaches described in this guide. Your blood glucose levels may drop rapidly leaving you at risk of blood glucose lows (hypoglycemia) if your medications are not adjusted. This is especially important if you are taking insulin, drugs called SGLT-2 inhibitors (with names that end in 'flozin' such as Canagliflozin) or sulfonylureas (with names ending in "ide"). You may also need to have your doctor or pharmacist monitor or adjust any medications for high blood pressure. Please also talk to your health provider first if you have other health conditions, such as problems with your heart or your kidneys.

WHAT IS TYPE 2 DIABETES?

Type 2 diabetes is a medical condition where the body cannot make enough insulin or does not use the insulin it makes very well. Insulin is a hormone that helps control the amount of glucose in your blood. Risks for type 2 diabetes include genetics and family history, metabolic syndrome, excess abdominal body fat, obesity, and a diet with high amounts of sugar or foods that rapidly digest to sugar. By the time you are diagnosed with type 2 diabetes, the underlying process has likely been going on silently for years.

Why does it matter?

Excess glucose in the blood can damage delicate blood vessels and nerves. When insulin is ineffective, it also prevents your muscles and tissues from taking up enough glucose for energy. Complications from diabetes includes damage to the eyes, feet, heart, kidneys and other organs. Annually, type 2 diabetes impacts an estimated 5.7 million Canadians and its rates have been steadily increasing.

5.7 million Canadians

$38.5 billion annually

Heart disease

Eye health

Foot & nerve problems

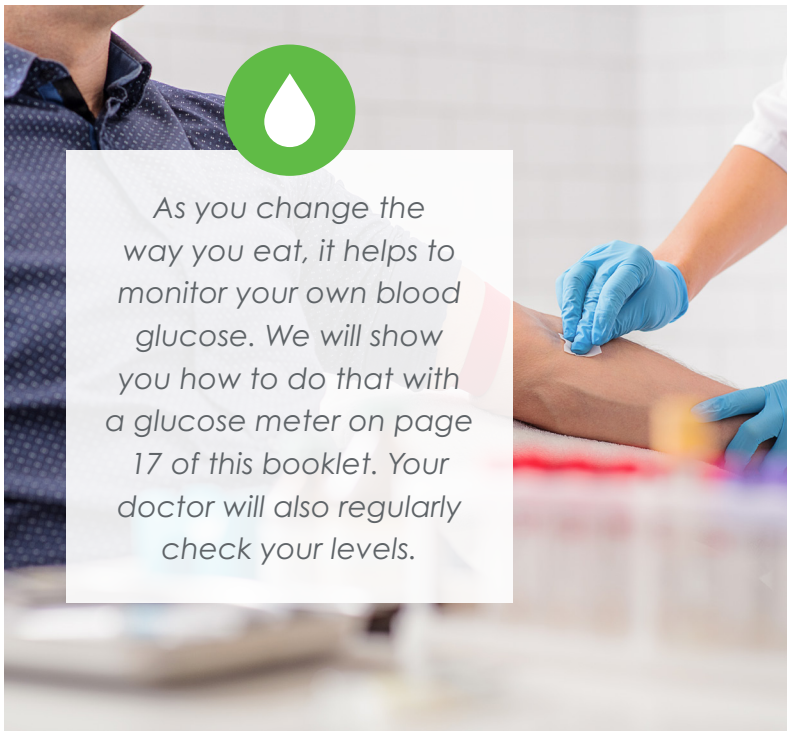
HOW IS TYPE 2 DIABETES DIAGNOSED?

1. **Fasting blood glucose:** blood is taken first thing in the morning after fasting; a result greater than 7.0 mmol/L indicates diabetes.

2. **Random blood glucose:** blood is drawn at any time, regardless of when you have last eaten; a result of 11 mmol/L or higher indicates diabetes.

3. **Hemoglobin A1C:** Also called an HbA1c or A1C, this blood test measures your average blood glucose over three months by measuring how much glucose has stuck to your red blood cells; a result of 6.5% or higher indicates probable type 2 diabetes.

4. **Oral glucose tolerance test:** two hours after drinking a very sweet drink, your blood is tested; a result of 11 mmol/L or higher indicates diabetes.



As you change the way you eat, it helps to monitor your own blood glucose. We will show you how to do that with a glucose meter on page 17 of this booklet. Your doctor will also regularly check your levels.

WHAT IS TYPE 2 DIABETES REMISSION?

In the past, type 2 diabetes was thought to be a disease that did not get better, only steadily worse overtime. People were given medications and taught about lifestyle changes that might slow the progression of the disease. Remission was not something talked about or hoped for. Today, things are different. **Increasingly, research shows remission is possible using a number of scientifically proven strategies. One way is to change how and what you eat.**

How is remission defined?

When it comes to type 2 diabetes, Diabetes Canada and other diabetes organizations have determined remission means that **your A1C and blood glucose levels are in normal ranges without needing to take glucose-lowering medication for three months or more**. It is called remission, and not cure, because the condition can come back.

Any improvement is great!

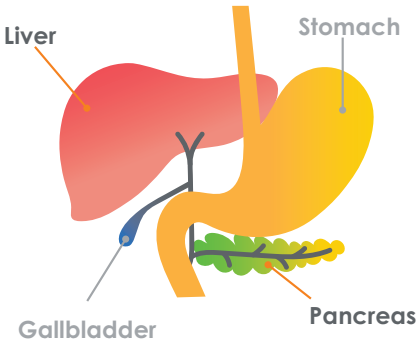
Even if you don't achieve full remission as it is currently defined, any lowering of your blood sugar is likely to benefit your health and reduce your risk of future health complications. Sometimes people can lower their A1C to 6.5% while still needing to take the drug metformin. While not technically remission, this outcome is still a great success.

Is changing the way you eat safe for everyone?

People on medications for blood glucose or blood pressure should have their doctor adjust their dosage. Pregnant and lactating women or those with fat metabolism disorders must consult their physician before changing their diet. A diet that is very low in carbohydrates may temporarily raise blood cholesterol in a small subset of individuals, but can often be managed effectively by reducing saturated fat.

HOW IS REMISSION POSSIBLE?

Type 2 diabetes remission is possible when you help your pancreas and liver function more effectively and you reduce your body's need to handle a lot of glucose coming in through the food you consume. Research suggests type 2 diabetes arises when too much body fat is in the abdomen, especially in the liver and pancreas.



The pancreas has two main jobs. It produces enzymes to aid digestion and hormones, especially insulin and glucagon, to control the amount of glucose in your bloodstream.

The liver has many essential functions, two of which are helping to regulate blood sugar and converting the food you eat into usable compounds, nutrients, and vitamins.

When you have excess fat in these two organs, they don't work well, increasing the risk of diabetes.

What leads to remission?

Research evidence supports four interlinked body changes that can help put type 2 diabetes into remission: reducing the amount of fat specifically in your abdomen, losing total body fat, building more muscle, and reducing the consumption of sugar and foods that digest to sugar.

Let's Explore All Four!

Reduce abdominal fat:

Fat in the abdomen, also called visceral fat, creates the highest risk for type 2 diabetes. Losing this abdominal fat – no matter what your weight and size – can reverse type 2 diabetes.

Lose total body fat:

Each of us has a body fat threshold. When our ability to store fat is exceeded, type 2 diabetes occurs. Reducing total body fat can free up space, putting diabetes into remission.

Build muscle:

The more muscle you have, and the more you use that muscle, the more you use up circulating blood glucose.

Consume less sugar & starch:

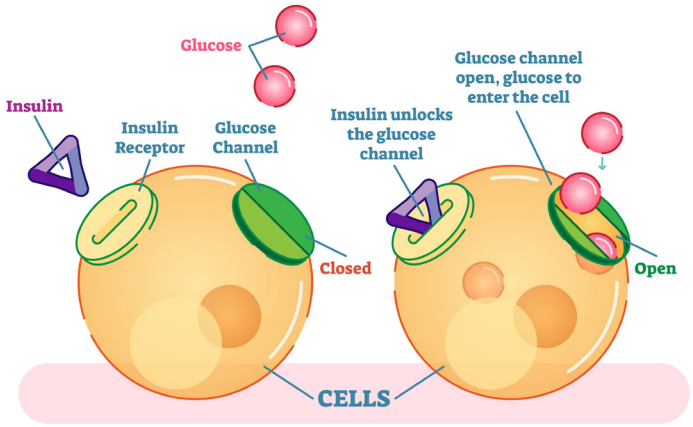
When you eat less sugar or foods that digest to sugar, less glucose ends up circulating in the blood, this can help put type 2 diabetes into remission.

INSULIN LEVELS IN TYPE 2 DIABETES

To understand your type 2 diabetes it helps to understand the role of insulin.

As you have seen in the previous pages, losing excess body fat is key to achieving remission. But you cannot lose fat unless your body's insulin is low because high levels of insulin keep fat locked in cells.

What is insulin?



Insulin is a master hormone, made by the pancreas, that regulates metabolism. Insulin helps glucose enter cells where it can be used as energy immediately or stored as glycogen or fat for later use. When insulin levels fall, the body takes fat out of storage to be burned for energy. In people with type 1 diabetes, the pancreas stops making insulin. They rapidly lose weight no matter how much they eat and their blood sugar soars. They must then inject insulin. In people with type 2 diabetes, the pancreas works overtime to churn out higher and higher levels of insulin until eventually its insulin-making cells start to fail.

Too much insulin = insulin resistance

When your cells become too full with excess energy, they stop responding to insulin. This is called insulin resistance. When this happens, your body tries to compensate by making even more insulin. This state of hyperinsulinemia (high insulin in the blood) keeps blood sugar levels looking normal for a while, but the underlying problem is growing worse over time. Eventually, your insulin can't keep up, and your blood sugar starts rising—leading first to prediabetes and then to type 2 diabetes. This process can take decades. If it goes on too long the pancreas may eventually stop making insulin.

Insulin resistance is reversible

The good news? If your pancreas is still making insulin, naturally lowering circulating insulin levels may restore insulin sensitivity. The best way to do that is by eating fewer foods that raise blood sugar, either by eating less food over all (lower calorie, intermittent fasting) or eating less food that digests to sugar (lower carbohydrate.) And to make more room in fat cells to store excess energy (i.e lose body fat.)

Over time, these actions can restore insulin sensitivity and even put type 2 diabetes into remission. By making these changes, you're not just controlling diabetes—you're addressing its root cause.

HOW CAN YOU ACHIEVE
TYPE 2 DIABETES REMISSION?

Currently, research evidence is showing that type 2 diabetes may be put into remission by four different ways.

1. ***A low carbohydrate or ketogenic***
2. ***A very low calorie***
3. ***Intermittent fasting or time-restricted eating***
4. ***Surgery or GLP-1 RA drugs***

Why do they work?

Each method helps you lose excess body fat, especially from around your abdomen, reducing insulin resistance by giving you more space to store excess energy. It also helps improve your blood glucose level by consuming fewer foods that raise your blood sugar and enabling your muscles to better use the blood sugar you do have. We will briefly describe each of these ways, but in this booklet we will put the focus on what and when you eat, plus exercise. That's because you can do these methods at home with support from your healthcare provider.

LOW CARB DIETS

LOW CALORIE DIETS

INTERMITTENT FASTING

SURGERY OR GLP-1 RA DRUGS

LOSS OF EXCESS BODY FAT AND IMPROVED BLOOD GLUCOSE CONTROL

COULD LEAD TO DIABETES REMISSION

Remember any improvement is a win for you!

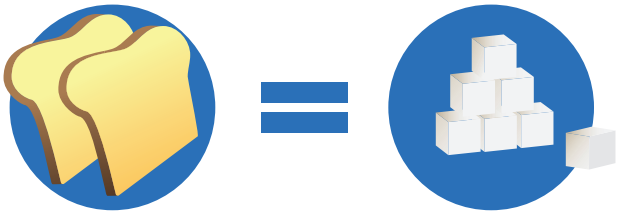
The journey to remission is different for everyone. Even if you do not achieve full remission, any improvement you can make to your blood glucose levels and your excess body fat will benefit your current and future health. And it will help reduce your risk of possible complications from type 2 diabetes.

1. LOW CARBOHYDRATE & KETO DIET

The general principle of this way of eating is to reduce the carbohydrates you eat because "carbs" break down into sugar (glucose) when digested. The fewer carbs you eat, the less sugar that will end up in your blood. These diets are also called "low carb, healthy fat" (LCHF) diets. If you eat a very low carb diet, less than 50 grams of carbs, it is called a ketogenic, or keto, diet. Both low carb and keto diets not only control blood glucose, they help you lose weight and they can help you feel less hungry between meals, helping you eat less. Counting calories is usually not required on a low carb or keto diet.

Cut out sugar & foods that digest to sugar

The typical Western diet usually has about 350 grams of carbs a day. A low carb diet means eating less than 130 grams a day. That means you cut out sugar, sweetened drinks (including fruit juice), processed foods, and carbs that digest to sugar such as cookies, cakes, crackers, cereal, bread, pasta, rice, potatoes and any refined processed foods with flour and sugar.



DID YOU KNOW THAT EATING TWO SLICES OF WHITE BREAD EQUALS EATING 7 SUGAR CUBES?

Fill up on protein & vegetables

What do you eat instead? You will fill up on plenty of healthy proteins such as chicken, fish, seafood, meat, eggs, Greek yogurt, and tofu. You can have as much above ground and leafy green vegetables as you desire. You will also eat nuts, seeds, and some cheese, if you want. You can also have low-sugar fruits such a raspberries, strawberries, blueberries, and blackberries.

Feel free to add some healthy fat

On a low carb diet you can add some butter or cheese to your vegetables, have an olive oil salad dressing or you can even top your berries with unsweetened whipping cream. Just add enough fat to help you enjoy your meals and let you feel full. If you overdo the fat, it may slow or stall your progress.

Make it keto with even fewer carbs

The keto diet is just a super-charged low carb diet, with less than 30 to 50 grams of carbs eaten a day. When you eat so few carbs, your body switches over from burning glucose for energy to burning your stored body fat for energy. This burned fat breaks down into compounds called ketones. That is why the diet is called a "ketogenic" or keto diet.

Getting used to burning fat for fuel

Our bodies are like hybrid engines and can burn glucose, fat or ketones for energy. In ancient times, this was life-saving and allowed our ancestors to burn their stored body fat when food was scarce. These days most of us run on glucose 100% of the time, but our bodies are still able to tap into this way to burn our fat – if we cut carbs.

It can take a few days to get used to using ketones for fuel (also called being in ketosis.) You may have a headache, dry mouth, or feel tired and achy. These symptoms are called "keto flu" but not everyone experiences them. And they typically can be avoided with a little pre-planning.

Drinking a cup of bone broth or water with a pinch of salt can help. Within a few days, your body will make the adjustment to being in ketosis, and most people experience increased energy, reduced hunger, and improved mental clarity.

KE TO

Although there are many new products labelled as "keto-friendly" on the market, they tend to be highly processed. Try sticking to **minimally processed, whole foods** rather than something packaged that has a long list of ingredients.

Talk to your doctor if you want to try a low carb or keto diet. This is especially important if you are taking any medications. See pages 14-16 for ideas what to eat.

2. LOW CALORIE DIET

A number of research studies show eating a very low calorie diet is one way to quickly lose body fat and improve blood glucose levels. **This is an intense, short-term treatment done for about 12 to 16 weeks under the care of a health professional.**

Phase 1: Shakes and soups first

You start by consuming a maximum of around 900 calories a day, often from commercially prepared shakes and soups that have been specially created to have a specific amount of protein, calories, vitamins, and nutrients.

Phase 2: Switch to whole foods

After 12 weeks, or when the desired body fat is lost, you switch to a healthy whole foods diet with meals like salads and vegetables with lean proteins, such as salmon and chicken.

Phase 3: Custom diet

For maintenance, you will then transition to a personalized diet that supports a stable weight and food that you can eat for the rest of your life.

Recurrence plan

If you start to regain weight or your diabetes returns, you should go back to the shakes and soups of phase 1 until you are stabilized again.

Exercise and stress reduction

The two largest studies of very low calorie diets included other lifestyle changes such as medically monitored exercise and stress management.

Next steps?

Talk to your doctor if you want to try a low calorie diet. This is especially important if you are taking any medications. See pages 14-16 for ideas what to eat.

3. INTENSIVE LIFESTYLE

A third method to help improve type 2 diabetes is intensive lifestyle changes—especially intermittent fasting (16:8) and muscle-building exercise. These strategies help lower blood sugar, improve insulin sensitivity, and reduce excess body fat.

Intermittent Fasting

While there are many fasting protocols, one popular form of intermittent fasting (IF) means eating within an 8-hour window and fasting for 16 hours each day. This approach allows your body to lower insulin levels when not eating and switch to burning stored fat for energy. Over time, this reduces insulin resistance and helps your blood sugar stay in a healthy range.

How to Start:

- **Choose an eating window, such as 10 AM – 6 PM or 12 PM – 8 PM.**
- **When eating, focus on protein, vegetables, salad, & healthy fats.**
- **When fasting, drink water, broth, or unsweetened teas or black coffee.**

Activities to Build Muscle & Burn Energy

Muscles improve insulin sensitivity. When you use your muscles, they use up sugar from the bloodstream, reducing blood glucose and lowering insulin levels. The more muscle you have, the more capacity you have to regulate your blood glucose.

Best Types of Physical Activity

The best kind of physical activities are the ones you like to do. **It can be anything that gets your body moving.** You don't have to go to a gym to work out but activities that use and build muscle or get your heart beating a bit faster can help make you fitter. If you do want to work out, try this:

Strength Training (2–3x per week)

- *Bodyweight exercises (squats, push-ups)*
- *Resistance bands or weightlifting*
- *Helps increase muscle mass and burn stored sugar*

Daily Movement & Cardio

- *Walking after meals (10–15 minutes) lowers blood sugar*
- *Any cardio 3-5 times a week improves your metabolism. High intensity interval training (HIIT) is particularly effective.*

Consistency Counts!

By combining intermittent fasting, cardio and muscle-building exercise, you can lower your insulin resistance and work toward remission — where your blood sugar remains in a healthy range without medication.

4. SURGERY OR GLP-1 RA DRUGS

BARIATRIC SURGERY

Bariatric surgery, often called 'weight loss surgery' is a medical procedure performed on the stomach or intestines to reduce their size. This greatly reduces the amount of food that can be eaten at one time, thus helping a person lose weight. **This surgery is generally reserved for people with large amounts of weight to lose.**

Surgery or drugs still requires changing your diet

While this booklet focuses on using food and eating strategies to achieve type 2 diabetes remission, we mention bariatric surgery because it is a scientifically proven approach to achieving short and long-term diabetes remission. After bariatric surgery, blood glucose levels can fall rapidly and type 2 diabetes can go into remission before any weight is lost. However, only adjustable gastric band surgery can be reversed. The other types of surgery are permanent.

TYPES OF BARIATRIC SURGERY

Adjustable gastric band (AGB) | **Vertical sleeve gastrectomy (VSG)** | **Roux-en-Y Gastric bypass (RYGB)** | **Biliopancreatic diversion (BPD)** | **Biliopancreatic diversion with duodenal switch (BPD-DS)**

After surgery, you must change how and when you eat.

Immediately after surgery, you will only be able to have fluids for a few weeks. Then you will eat small amounts of soft, moist and mashed foods four or five times a day. Eventually, you will transition to a whole foods diet that is low in sugar and processed foods. You will also have to take key vitamins and minerals as supplements for life.

Important Considerations

Bariatric surgery is a powerful tool but you must be fully informed of its risks and benefits. Short-term risks include serious post-operation complications; long-term risks include nutritional deficiencies, gastro-intestinal issues, muscle loss, osteoporosis, and mental health issues such as depression, anxiety and higher rates of post-op addiction, such as to alcohol or gambling. It is possible to regain weight if you go back to previous ways of eating. Long-term success will depend on a life-long commitment to changed eating habits and prioritizing your physical and mental well-being.

GLP-1 RA WEIGHT LOSS MEDICATIONS

GLP-1 receptor agonists, such as semaglutide *(Ozempic, Wegovy)* and tirzepatide *(Mounjaro, Zepbound)*, are medications that help manage type 2 diabetes and support weight loss. While they improve blood sugar control and reduce insulin resistance, they do not lead to true "remission" as currently defined since you are continuing to take a medication. These medications mimic the GLP-1 hormone in the gastro-intestinal tract, which:

- **Regulates blood sugar by increasing insulin release when needed**
- **Slows digestion, leading to a longer feeling of fullness**
- **Reduces appetite, which helps with weight loss**

Common side effects include nausea, vomiting, diarrhea, constipation and fatigue. A major concern is that up to 40% of weight lost on GLP-1 RA drugs may come from muscle, not fat. To prevent this, resistance training and adequate protein intake are essential.

GLP-1 RAs require lifestyle change for success

These medications are expensive, and many people want to stop them after a year or more. However, **rapid weight regain is common** unless long-term lifestyle changes are made. Therefore, it may be possible to include medications as a component of a remission strategy, but long term success depends on a sustainable lifestyle that is built on a foundation of whole, minimally processed, foods.

- **Eliminates added sugar & ultra-processed foods**
- **Reduces foods that rapidly digest into sugar**
- **Prioritizes protein & whole, nutrient-dense foods**

Additionally, it is crucial that you include strength-building activities such as resistance training or weight-lifting to preserve and increase muscle mass while taking GLP-1 RAs.

8 COMMON PRINCIPLES OF EATING

No matter what approach you take to type 2 diabetes remission, as outlined in the previous pages, these 8 common principles underlie all ways of eating for long-term success. You can apply these principles to any style of diet — Mediterranean, vegetarian, vegan, low carb, keto — **or any ethnic or culture's cuisine.**

1. **Eat** whole foods and minimally processed foods
2. **Prioritize** protein at every meal, whether from animal or plant sources
3. **Eliminate** ultra-processed foods & added sugars
4. **Avoid/reduce** foods that rapidly digest to sugar, such as high glycemic carbs, refined grains
5. **Eliminate** sweet beverages including pop, fruit juice, sports drinks, and sweet tea or coffee
6. **Eat** plenty of colorful vegetables for adequate fiber and nutrients
7. **Include** healthy fat sources such as olive oil, avacado oil or nut oils
8. **Consume** little to no alcohol and eliminate intake of sweet alcoholic drinks

Easy As 1, 2, 3

When planning a meal, it helps to think of these three steps:

One

Pick a protein: whether animal or vegetable protein — you decide

Two

Add lots of above ground vegetables or leafy greens

Three

Add fat for flavor: olive oil, avocado, butter — just enough to make the food tasty

WHAT TO EAT FOR DIABETES REMISSION

How do you translate the 8 common principles into easy choices for breakfast, lunch and dinner plus drinks and snacks? Here are some ideas of what to eat and what to avoid.

BREAKFAST

Whatever time you have your first meal of the day, begin with protein and fiber. Leftovers are great.

Enjoy

- Plain Greek yogurt, or cottage cheese, with berries topped with nuts and seeds
- Eggs any way; grilled meat or fish, cheese, vegetables, avocado, ham, fish, or bacon

Avoid

- Boxed cereals, oatmeal, granola, or grain-based porridges
- Pastries, donuts, muffins, toast, bagels, flour-based baked goods, pancakes with syrup

LUNCH & DINNER

One: Pick a protein like meat, poultry, fish, eggs, or tofu.

Two: Have as many leafy-green or above ground vegetables as you want.

Three: Add a bit of fat for flavor.

As easy as 1, 2, 3.

Enjoy

- Grilled, baked, broiled, poached, or fried meat, fish, poultry, or tofu
- Plenty of above ground vegetables, leafy salads with olive oil or butter-based dressing
- For desert, try cheese & nuts or plain yogurt with seasonal berries

Avoid

- Breaded or deep-fried meat, poultry or fish
- Pasta, potatoes, rice, bread, pita, tortillas, naan or any other starches
- Cakes, cookies, pastries, icecream or any other sugary sweets for desert!

SNACKS & DRINKS

Eat enough at meals to stay full, but if you need a snack, choose from the list below. For drinks, avoid sweet beverages—water with lemon or lime is a great choice.

Enjoy

- For a snack, sliced veggies with yogurt dip, hardboiled eggs, unsweetened jerky, slices of cheese or a handful of nuts like almonds, cashews or pistachios
- Enjoy still or sparkling water. If you'd like some flavor try diffusing it with cucumber, mint or fresh berries
- Plain tea or coffee if you need a boost

Avoid

- Chocolate bars, sweets, muffins, donuts, pastries, potato chips, pretzels, nachos, crackers, popcorn, corn chips or other packaged snacks
- Sugary soft drinks, sodas & fruit juice of any kind *(be careful of diet sodas if they spur your sweet cravings)*
- Avoid putting sweetener in your tea or coffee,
- Beer, sweetened cocktails, liqeuers, fortified or sweetened wine,

COMMON PRINCIPLES SHOPPING LIST

When you're grocery shopping stick to the outer rim of the store. Frozen berries, vegetables, fish, and meat are great to have on hand and won't go bad. Pick up any of the following:

Proteins

beef
lamb
pork
poultry
game
fish
seafood
luncheon meats & sausages*
eggs
tofu, tempeh, natto*

Natural fats

avocado oil
bacon
chicken fat (schmaltz)
coconut milk
coconut oil
full-fat salad dressings*
ghee
lard and tallow
mayonnaise
nuts and nut butters
nut oils of all types
olive oil
sesame oil

Vegetables

artichoke
asparagus
avocado
bok choy
broccoli
Brussels sprouts
cabbage
cauliflower
celery
cucumber
eggplant
fennel
garlic
green beans
hearts of palm
jicama
kholrabi
leafy greens
leeks
mushrooms
okra
olives
onion
parsley
peppers
pickles*
pumpkin
radishes
rhubarb
rutabaga
scallions
shallots
snow peas
sprouts
squash
sugar snap peas
tomatillos
tomato
turnip
zucchini

Fruit

blueberries
raspberries
strawberries
blackberries
lemons
limes

Dairy products

butter
cheeses of all kinds
cottage cheese
cream cheese
ghee
cream cream (18%, whipping*)
mascarpone
ricotta
sour cream
yogurt - plain, full-fat

***no added sugar or starches**

Low carb and keto diets have become very popular. You can find many cookbooks, websites, and magazines with a wide variety of low carb and keto recipes. There is no need to buy expensive, processed, packaged "keto" products.

WHAT SHOULD I MEASURE AND TRACK?

What you track is up to you and your doctor. Tip: track what motivates you.

Your healthcare provider will track important health measures like your HbA1c, your blood lipids, and your blood pressure. But you can track certain measures, too, if they help keep you motivated.

For example, some people like to track their weight and their waist measurement and find this motivating to do. However, if you find stepping on the scale or putting a tape measure around your waist is demotivating or stressful, don't do it.

Some people find it helpful to track calories if doing a very low calorie diet. Others, who are doing a low carb diet, track "their macros," which are the grams of carbs, protein, and fat they eat each day. You don't need to do this, but if you find it motivating go ahead.

Some people also keep a food journal, noting what they eat for breakfast, lunch, and dinner. This may help if you are having trouble sticking to the diet or not getting good results. It can help you or your health provider fine tune your approach.

Track your blood glucose levels

While your health provider will order blood tests to check your blood sugar periodically, it is easy and helpful if you learn to check it yourself. Doing so can give you immediate feedback about how certain foods impact your blood sugar. It can keep you motivated and on track.

A home blood glucose meter (or glucometer) and glucose strips are available [they are sold separately] for purchase from your pharmacist. Here, in general, is how to take a reading:

1. Wash and dry your hands
2. Put glucose strip into the meter
3. Prick a fingertip with the lancet provided
4. Put a drop of blood on the strip
5. Wait for the result.

Use a continuous glucose monitor

A device called a continuous glucose monitor, or CGM, is now available from your pharmacist without a prescription. While more expensive than a glucose meter, a CGM gives blood sugar readings 24/7 without pricking your finger. A special disc is worn on the back of your arm that links to an app on your smart phone. Wearing a CGM can give you insight into how your blood sugar is impacted by different foods, sleep, and stress.

PLAN FOR COMMON CHALLENGES

In a few places in this booklet, we've stressed the need to prepare for challenges. What are some of the most common challenges people face and what can you do about them?

- **Tempting food in the house:** Clear out your fridge, freezer and pantry of tempting foods like chips, cookies, crackers, ice cream and don't bring them into the house. If family brings in such food, ask them to hide it or not eat it in front of you.

- **Tempting food in your daily activities**: Do you have to walk by a bakery or donut shop every day on the way to work? Any other tempting daily traps like a candy dish on a colleague's desk or a vending machine in the break room? See if you can make a plan to avoid the lure or bring your own safe treat from home.

- **Snacking traps:** Sudden hunger can sabotage plans. Have in your fridge hard boiled eggs, pre-washed & cut up vegetables like celery and sweet peppers with a yogurt or cream cheese dip. Out on the road, choose roasted nuts, no-sugar jerky, or cheese strings. Have a packet of roasted almonds in your car or purse.

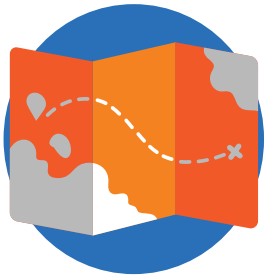
- **Swaps for sweet drinks:** Breaking the sugary pop habit can be hard. Even zero calorie diet pops can prime the brain to crave sweet tastes. Sparkling water with ice and lemon or lime wedges can be refreshing. Or try cold, strongly steeped herbal teas mixed with sparkling water and citrus.

- **Dining out:** When you are not in control of the food, plan for the following situations
  - ***Buffets*:** Fill the plate with simple proteins, vegetables and salad. Skip the rice, potatoes, and pasta. Steer clear of the dessert except the cheese.
  - ***Fast food restaurants:*** Order the burger or breakfast sandwich without the bun or salad option with protein. Hold the fries.
  - ***Higher end restaurants:*** If possible, look at the menu online before you go to plan your order. Try to go for simple grilled or roasted protein (fish, meat, tofu), veggies and salad.
  - ***Friends' parties:*** If appropriate, ask if you can bring a dish to share. At a cocktail party go for the charcuterie, cheese or crudité plate. At a dinner party you can ask for reduced portions of starches or decide to eat what you are served and get back on track the next day.
- **Work lunches:** Are pizza or sandwiches common working lunches? Just eat the top off pizza or the insides of sandwiches. Or bring your own food from home.
- **Travel**: Travel and vacations can be one of the hardest challenges. Use the tips above for eating out or snacking or decide to get back on track after the trip.
- **Grief and loss:** One of the hardest times to eat well is during times of great stress or loss. If friends and family want to support you by bringing food, you can ask for specific remission-friendly dishes, freeze plates of cakes and cookies or give them away. Or get back on track when you can.
- **Is it sugar addiction?:** If your cravings are unrelentingly, check our companion resource on food and sugar addiction at www.reversingprediabetes.ca

Be kind to yourself! Everyday is a new day. Regroup and try again!

HOW DO I STAY IN REMISSION?

You are in remission when your blood glucose has come down to a normal level and stayed there for three months without medication. Now you are in the maintenance phase of your type 2 diabetes remission plan. **It is important to remember that remission is not the same as cure.** Type 2 diabetes symptoms will come back if you go back to your old ways of eating. Research shows that keeping off the excess body fat appears to be the key to staying in remission. It is good to have a set of strategies to help you with this goal.



Have a recurrence plan

You can re-gain weight or see your blood glucose start to go up again at any time in the remission process. This is a very normal, human part of any change. A good idea is to have a plan ready to prevent or manage this when it happens. Going back to phase 1 of your remission plan and re-starting a very low calorie or very low carbohydrate diet for a short period of time can help to get back on track.

Include physical activity

Regular movement improves both physical and mental wellbeing along with reducing the risk of cardiovascular disease and type 2 diabetes. So try to make regular physical activity a part of your type 2 diabetes remission plan.

Some people find, however, that exercise can be very difficult at first. Don't worry, by changing your diet, and feeling better, you may find that you have more energy, desire, and ability to exercise.

Doing anything, even only 10 minutes a day to start, can help. If you can build up to three or four hours a week, wonderful! Just be active. Did you know a 10 or 15-minute walk after a meal is a great way to lower blood sugar?

Popular ways to be active include walking, cycling, team sports, yoga, gardening, outdoor recreation, and play. These activities can be done at any level of skill and for enjoyment by everybody. Choose the activity that makes you feel good!

Pay attention to sleep and stress

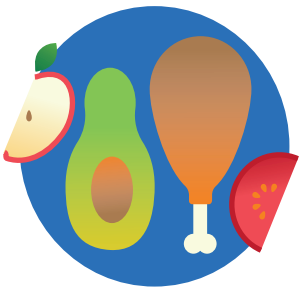
A good night's sleep helps give you more energy and helps your metabolism work better. It also helps your brain with tasks like memory, learning, and managing emotions. Poor sleep can raise your blood glucose levels, while fluctuating blood glucose levels may conversely contribute to poor sleep. One possible benefit of type 2 diabetes remission is better sleep.

Stress less

Stress can also make it a lot harder to get good control of your blood glucose. Stress increases hormone levels in your body that may directly increase glucose levels. When stressed, the body prepares itself for 'fight or flight' by making sure that enough glucose or energy is available. Feeling stressed or anxious can also interfere with a good night's sleep.

So, finding ways to reduce stress and improve sleep is part of the remission process and can help you succeed. Here are some actions to try:

- Limit all screen time before bed
- Try meditation
- Make time for yourself to relax
- Reduce your caffeine intake
- Spend relaxing time with family and friends
- Take breaks from work
- Exercise regularly with movement you enjoy



Continue to choose unprocessed or 'whole foods'

Throughout this book we've stressed eating whole, minimally processed foods. Why? It's because ultra-processed foods are strongly linked to poorer health outcomes and are engineered to make you crave more. Therefore they contribute to you unwittingly eating more calories.

In one recent study, 20 healthy subjects were admitted to a hospital ward for two weeks so that the researchers could control and monitor everything they ate. The participants were allowed to eat as much food as they wanted to feel satisfied. The researchers randomized whether the food was ultra-processed or less processed. The study showed that the participants ate 500 calories more each day when they ate ultra-processed foods, compared to eating as much as they wanted of a less-processed diet. This suggests that eating ultra-processed food can be a major factor in weight gain.

Unprocessed foods are foods close to their natural state. Fresh vegetables, fruits, pasteurized milk, meat, poultry, fish, beans, and eggs are considered unprocessed or minimally processed. These nutritious and delicious whole foods should be the major staples in your healthy maintenance diet.

In Summary:

THE JOURNEY TO REMISSION INCLUDES THESE 6 ACTIONS:

Make a decision: Sometimes the hardest part of making a change is deciding to do it. Once you have decided, commit to following through with the following steps.

Adopt the 8 common principles of eating: These principles can be applied to any style of eating or food preferences and can be sustained for life.

Ask for support: Having support from a healthcare professional is important for safety reasons, and supportive family and friends improve your chances of making behavior changes that last.

Track Progress: Monitor your progress, especially by tracking measures like waist circumference, blood glucose levels, and reduction of body fat.

Prepare for challenges: Struggles will arise. Expect them and prepare for them with strategies and a plan if or when you regain weight or see your blood sugar rise.

Repeat as needed: If you get off track, recommit to actions. You can restart as many times as you like and need.

NOTES

ARE YOU READY TO START?

Use these last two pages as a place to jot notes, record helpful health measures, and make a plan to overcome possible challenges.

1. Record health measurements that you find motivating to track.

If you find it motivating, and easy to get, record key starting health measures, such as your weight, waist size, blood glucose and blood pressure. Then update those measures at 4, 8, 12 & 16 weeks. Note other improvements in the way you feel over time such as having more energy, better sleep, reduced cravings or hunger and fewer mood swings.

	Starting	4 Weeks	8 Weeks	12 Weeks	16 Weeks
Weight					
Waist					
HbA1C					
Fasting BG					
BP					
Other					

2. Note the reasons why you want to try putting your type 2 diabetes into remission

This could be the desire to get off medications, avoid complications, be healthier and more available to family and children. The more reasons you can find the more motivation!

3. Anticipate possible challenges. What will you find hard? Make a plan for it.

It could be upcoming travel or events, eating at restaurants, or missing key foods. What can you do to meet the challenge?

Challenge	*Plan*

4. What personal traits or relationships can you rely on for support. How can they assist you?