



THE
CHARLES H. BEST
DIABETES CENTRE

New Patient Guidebook

A Resource Guide for
The Charles H. Best Diabetes Centre
Patients, Families and Caregivers.

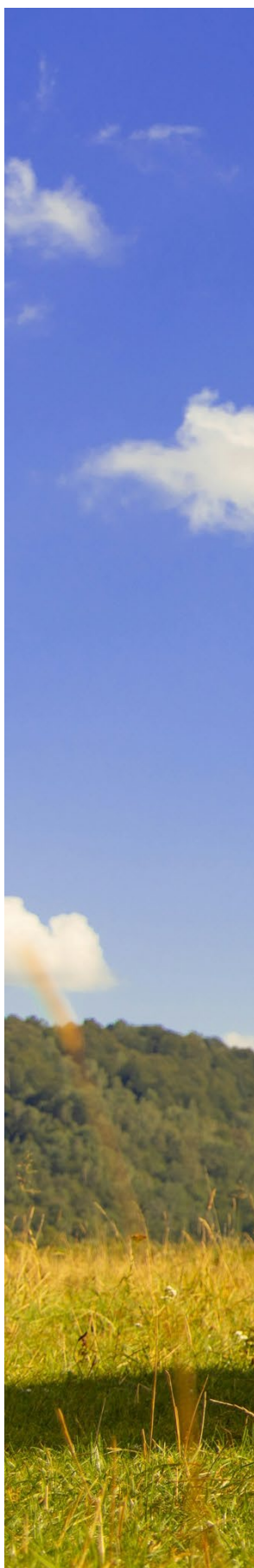
We empower people with type 1 diabetes to live fully by providing extraordinary care, education and a community of unwavering support.

We created this guide to empower you with important information about managing your diabetes effectively. It serves as a comprehensive resource to educate you on things such as insulin, blood sugar monitoring, carbohydrate counting and healthy living.

We are here to support you.

This guide is your reference to help make these early days in our journey together, easier.





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About The Charles H. Best Diabetes Centre

The Charles H. Best Diabetes Centre is committed to keeping patients healthy through education and a family-centred support model that engages everyone involved in their care. With a lifelong, all-encompassing approach, we are guided by our vision - Outstanding Care. Outstanding Outcomes. We empower people with type 1 diabetes (T1D) to live fully by providing extraordinary care, education and a community of unwavering support.

Our interdisciplinary team, including physicians, nurses, dietitians, and social workers, works collaboratively to make a meaningful difference in the lives of children, adults, and their families.

Welcome from the Executive Director

The Charles H. Best Diabetes Centre is a one-of-a-kind community healthcare centre and a registered charity, which exclusively serves the needs of patients and families living with type 1 diabetes. Our founder, Marlene Grass, opened the doors in 1989 to the type 1 community because as a nurse, she saw the need for a place where patients and families could receive complete health care and ongoing support without a fee.

Our team provides expert education to patients of all ages and works closely with families and caregivers. We are with our patients throughout all stages of their lives, providing care to children and adults, seeing teens through the transition to adulthood and working with adults through lifecycle changes, such as pregnancy and into the senior years.

Our programs and services are based on a truly integrated and collaborative care model. The interdisciplinary team of educators includes members of all health care disciplines; we are proud of our staff whose work with you is guided by the values of the Best Centre: Excellence, Collaboration, Compassion, Quality and Respect. Please visit our website for more information; charleshbest.com.

Type 1 diabetes is life altering; we understand, and we are here to help you, your child, and your family live your life fully. Please do not hesitate to ask questions, get involved and above all, take good care of yourself and each other.

Best in health,



Lorrie Hagen, RD, MHSc, CHE
Executive Director

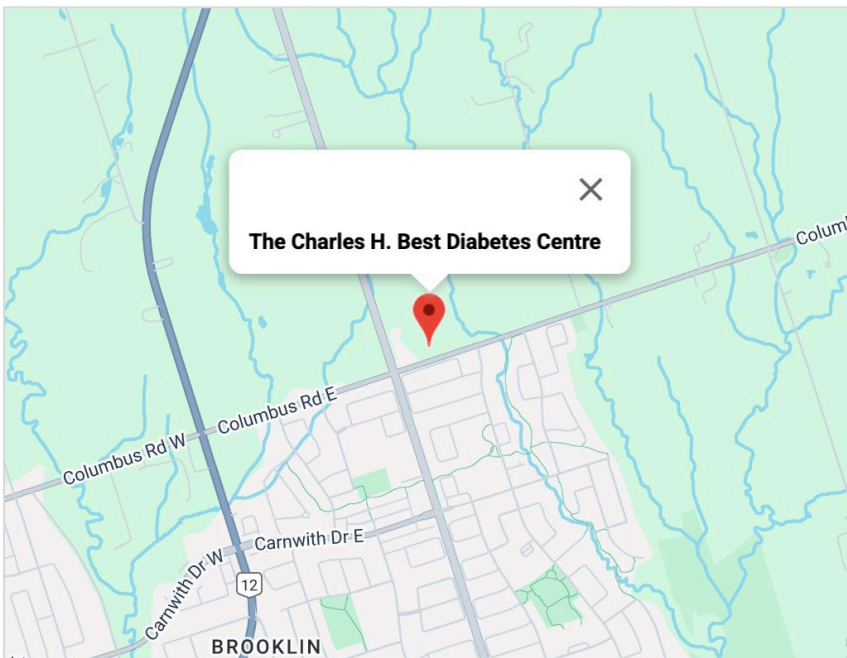


| Marlene Grass, Founder, & Lorrie Hagen, Executive Director. |

Contact Information

Main Phone and E-mail:

The Charles H. Best Diabetes Centre
905-620-0360
bestdiabetes@charleshbest.com



360 Columbus Road E,
Whitby, Ontario
L1M 1Z5

Connect with us through our socials!



<https://www.linkedin.com/company/charleshbest/>



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Glossary

A1c: (also known as hemoglobin A1c, and HbA1c) is a blood test that provides an average measure of blood sugar levels over the past 3 months.

Autoimmune disease: A disease where the body's immune system attacks healthy cells.

Basal Insulin: (aka long-acting insulin) is the kind of insulin you inject for continuous insulin (also referred to as “background insulin”) to keep blood glucose levels stable overnight and between meals.

Blood glucose: Also known as blood sugar, this is the amount of glucose in the blood.

Blood glucose meter: A device that measures the amount of glucose in a blood sample.

Blood sugar: Also known as blood glucose, is the amount of sugar (glucose) in the blood. Normal blood glucose levels are between 4 and 7 mmol/L before meals.

Bolus Insulin: (aka rapid-acting insulin) is the kind of insulin you inject to bring your blood glucose down into target or to match up with your food.

Continuous Glucose Monitor (CGM): A wearable device that sits just under the skin which continuously measures glucose levels in real-time.

Diabetic ketoacidosis (DKA): A serious and potentially life-threatening complication of diabetes that occurs when the body doesn't have enough insulin to allow glucose to enter cells for energy.

Glucagon: A medication to treat severe hypoglycemia. It is used in severe cases, such as when the child does not respond or is unconscious, has convulsions, or is so uncooperative that you are unable to give juice or sugar by mouth.

Hyperglycemia (high blood sugar): Occurs when the blood sugar level is above normal values: above 7 mmol/L, on an empty stomach or before a meal, or a random blood sugar above 11 mmol/L.

Hypoglycemia (low blood sugar): Occurs when the blood sugar level is below normal values: below 4 mmol/L.

Insulin: A hormone produced by the pancreas that moves glucose from your blood into cells for energy.

Insulin injection: A way to replace insulin that the body doesn't produce.

Insulin pump: A device that delivers insulin to the body.

Ketoacidosis: A complication of hyperglycemia. It occurs when there are ketones in the blood. This is an EMERGENCY SITUATION.

Ketones: Dangerous chemicals that build up in the body when there isn't enough insulin to process blood glucose.

Lancet: A small needle used to prick the skin to get a drop of blood for testing.

Lipohypertrophy: When insulin is injected in the same spot too many times, causing lumpiness under the skin.

Test strip: A small disposable strip that measures blood glucose levels.



Your Care Team

Type 1 diabetes is best managed through a collaborative team of healthcare professionals, each bringing their expertise while working closely together. Each team member focuses on specific aspects of care to ensure comprehensive support. Our goal is to help you manage diabetes effectively, so it remains in the background of your life, allowing you to focus on what matters most to you. We are dedicated to keeping our patients healthy, happy, safe, and well-adjusted.

Type 1 diabetes is a highly specialized area of clinical care, and the educators at the Best Centre bring years of focused experience to the field. Their deep expertise encompasses current treatment methods as well as best practices in assessment, management, and patient education, ensuring that individuals with type 1 diabetes receive comprehensive, personalized care.

Learn more about your care team on the next page.

Diabetes Doctor

What do they do? They are specialized medical professionals with expertise in managing diabetes in children and adolescents. You will meet with the doctor at diagnosis, followed by every three months at the Best Centre for your child's diabetes clinic appointment.

Diabetes Educator Nurse

What do they do? They play a vital role in empowering your child and family with the knowledge and skills needed to manage diabetes effectively, both immediately and in the future. Following the initial diagnosis, the educator schedules regular sessions to provide continuous support. They guide you through the day-to-day aspects of diabetes care, including blood sugar monitoring, insulin administration, and effective communication with schools or daycare providers, ensuring a comprehensive understanding of your child's T1D.



Diabetes Educator Dietitian

What do they do? They focus on food and nutrition. The Dietitian will meet with you at diagnosis and regularly throughout the year. The Dietitian will provide education about food choices and carbohydrate counting.



Diabetes Social Worker / Counsellor

What do they do? They provide therapeutic support to improve coping and managing life with type 1 diabetes, as well as other aspects of life. Learning healthy communication and coping skills are essential components of diabetes management. It is recommended that you meet with the Social Worker/Counsellor within the first month of diagnosis, and as needed moving forward. The goal is to support your child in returning to, and continuing to, participate in all their normal childhood activities whether it is pizza day at school, birthday parties or elite sports. The Social Worker/Counsellor will provide support to you, your child and family, and can also link you with community resources and services as needed.



My Care Team Members

Diabetes Doctor:

Nurse Educator:

Diabetes Educator Dietitian:

Social Worker/Counsellor:

Additional Members:

What are my questions?

A new type 1 diabetes diagnosis can be overwhelming and confusing. It is natural to have questions and to feel uncertain. Your care team is here to assist and support you. Your care team includes your doctor, nurse educator, dietitian, social worker/counsellor and support staff. Please use the space below to take notes and write down other questions you have that are not included in this Guide or that you would like more information and education on.

Notes: _____

My Schedule

Consistency and routine are important for children with type 1 diabetes. Your care team will work with you to complete this section. Use it as a guide to help you with timing blood sugar monitoring, administering insulin and eating meals. Timing is important for type 1 diabetes management.

Time	Activity
	Breakfast ✓ Check blood sugar before breakfast, carb count the meal. ✓ Give insulin ✓ Eat breakfast
	Morning snack <i>(There is no need to check blood sugar before morning snack)</i> ✓ Carb count the snack
	Lunch ✓ Check blood sugar before lunch, carb count the meal ✓ Give insulin ✓ Eat lunch
	Afternoon snack <i>(There is no need to check blood sugar before afternoon snack)</i> ✓ Carb count the snack
	Dinner ✓ Check blood sugar before dinner, carb count the meal ✓ Give Insulin ✓ Eat dinner
	Bedtime snack ✓ Check blood sugar before bedtime snack ✓ Carb count the snack ✓ Eat snack

Check blood sugars **before** breakfast, lunch, dinner and bedtime snack.

- You do not need to check blood sugar before morning and afternoon snacks.
- We may ask you to check blood sugar 2-3 hours after meals or at 3:00 a.m. if needed to evaluate insulin doses.
- Give insulin before eating. Infants and toddlers can take insulin after eating if food intake is unpredictable and erratic.

Type 1 Diabetes 101

In this section, you will learn about what type 1 diabetes is and what to expect at the beginning of your child's diagnosis.



What is type 1 diabetes?

Type 1 diabetes is a lifelong condition where the pancreas makes little or no insulin. Insulin is an essential hormone that helps control the level of glucose (sugar) in your blood and provides energy to your body's cells.

In a healthy pancreas, specialized cells called **beta cells** produce insulin. This hormone allows glucose (sugar) from the food you eat to move into your cells, where it's used for energy. However, in type 1 diabetes, the body's immune system mistakenly attacks and destroys these beta cells. Without enough insulin, glucose (sugar) builds up in the blood instead of entering the cells, leading to high blood sugar levels and the symptoms of stage 3 type 1 diabetes.

This autoimmune response begins long before there are noticeable symptoms and there is currently no way to cure type 1 diabetes. However, ongoing research and clinical trials worldwide are working to change that. Screening tests can help identify people who may be at genetic risk for type 1 diabetes (T1D) or who are already in the early stages of the disease known as Stage 1 or Stage 2, before symptoms appear. Medications are currently available to delay the progression to Stage 3 Type 1 Diabetes. Talk with your diabetes doctor or educator to learn more about options. To learn more about ongoing research studies, visit TrialNet at www.trialnet.org.

Symptoms of type 1 diabetes:

- Increased thirst and urination
- Change in appetite and increased hunger
- Unusual weight loss
- Feeling tired or nauseous
- Blurred vision
- Irritable or other behavioural changes
- Heavy laboured breathing and fruity smelling breath

Managing Type 1 Diabetes

While there is no cure for type 1 diabetes at this time, it can be effectively managed by balancing insulin and carbohydrate counting. The goal is to keep blood sugar levels as close to normal as possible to support overall health and well-being.

Type 1 vs. Type 2 Diabetes: What's the Difference?

It's common to confuse type 1 and type 2 diabetes, but they are different conditions:

- **Type 1 Diabetes:** The body produces no insulin because the beta cells in the pancreas have been destroyed. It must be managed with insulin therapy.
- **Type 2 Diabetes:** This is the most common type of diabetes, typically occurring in adults. People with type 2 diabetes produce some insulin, but their body doesn't use it properly. It can often be managed with a combination of healthy eating, exercise, and medication (sometimes including insulin).

Did You Know?

Type 1 diabetes is one of the most common chronic conditions in children.	1 in 300 children have type 1 diabetes.
More than 300,000 Canadians live with type 1 diabetes.	The incidence (number of new cases per year) of T1D has increased by 34% between 2000 and 2022.

¹Public Health Agency of Canada, 2011. Diabetes in Canada: Facts and figures from a public health perspective; Chapter 5 – Diabetes in children and youth: www.phac-aspc.gc.ca/cd-mc/publications/diabetes-diabetes/facts-figures-faits-chiffres-2011/chap5-eng.php (Accessed August 15, 2014).

²<https://www.jdrf.ca/>, accessed Feb 15, 2019.

³www.t1dindex.org.

Notes



A type 1 diabetes diagnosis

A diagnosis of type 1 diabetes is not easy and can be unsettling for the whole family. You may be overwhelmed and flooded with emotions and questions.

You do not catch diabetes; it is not a bug like the flu bug. Diabetes is an autoimmune disorder that some people develop. It is NOT caused by eating too much or having too much sugar, candies or carbohydrates. The cause of type 1 diabetes is complex and still not completely understood by researchers. We know that people inherit a tendency to develop diabetes, but not all people who have this tendency will get type 1 diabetes. In fact, there is no family history in approximately 80% of cases. You and/or your child did not cause it. While there is nothing you can do to prevent T1D, there are medications that may preserve some insulin production. Talk to your diabetes doctor about options.

Most people are unfamiliar with type 1 diabetes, and it is common to feel overwhelmed, guilt, sadness and anger. These feelings are normal and can come and go and will change over time. This difficult time will pass, and you will regain your feeling of balance. The best way to move forward is to address your child's medical condition directly, as well as your feelings. The Best Centre has a team of professionals to help you with all aspects of your child's diabetes. The team provides support and education to help you work through this adjustment period. It is important to express your thoughts and feelings.

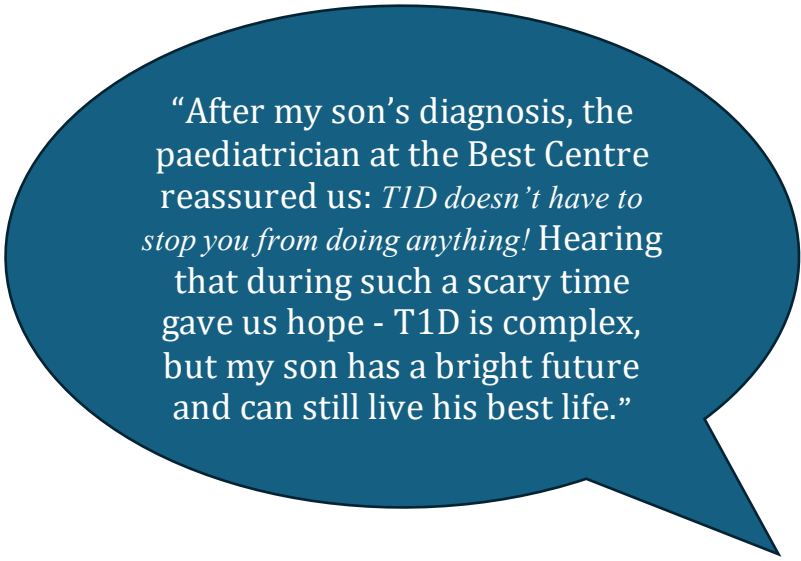
It is critical for both you and your child's adjustment to talk openly. Children often take on parents' feelings, anxiety or stress, so it helps them when you role model healthy expressions of feelings. Children need to know that they did nothing wrong, and they did not cause their diabetes.

Many children need time to express themselves and understand that they too will go through a grieving process. Initially, many children appear to handle the diagnosis with ease, and they may even try to comfort you. Expect this to change. Suddenly, your child's daily routine has been altered, and they feel forced to make changes against their will. You may notice that they start to struggle or express anger, sadness or fear. **This is normal** and it is healthy to continue to talk about these feelings long after the initial diagnosis. It is important to reassure your child (and yourself) that they will be healthy and remain healthy.

What to expect in the first week of diagnosis.

If your child does not require hospitalization, they will be seen at the Best Centre *every day*, for several days, followed by 1-2 times per week over the next few weeks and months.

The initial days after diagnosis are very busy and are an important time for children and parents to become educated on type 1 diabetes. **It is important for your child to attend all appointments at the Best Centre** to get to know the health care team and to learn about diabetes. It normally takes 20-25 hours to provide the necessary initial diabetes education. Parents need to be available as much as possible to concentrate on education and be with their child. Please arrange to take time off work and school. Many families take the first week off to receive initial diabetes education. We can provide a letter to your employer, if needed.



"After my son's diagnosis, the paediatrician at the Best Centre reassured us: *T1D doesn't have to stop you from doing anything!* Hearing that during such a scary time gave us hope - T1D is complex, but my son has a bright future and can still live his best life."

The aim of diabetes education is to give your child and family the knowledge and skills to be self-reliant in the care of diabetes. The diabetes team will also help you learn to cope and come to terms with the diagnosis of type 1 diabetes. Diabetes requires frequent adjustments in treatment (e.g. insulin doses) for various situations as well as with growth and development. The diabetes team continues to help you at follow-up visits, by telephone and email. By the end of the first week, families start to feel more confident in caring for their child with diabetes.

You will spend a number of hours at the Best Centre every day but will go home at night to allow you to get back into a new daily routine. You will be in contact with the nurse or dietitian by pager *daily* for insulin dose adjustments, and to answer any questions you may have.

You will call the **EMERGENCY PAGER NUMBER** (ask your educator for the pager number) every day, usually before each meal, for insulin doses. Before you call, check your child's blood sugar. We will assist you with insulin dose adjustments for approximately 2–4 weeks, and then we will transition to communication by email (detailed instructions will be provided to you).



What to Expect During Your Initial Appointments

Education for you and your child is essential after a diagnosis. The Best Centre is here to support you in creating and adjusting to your new normal.

Appointment	Purpose	Timeline
First visit with a nurse. (2-3 hours)	To provide fundamental education & management of type 1 diabetes with insulin injections and doses. You will receive resources and supplies.	Within 24 hours after diagnosis.
First visit with a dietitian. (2-3 hours)	To build on the fundamentals, establish nutrition guidelines, and carbohydrate counting for insulin dosing.	Within 48 hours after diagnosis.
First visit with a diabetes doctor. (30-60 minutes)	Meet with your paediatrician (diabetes doctor). This appointment might be at their office instead of the Best Centre.	1-2 weeks after diagnosis.
Follow-up visit with a nurse. (1 hour)	Meet with a diabetes educator to expand your knowledge and reinforce new skills. Key topics will include managing illness, high and low blood sugar, activity, etc.	1 week after initial visit.
Follow-up with a dietitian. (1 hour)	Additional education, management and support.	1 week after initial visit.
Follow-up with a nurse. (1 hour)	Additional education, management and support.	1 month after initial visit.
Follow-up with a dietitian. (1 hour)	Additional nutrition and insulin adjustment education, management and support.	1 month after initial visit.
First meeting with a Social Worker/ Counsellor. (60-90 minutes)	To support with the transition to living with T1D, including processing emotions, families struggling with the shock of diagnosis, or to help with any mental wellness concerns.	1 month after diagnosis, followed by, as needed.
Nurse for a T1D Skills Review. (1 hour)	Review of type 1 diabetes fundamentals.	5-6 weeks after initial visit (option for virtual or evening appointment).
Virtual Education for School Staff	T1D basics and safety education for staff and teachers at your child's school. You are encouraged to join online.	As needed.
Daily contact (via telephone or email) with a diabetes educator for insulin dose adjustments will continue as long as needed.		
Diabetes Clinic. (30 mins)	Meet with your healthcare team. <i>Note: the doctors do not work at the Best Centre every day; they have a set schedule here.</i>	Once every three months or as needed.

What happens at the clinic visit?

- **Health Checks:** A nurse will measure your child's blood pressure and, if needed, perform an HbA1c test. The A1c sample is collected through a "finger poke," similar to a blood sugar test.
- **Growth Monitoring:** With permission, your child's height and weight will be measured during some visits to monitor growth.
- **Team Consultation:** You and your child will meet with the care team, and the doctor will perform a physical exam if necessary.
- **Diabetes Review:** The team will review blood sugar levels, adjust insulin doses if needed and address any questions or concerns you have.

Important Details About Clinic Visits

- **Duration and Frequency:** Appointments are 30 minutes long and occur every 3 months.
- **Bring Data:** Blood sugar management relies heavily on data. Please bring any recorded insulin doses or blood sugar levels to your appointment.
 - Most glucose meters can be downloaded to provide detailed reports.
 - If your child uses a sensor, it can be linked to the clinic, so their blood sugar data is automatically shared with the Centre.
 - Ask your diabetes educator for instructions on how to download data and link your sensor data to the clinic.

Have Questions or Concerns?

- **Email Ahead of Time:** If you have questions or concerns before your appointment, email bloodsugars@charleshbest.com. A diabetes educator (nurse or dietitian) may address your questions or let you know if they are better discussed with the doctor during your visit.

Preparing ahead ensures you make the most of your clinic visit and receive personalized support for managing your child's diabetes effectively.

Interpreter services

We want to make sure you understand your care. If you prefer to communicate in a language other than English, qualified medical interpreter services are available at no cost. Interpreters can assist you in person, by phone, or through a secure video connection.

Top 10 Tips

for Parents of Children Newly Diagnosed with Type 1 Diabetes (T1D)



1 Neither you nor your child did anything wrong

- The exact causes of T1D are not yet understood, but certain hereditary, environmental and viral factors beyond your control are thought to trigger the immune response.
- The myth that T1D is caused by eating too much sugar is NOT correct.

2 You will adjust to your new normal

- It will take time to adjust to your new life with T1D.
- Find friends with children that have thrived with T1D and ask for tips.
- It is important for you and your child to stay involved in the same activities as before your child was diagnosed. Make sure your child does not feel any more different from his/her peers.

3 Diabetes impacts the whole family

- Relationship dynamics may change after your child is diagnosed.
- Siblings may feel forgotten or like an additional burden to the family. Don't forget to ask the siblings how they are doing.
- Everyone in the family will have to adjust to portioning food, counting carbs and focusing on diabetes around meal time.
- Make sure the family takes time to work through these issues and to spend leisure time together.

4 Focus on the now

- Diabetes can be stressful and anxiety provoking. Do your best to take care of your child in the present.
- Work with your diabetes educator or diabetes care team to prevent short-term and long-term problems associated with low and high blood glucose.
- Don't play the blame game. Don't focus on what you could have done differently. Figure out the root cause of the highs and lows and how to prevent them next time.

5 Diabetes is unpredictable

- Some highs and lows are inevitable. Even with a rigid schedule and following all the doctor's orders, blood glucose changes may be unpredictable. Don't be hard on yourself.
- Flexibility is key!
- Technology is your friend, so don't be afraid to learn how to use it. Your diabetes educator can help.
- Be prepared for the lows and highs when you least expect them. Always have a backup plan.
- Be ready to readjust insulin dosing and food intake based on the situation.
- Be aware that technology may fail.

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Top 10 Tips

for Parents of Children Newly Diagnosed with Type 1 Diabetes (T1D) *continued*

6 You are not alone

- Thousands of others have shared the experience of caring for a child with T1D. If they can do it, so can you!
- Diabetes camps can provide an important oasis where your child can build long-lasting friendships with others who understand what it's like to live with T1D. Camp parents can also network with others who are well-informed about diabetes technology, medical insurance coverage, local health care providers, schools and other issues.
- Peer support is powerful, but if you are not ready, that is okay.
- Your child will have a diabetes care team that should inform you about local events and support resources for your family.
- Online support communities can be wonderful resources when used properly. Be aware of who is providing the information, the source it's coming from and how it might affect your child. Always consult with your diabetes educator or diabetes care team before making changes to your care plan. Remember that every person is different and what works for one individual may or may not work for your child. Learn more at DiabetesEducator.org/PeerSupport.

10 Empower your child

- It's your child living with diabetes. Encourage them to advocate for themselves at school and in their medical care. Empower them to participate in their own care but don't expect them to take over too soon—they might not be ready yet.

7 You and your child will become diabetes experts

- You and your child are the biggest experts in your child's diabetes care. You and your child know how your child's body is impacted by certain factors better than anyone else.
- Ask your child for their input about their diabetes. Include your child in self-management discussions. Let them learn to calculate insulin dosages based on glucose levels, insulin sensitivity, correction factors, carb counting, activity level, etc.
- Remember, your job as a parent is to prepare your child to take care of her/himself.

8 Take care of your mental health and your child's

- Diabetes burnout is real. Seek mental health support if you have any concerns for yourself or your child. Ask your diabetes educator or diabetes care team for a referral.
- It is normal to feel stressed by diabetes and to seek mental health support

9 Support your child

- Always provide support to your child even if they don't seem to want it, deep down they do.
- Stay involved in your child's care throughout. They always need your support.
- Do not blame your child for their highs and lows. Don't be accusatory (example: What did you eat?). Work through the problem and figure out solutions going forward.

Type 1 Diabetes Management with Insulin

In this section, you will learn about managing type 1 diabetes and all things insulin.



Diabetes Management

Children with diabetes generally start to feel better within a few days of starting insulin. It is important that your child remain in your care until those around them (extended family/friends/school/daycare) are trained in type 1 diabetes management.

A nurse will assist with the first few insulin injections until you have learned this skill.

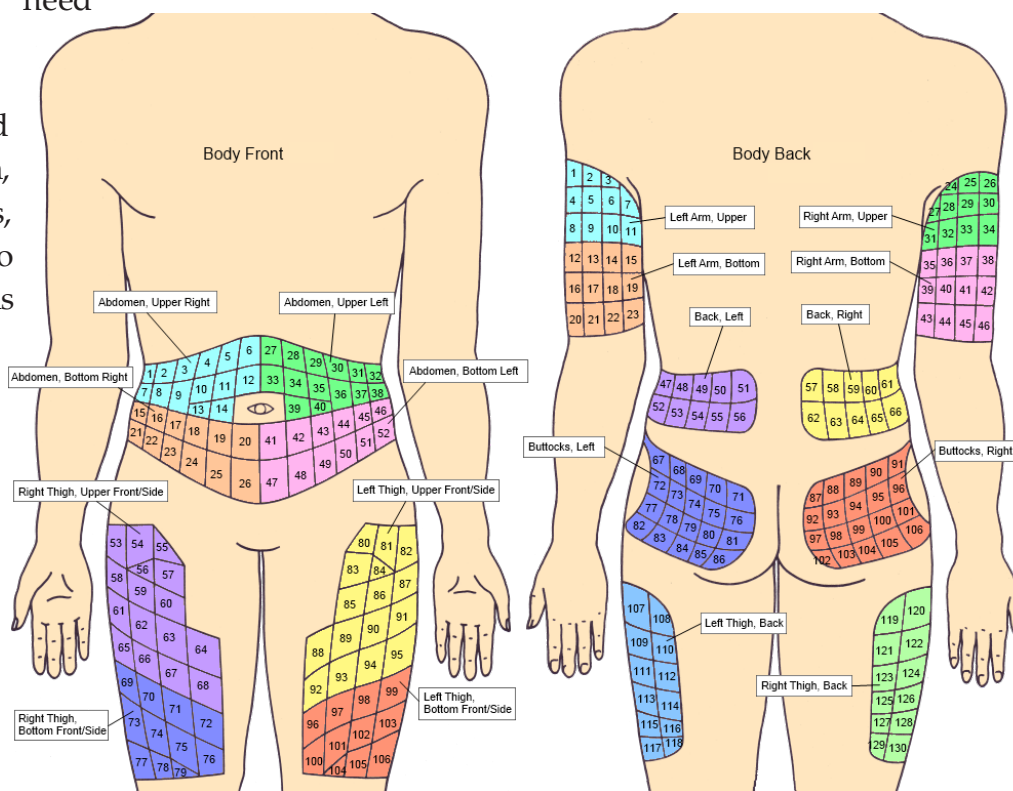
How is diabetes treated?

Children with type 1 diabetes require insulin, which must be delivered through injections using a pen or pump. Insulin cannot be taken as a pill, patch, or nasal spray. Most children with type 1 diabetes need four insulin injections per day.

What is insulin?

Insulin is a hormone produced by the pancreas. When we eat, much of our food is converted into glucose, a type of sugar. Insulin helps move glucose from the bloodstream into the body's cells, where it is used as energy to power essential functions like movement, breathing, and thinking. Without insulin, the body cannot use glucose for energy, and we need insulin to survive.

Insulin is injected into the abdomen, legs, upper arms, buttocks or hips into the subcutaneous tissue just below the skin. This is where insulin absorption is most predictable and consistent. Also, there are not as many nerves in these areas which mean it will be less painful.



Rotating injection sites

It's essential to rotate injection sites to prevent the development of lipohypertrophy - lumpy areas under the skin caused by repeated injections in the same spot. Lipohypertrophy can interfere with insulin absorption and affect blood sugar control.

Regularly inspect and feel your child's injection sites to ensure they remain healthy. Your doctor or diabetes educator will also check these sites during visits.

There are many brands and models of insulin pens, however insulin pens can be divided into two basic types:

- **Disposable pens** which come prefilled with insulin. The pen is thrown away after use.
- **Reusable pens** where you replace the insulin cartridge and reuse the insulin pen.

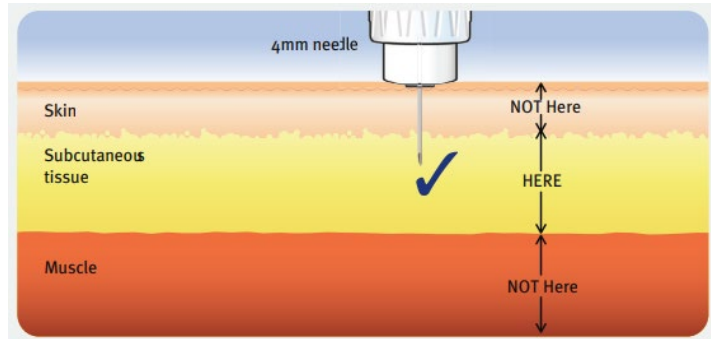


IMPORTANT TIP: Each insulin brand has its own unique pen device, so it is important to use the pen that matches your specific brand of insulin to ensure accurate dosing. Since pens from different manufacturers may function slightly differently, be sure to carefully read the operating instructions for your pen.

How to give an insulin injection

1. Wash your hands.
2. Choose an injection site. Remember to choose different sites each time. This should be spaced at least 1-2cm from each injection site.
 - Abdomen: stay 2-3 cm away from the belly button
 - Upper buttocks or hips: not the part you sit on
 - Arm: back of the upper arm
 - Thigh: top or outer side of the thighs, not the inner thighs.
3. Attach a pen needle to the insulin pen and remove both the outer and inner caps.
4. Prime the pen. Dial 2 units and depress the plunger by holding the pen needle upward. If drops come out, your needle is primed. If not, repeat the step until drops come out. Prime the pen before every injection.
5. Dial the dose.

6. Insert pen needle into the skin. You do not need to pinch the skin of the injection site. (**for children ages 2 - 6 or those with a slim build, lift the skin to avoid injecting into muscle*).



7. Hold the pen at a 90-degree angle and push the needle all the way into the subcutaneous layer (fat layer). Note: injecting into muscle can speed up the action of insulin and potentially result in a low blood sugar.



8. Slowly push the plunger to inject all the insulin. Make sure you push down completely so that all the insulin has been given. Wait about 10 seconds before pulling out the needle.
9. Remove the pen needle and put the used needle into a sharps container or a plastic or metal container with a tight lid. Replace the pen cap.

Bleeding at the injection site

It is normal for a small amount of blood to appear after injecting insulin. This typically happens when the needle punctures a tiny blood vessel. To stop the bleeding and help prevent bruising, apply gentle pressure to the injection site with your finger. Avoid rubbing the area.

If a bruise does develop, wait until it has healed before using that site again for injections.

If you notice frequent bleeding during insulin injections, consult your diabetes educator, as you may need to adjust your injection technique.

Disposal of Sharps

More than a million needles and lancets are used for diabetes care in Canada each year. Improper disposal of these items can pose a serious risk of injury to others.

What are sharps?

Sharps are any objects that can puncture or cut the skin. This includes pen tips, syringes, and lancets (commonly referred to as "prickers" or "pokers").

To ensure safety:

- Never attempt to recap pen tip, or lancet.
- Place sharps directly into an approved sharps container.
- Sharps must never be thrown in the garbage, recycling, or flushed down the toilet.
- Always keep sharps securely out of reach of children.

Where should sharps go?

Sharps must be disposed of in approved sharps containers labeled with the universal or cytotoxic biohazard symbol. These containers are made of durable plastic and are designed to prevent sharps from being removed once inserted. Proper disposal significantly reduces the risk of accidental needle-stick injuries.

Pharmacies participating in the Ontario Sharps Collection Program (OSCP) provide approved sharps containers and accept full containers free of charge. The pharmacy will ensure safe disposal of the contents.



When filling your prescriptions, speak to your pharmacist about getting an approved sharps container.

Disposing of Sharps While Away from Home

Travel-sized sharps disposal containers are available for use when you're on the go. Ask your pharmacist for recommendations. Additionally, many public facilities, including restaurants, hotels, stores, and airports, provide designated sharps disposal containers in their restrooms.



IMPORTANT TIP: To find the nearest pharmacy participating in the sharps disposal program, visit www.medicationsreturn.ca or email the Health Products Stewardship Association (HPSA) at info@medicationsreturn.ca.



Daily Injection Routine Tips

Here are some helpful strategies to make your child's daily injection routine more manageable and less stressful:

- **Stay Calm and Matter-of-Fact:** Approach your child in a neutral tone, simply stating that it's time for insulin.
- **Avoid Using the Word 'Needle':** Use language that is less intimidating and age-appropriate.
- **Provide a Simple Explanation:** Explain why insulin is important, e.g., "It helps your body stay healthy, grow, and be strong."
- **Acknowledge Discomfort:** Reassure your child that it's okay to feel upset if it hurts, but remind them that their job is to stay still.
- **Avoid Bribes or Negotiations:** Deliver the injection quickly and confidently without bargaining or using rewards.
- **Offer Limited Choices:** Allow your child to choose between two or three injection sites to give them a sense of control. For example, "Would you like your lunch dose in your abdomen, thigh, or buttocks?"
- **Provide Gentle Support:** If needed, hold or hug your child securely to help keep them still during the injection.

- **Offer Comfort Afterward:** Show affection and reassurance with a hug or kiss once the injection is complete.

These tips can help create a smoother and more predictable routine while fostering a sense of safety and trust for your child.

Tips for toddlers, preschoolers and early school-aged children:

Making injections a positive and manageable experience for younger children can be easier with these strategies:

- **Let Them Help:** Involve your child in the preparation process, such as screwing on the pen needle and priming the insulin pen.
- **Use Pretend Play:** Pretend a favorite stuffed animal or doll has diabetes and let your child give it an injection. Ensure the pen needle is not attached to avoid accidental poking.
- **Create a Reward System:** Use a sticker chart to encourage your child to stay still during injections, celebrating their efforts.
- **Keep Them Distracted:** Distract your child during the injection with activities like watching TV, playing with a device, wiggling their toes, counting aloud, blowing bubbles, or searching for objects in a picture.

These tips can help reduce anxiety, build confidence, and make the injection routine more engaging for young children

Adapted from FIT Technique Plus- FIT for Kids: Pointers for Parents



IMPORTANT TIP: Most insulin injections are painless, but if your child often experiences discomfort, try these strategies:

- **Use Room-Temperature Insulin:** Cold insulin can be more painful and may not work as effectively. Allow insulin to reach room temperature before injecting.
- **Relax the Injection Area:** Encourage your child to relax the muscles where the injection will be given. You can have them exhale, blow bubbles, or focus on something calming.
- **Use a New Needle for Every Injection:** Reusing needles can cause the tip to bend or dull, leading to increased pain. Always use a fresh needle for each injection.

These simple adjustments can help make the injection process smoother and more comfortable for your child.

Types of insulin

There are two different types of insulin your child needs: long-acting insulin and rapid acting insulin.

Insulin therapy is customized for each child based on a number of factors that affect how insulin works and how long it lasts. Your doctor will evaluate how your child's body responds to exercise, stress, the foods they eat and more before determining the right type of insulin, as well as how much and how often to give it.

Long-acting insulin

Long-acting insulin is also called **basal insulin**. Basal insulin balances the amount of glucose (sugar) used by the cells in the body with that released by the liver. The liver releases glucose between meals and while you sleep so that the brain and nerves receive the constant supply of glucose they need to survive.

Long acting is given 1 time per day, and lasts between 16 - 24 hours, depending on the one your child is prescribed. Some examples of long-acting insulin are: Lantus®, Basaglar®, Toujeo® and Tresiba®.

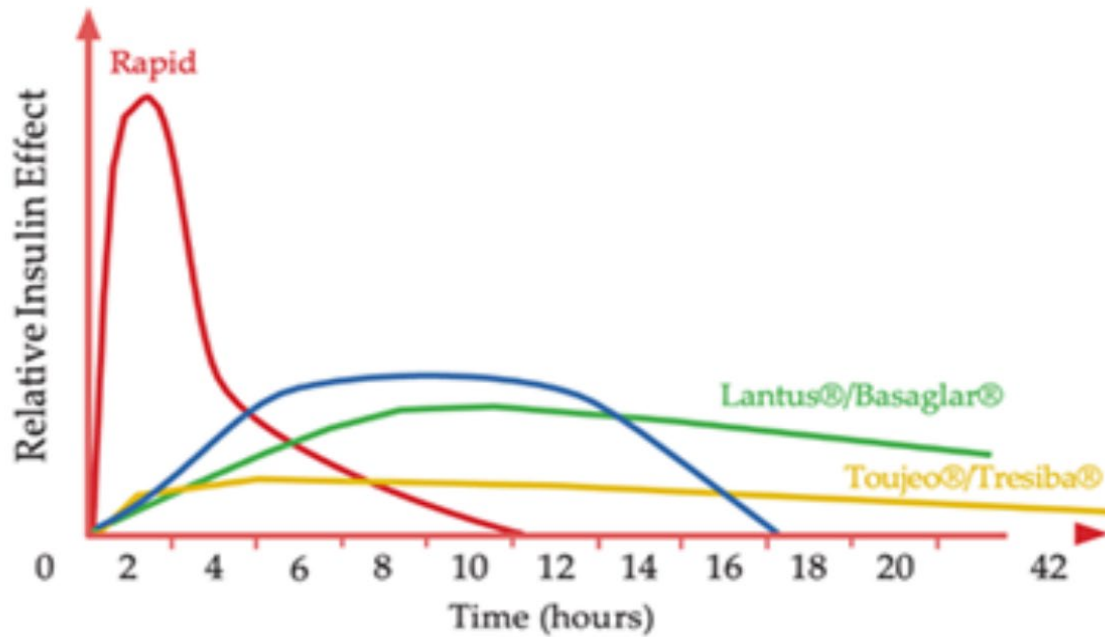
Rapid-acting insulin

Rapid acting insulin is also called **bolus insulin**. Rapid acting insulin is used to manage the rise in blood sugar that occurs with food. Rapid acting insulin is also used to correct high blood sugars.

Rapid acting insulin is given 3 times per day: before meals, and lasts 3 - 4 hours. Some examples of rapid acting insulin are: Humalog®, Novorapid®, Admelog®, Trurapi®, Kirsty®, and Apidra®



Activity Profiles of Different Types of Insulin



Rapid Acting Insulin

	Onset	Peak	Duration
Novorapid®, Humalog®, Apidra®, Admelog®, Trurapi®, Kirsty®	10-15 minutes	1-2 hours	3-5 hours

Long Acting Insulin

	Onset	Peak	Duration
Lantus®, Basaglar®	1.5 hour	flat	24 hours
Toujeo®	not applicable	flat	up to 30-hour
Tresiba®	not applicable	flat	up to 42-hours

Taking Care of Insulin

The temperature you store and use insulin is very important. Insulin can become damaged and not work well if it is not stored properly.

Unopened insulin should be stored in the refrigerator until the expiry date. Check the

expiry date on the box of insulin before you use it. Use the insulin before this date. Once opened, insulin can be stored at room temperature (20°C) for up to 28 days. During this time, there's no need to refrigerate it after each use. However, after 28 days, discard the insulin regardless of how much is left or the printed expiration date. Always check the packaging, some types of insulin can stay at room temperature for up to 6 weeks (Toujeo®) and 8 weeks (Tresiba®).



IMPORTANT TIP: Always record the date that you start new insulin to help you keep track. Some people change their insulin on the first of each month to make it easier.



IMPORTANT TIP: Make sure your insulin does not get too warm or too cold. Do not keep insulin in the car during very warm or cold months. When travelling, remember to keep insulin at room temperature, use a cooler with an ice pack or an insulated case such as a Frio Pack®.

How will I know if my insulin has gone bad?

There are two ways to tell when insulin is no longer good: poor performance and unusual appearance.

If your child's blood sugar stays high even though you are following your treatment plan, the insulin may have lost its effectiveness. Poor performance could be due to:

- The insulin has been at room temperature for greater than 28 days
- The insulin may have gotten too hot or too cold.

If your child's insulin has an unusual appearance, it's probably no longer effective. Here are some warning signs:

- The insulin is cloudy (it is supposed to be clear).
- The insulin looks stringy.
- The insulin has changed in color.

Insulin Pumps

An insulin pump is a small, computerized medical device used as an alternative to multiple daily injections. It delivers **rapid-acting insulin** in two ways:

1. **Continuous Delivery:** A small, steady dose of insulin is delivered 24-hours a day to act as basal insulin.
2. **Bolus Doses:** Additional insulin is delivered at mealtimes or to correct high blood sugar levels based on carbohydrate intake and current blood sugar readings.

How Does It Work?

The pump, about the size of a smartphone or deck of cards, is worn outside the body and delivers insulin through a thin tube (catheter) connected to a small cannula inserted under the skin. It can be worn:

- Around the waist in a pump case
- Attached to a belt or bra
- In a pocket or on an armband.

Pumps can be placed anywhere you would typically give an insulin injection.

Types of Insulin Pumps and Automation

There are several types of insulin pumps on the market, each offering unique features. Most pumps integrate with **continuous glucose monitors (CGMs)** for automated insulin delivery (AID) which adjust insulin delivery based on real-time blood sugar levels, mimicking the natural function of the pancreas more closely. However, you still need to enter carbohydrates and bolus for food for optimal diabetes management.

Pump technology is constantly evolving, offering new ways to simplify diabetes management.

Eligibility and Coverage

- In **Ontario**, insulin pumps are covered through the **Assistive Devices Program (ADP)** if your child meets the program's eligibility criteria.
- ADP eligibility generally requires your child to have been diagnosed with diabetes for at least one year.
- Some private insurance plans may also provide coverage for an insulin pump.
- Insulin pump therapy is not usually started immediately after diagnosis. Before beginning pump therapy, you and your child should have a good understanding of diabetes management and feel comfortable giving insulin by injection and monitoring blood glucose, including performing finger pokes. These **foundational** diabetes management skills remain essential even after starting insulin pump therapy.

Talk to your diabetes doctor or diabetes educator to learn more about when pump therapy might be right for you and your child.

Key Information for Monitoring Type 1 Diabetes

In this section, you will learn about day-to-day monitoring, blood sugars, ketones and how to best manage illness.



Blood Sugar

People with type 1 diabetes need to check their blood sugar multiple times a day to maintain a balance between insulin and carbohydrate counting. Your care team will give you specific recommendations on when and how often to check blood sugars. The following is a general overview:

- Check your child's blood sugar by finger poke or sensor at least 4 times per day.
- Check your child's blood sugars before meals to determine the correct amount of rapid acting insulin for the food they will eat, and to correct a high blood sugar (when needed).
- Check your child's blood sugar before their bedtime snack to help determine the long-acting insulin dose.
- It is helpful to occasionally check blood sugars before daytime snacks, increased activity, or overnight, especially if your child is out of their usual routine.
- It is very important to check blood sugar more frequently during illness as insulin needs and blood sugars can vary significantly.

Blood sugar targets

Diabetes Canada provides recommended blood sugar targets for children and adolescents with T1D as follows:

- 4-8 mmol/L before meals
- 4-10mmol/L 2 hours after meals.

Your child's healthcare team will help determine the ideal target range for your child. When blood sugar levels consistently fall within this target range, it generally indicates that your child's diabetes is being well managed.

What is your blood glucose level?

Blood Glucose Level	mmol/L	Symptoms
You have HIGH blood glucose (hyperglycemia)	22.0	Above Target You may have some of these symptoms: - extreme thirst - weight loss - dry mouth - fatigue - frequent urination - nausea - blurred vision - headache
	20.0	
	18.0	
	16.0	
	14.0	
	12.0	
TARGET Before meals: 4 – 8 After meals: 4 - 10 Your diabetes team may provide a different target if needed.	10.0	Not everyone experiences symptoms when blood glucose levels are outside the target range. Blood glucose monitoring is the best way to determine your blood glucose level.
	9.0	
	8.0	
	7.0	
	6.0	
	5.0	
You have LOW blood glucose: 3.9 or less (hypoglycemia)	4.0	Below Target You may have some of these symptoms: - dizziness - shaking - headache - hunger - pallor - weakness - confusion - mood changes
	3.0	
	2.0	
	1.0	
	0.0	

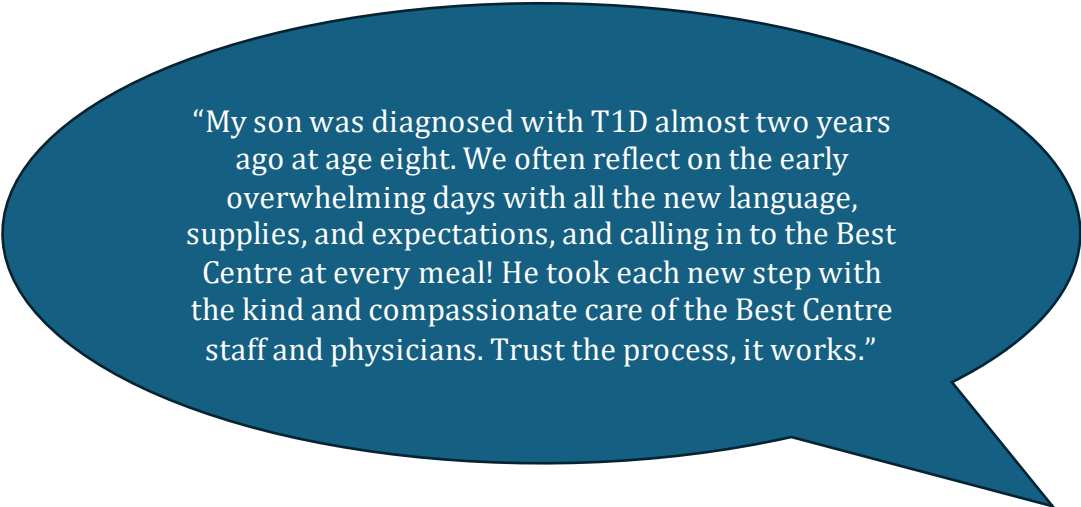
How to check a blood sugar

To measure your child's blood sugar levels, use a blood glucose meter, which requires just a small drop of blood. Your care team will recommend a suitable meter and guide you on how to use it. These meters are compact, easy to operate, and only need a tiny blood sample. Here's an overview of how to use them:

1. **Clean your child's finger:** Have them wash and dry their hands thoroughly. Any food, dirt, or moisture can affect the accuracy of the blood sugar reading.
2. **Insert a test strip:** Place a test strip into the meter according to the manufacturer's instructions.
3. **Poke the finger:** Use the lancet device (also known as "the poker") to prick your child's finger. Place the drop of blood onto the edge of the test strip (on the front or side, not the top). If the blood sample is too small, an error message may appear, and you will need to use a new strip.
4. **Clean the finger:** Wipe away any remaining blood from your child's finger with a tissue.

Additional information:

- Check the expiration date on the strip before using it.
- Strips are sensitive to changes in temperature and moisture. They should always be kept in their original container and used immediately after they are removed from the container.
- Check the manual for your meter for more information.



"My son was diagnosed with T1D almost two years ago at age eight. We often reflect on the early overwhelming days with all the new language, supplies, and expectations, and calling in to the Best Centre at every meal! He took each new step with the kind and compassionate care of the Best Centre staff and physicians. Trust the process, it works."

Continuous Glucose Monitors (CGM)

For updated information on OHIP coverage, ADP, private insurance, and customer support, please visit our FAQ page at charleshbest.com.

Continuous or intermittently scanned glucose monitors, commonly known as *sensors*, provide real-time blood sugar readings 24 hours a day.

These sensors feature a tiny filament that measures glucose levels in the fluid beneath the skin. The device attaches to the skin with an adhesive patch and wirelessly transmits readings to a receiver (a small recording device) or directly to a mobile device. The blood sugar data is updated and displayed every few minutes.

CGMs are typically replaced every 10-14 days, depending on the device type.

Some challenges associated with sensors include the cost, alarm fatigue, information overload (which may lead to unnecessary insulin adjustments), unrealistic expectations, and skin irritation.

CGM sensors available in Canada:

Abbott's Libre

- <https://myfreestyle.ca>
- change sensor every 14 days
- scan with a reader or cell phone to view data



Dexcom

- www.dexcom.com
- change sensor every 10 days
- view data on a receiver or cell phone



Compatibility: Not all mobile devices (including the latest smartphones) are compatible with all sensors. Before purchasing a cell phone or sensor, please check the manufacturer's website to ensure that your phone is compatible with the app required to receive data.

Viewing options: All sensors offer the option for parents and caregivers to remotely monitor blood sugar levels via a companion app. This feature does not apply if the child is using a separate receiver or reader.

Target Blood Sugar Ranges on a Sensor à the goal during the first year after diagnosis is to achieve 70% of blood sugar readings within the target range of 3.9–10 mmol/L.

Consensus Time in Range Targets (mmol/L)



1% =



Just 15 minutes in range equals 1% improvement. Small changes can make a big impact on your time in target.

T1: Type 1 diabetes T2: Type 2

Finger pokes

While sensors help monitor blood sugars continuously, they do not eliminate the need for finger pokes. It is crucial to confirm low blood sugar readings and alerts with a finger poke. Sensors may not always be accurate, particularly when reading low blood sugar levels.

If the CGM reading doesn't align with how your child is feeling, their symptoms, or expected blood sugar levels, use a finger poke to confirm the result. For example, if the CGM reads 20 mmol/L but your child shows no symptoms of high blood sugar, double-check the reading with a finger poke. Additionally, use finger pokes if CGM data is unavailable.

Understanding Hemoglobin A1c

What is Hemoglobin A1c?

A hemoglobin A1c test measures blood sugar control over the past three months through a blood sample. It reflects the average blood sugar levels during this time by measuring the amount of sugar attached to hemoglobin, a protein in red blood cells. Since red blood cells have a lifespan of about three months, the A1c provides a long-term view of blood sugar management.

How is A1c Different from Blood Sugar Readings?

The A1c result is separate from daily blood sugar readings. It gives a broader picture of blood sugar trends, making it an important tool for understanding long-term balance.

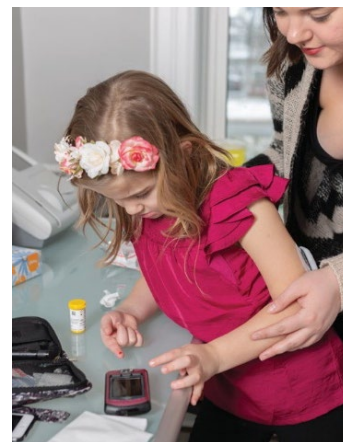
Target A1c for Children

- The recommended target for children under 18 is **less than 7%**.

Tips to Increase Time in Target Blood Sugar Range

1. **Check Blood Sugar Regularly:** Test 4-5 times per day - before meals and at bedtime.
2. **Take Insulin as Prescribed:** Follow your child's insulin schedule carefully.
3. **Count Carbohydrates Accurately:** Ensure accurate carbohydrate counting for better insulin dosing.
4. **Stay in Touch with Your Educator:** Regularly consult your diabetes educator for guidance on adjusting insulin doses.

Note: It can take at least 1 month, and often closer to 3 months, to see changes in A1c levels.



The Honeymoon Period

After starting insulin therapy for type 1 diabetes, your child's pancreas may temporarily begin producing some insulin. This phase is known as the honeymoon period.

- **Duration:** The honeymoon period can last several weeks to several months, but it varies for each person.
- **What to Expect:** Your child may need less insulin during this time, though diabetes is still present.
- **Why It's Important:** Inform your diabetes care team as soon as the honeymoon period begins. Insulin doses will need to be adjusted to prevent low blood sugars (hypoglycemia).

Understanding these factors helps you manage diabetes more effectively, ensuring your child stays healthy and within their target blood sugar range.

Low Blood Sugar (Hypoglycemia)

Low blood sugar, or hypoglycemia, occurs when blood sugar drops below 4 mmol/L. It's essential to treat low blood sugar immediately. The brain needs blood glucose to function, severe or long-lasting hypoglycemia is not good for the brain. Most children with type 1 diabetes will experience it at some point.

What Causes Low Blood Sugar?

Low blood sugar can result from various factors, including:

- Overestimating meal or snack time carbs
- Giving rapid-acting insulin more than 15 minutes before a meal or snack
- Activity without adjusting food or insulin
- Illness

Call 911 if your child is:

- unable to consume fast-acting sugar by mouth
- unconscious
- having convulsions or a seizure.

Treat low blood sugar right away. Do not wait.

Symptoms of low blood sugar may include shakiness, dizziness, sweating, hunger, irritability, confusion, rapid heartbeat, and in severe cases, seizures or unconsciousness.

How to Treat Low Blood Sugar

- Your child needs fast-acting sugar that is easy to absorb and consume.
- Give fast acting sugar based on your child's weight (*see next page*).
- Wait 15 minutes and re-check blood sugar.
- If blood sugar is **below 3 mmol/L**, add an extra **5g** of fast-acting sugar.
- Wait 15 minutes and re-check blood sugar.
- Continue these steps until the blood sugar is above 4 mmol/L.

Fast Acting Sugar Treatment for Mild-to-Moderate Hypoglycemia

Child's weight	Less than 15 kg (33 lbs)	15-30 kg (33-66 lbs)	Greater than 30 kg (66 lbs +)
Amount of carbohydrate	5 g	10 g	15 g
Dex4 glucose tablets	1	2 or 3	4
Dex4 LiquiBlast (bottle)	1/3 bottle	2/3 bottle	1 bottle
Dex4 glucose gel	1/3 tube	2/3 tube	1 tube
Juice or regular pop	40 mL or 1/4 cup	85 mL or 1/3 cup	125 mL or 1/2 cup
Honey, corn syrup or maple syrup	1 teaspoon (5mL)	2 teaspoons (10mL)	1 tablespoon (15mL)
Skittles	5	10	15

Once blood sugar is above 4 mmol/L, offer a snack if the next meal or snack is more than 1 hour away.



IMPORTANT NOTE: It's crucial to wait until the blood sugar is above 4 mmol/L before giving any food. Eating food too soon can slow down the absorption of fast-acting sugar and delay the rise in blood sugar.

Confirm sensor blood sugars with a finger poke when:

- sensor blood sugar reading is less than 4mmol/L but there are **NO** symptoms
- your child feels low but the sensor blood sugar reading is above 4mmol/L
- you treated a low blood sugar with the appropriate amount of fast-acting sugar based on their weight and waited 15 minutes but the sensor blood sugar is still reading under 4mmol/L

Sensors measure interstitial fluid therefore they can lag behind by 5-10 minutes. This is most obvious when blood sugars are rising or falling quickly such as after meals, after taking insulin, with activity or when treating a low.

What does lo or low on my sensor mean?

LO – less than 2.0 on the libre

LOW = less than 2.2 on the Dexcom.

You will likely need more fast acting sugar to treat a LO/LOW blood sugar.

Be Prepared

Always carry fast-acting sugar (such as juice, Dex4 tabs, or Skittles) and a snack (such as granola bars or crackers) with you to treat low blood sugar promptly.

High Blood Sugar (Hyperglycemia)

High blood sugar, or hyperglycemia, occurs when blood sugar is greater than 11 mmol/L. While high blood sugar is not an emergency, it must be addressed with rapid-acting insulin within the next few hours or at the next meal. If left untreated, high blood sugar can lead to an emergency if ketones develop.

What Causes High Blood Sugar?

High blood sugar can result from various factors, including:

- Not enough insulin or missed insulin doses
- Too much food relative to the amount of insulin given
- Emotional factors such as stress, anger, or excitement
- Rapid growth or puberty
- Illness or infection.

Early symptoms of high blood sugar may include:	Prolonged symptoms may include:	Severe symptoms
• increased thirst • frequent urination • fatigue • blurred vision • headache	• dry mouth • hunger • weight loss • slow healing wounds • recurrent infections	• known as diabetic ketoacidosis (DKA) which is covered on page 47 of this guide.

Impact on health:

While chronic high blood sugar levels can harm long-term health, short-term elevations are usually not urgent if managed promptly and effectively.

How to Treat High Blood Sugar

- Administer rapid-acting insulin as advised by your healthcare provider.
- Recheck blood sugar levels in 2-3 hours to assess if it has dropped.
- If blood sugar remains high, follow your health care team's instructions for further action.



IMPORTANT NOTE: High blood sugar should be closely monitored, and insulin should be given to bring the levels down over time. If ketones are present, seek medical advice immediately.

Serious Issues Related to Blood Sugar

Complications related to blood sugar in type 1 diabetes can include both short-term and long-term risks. Consistently high blood sugar (hyperglycemia) can lead to complications like diabetic ketoacidosis, while prolonged low blood sugar (hypoglycemia) can cause confusion, fainting, or seizures. Over time, poorly managed blood sugar levels can also increase the risk of heart disease, nerve damage, kidney problems, and vision loss.

Severe Low Blood Sugar

Severe low blood sugar (hypoglycemia) can lead to confusion, seizures, loss of consciousness, or even life-threatening situations if not treated promptly with fast-acting sugar or medical intervention by calling 911.

Severe Low Blood Sugar Treatment: Glucagon

Glucagon is a hormone used for the emergency treatment of a severe low blood sugar. Glucagon works by sending a signal to the liver to release stored sugar.

When should I use Glucagon?

Glucagon should be given when your child has a severe low blood sugar and cannot safely consume sugar by mouth.

There are two ways of administering glucagon:

1. **Glucagon injection:** This is the traditional form of glucagon, administered through a syringe to treat severe hypoglycemia (low blood sugar).
2. **Baqsimi™:** A nasal spray form of glucagon that can be administered through the nose without the need for injection, making it easier for non-medical individuals to use in an emergency.

Glucagon Injection

Your injectable glucagon kit contains:

- A small bottle with 1 mg of glucagon powder
- A syringe pre-filled with 1 mL of sterile water.

The glucagon powder and water in the syringe are inactive. **You MUST mix the water with the glucagon powder before administering the injection.** Do not prepare glucagon until you're ready to use it.

How to Inject Glucagon

1. **Prepare the vial:** Remove the plastic cap from the bottle and the plastic cover from the needle.
2. **Mix the solution:** Push the syringe needle through the rubber stopper of the vial and inject all the sterile water into the bottle containing the glucagon powder.
3. **Swirl the vial** gently until the glucagon dissolves and the solution is clear. Do not shake. Do not use if a gel forms or if particles are present.

Baqsimi™

Baqsimi™ comes in a single, pre-measured dose suitable for individuals aged 4 years and older.

Baqsimi™ contains one dose of medication and cannot be reused. It should be administered in one nostril, and there's no need for the child to inhale. **Baqsimi™** will be effective even if your child has a cold, is using cold medications, or loses consciousness. Be sure to inform your doctor each time **Baqsimi™** is used.

Storage

- Keep **Baqsimi™** in its shrink-wrapped tube until you're ready to use it.
- Store **Baqsimi™** in the tube at temperatures up to 30°C.

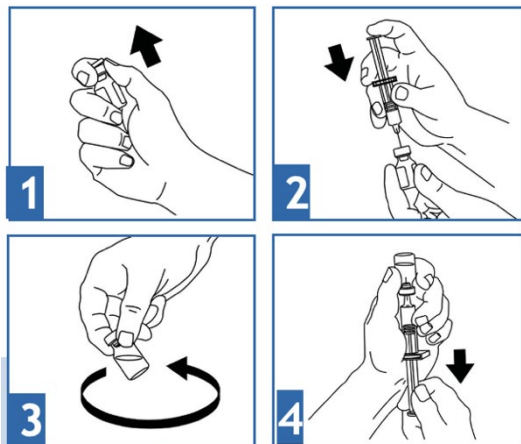
How to Use

It's important to show your caregivers, family, and friends where **Baqsimi™** is stored and explain how to use it by sharing these instructions. Ensure they understand how to administer **Baqsimi™** before an emergency occurs.

Children should have **Baqsimi™**

Glucagon Injection

4. **Draw the solution:** Turn the vial and syringe upside down. Draw the entire solution into the syringe, being careful not to pull the plunger out. Remove air bubbles by tapping the syringe and pushing out the excess air.



Baqsimi™

available at school, and take it to sports tournaments, school trips, and sleepovers.

The most common side effects may include:

- Nausea
- Vomiting
- Headache
- Runny nose
- Nasal discomfort
- Stuffy nose
- Redness in the eyes
- Itchy or watery nose, throat, and eyes.

Glucagon Injection (continued)

5. **Administer the injection:** Inject the glucagon into the muscle on your child's thigh, buttocks, or upper arm. Push the plunger all the way down.
6. **Wait for action:** It may take up to 10 minutes for glucagon to take effect.
7. **Position if unconscious:** If your child is unconscious, place them on their side to reduce the risk of choking when they wake up and possibly vomit.
8. **Follow up with sugar:** Once your child regains consciousness and can drink, give them juice or other fast-acting sugar. Once blood sugar is above 4 mmol/L, give a snack containing at least 15 grams of carbohydrates (e.g. granola bar, crackers with cheese, or toast with peanut butter).

The typical dosages for injectable glucagon depend on the age and weight of the individual:

Weight	Injectable Glucagon
For children under 25 kg (55 lbs):	0.5 mg of glucagon.
For children 25 kg (55 lbs) and above, and adults:	1 mg of glucagon.

Side Effects of Injectable Glucagon

Possible side effects include upset stomach or vomiting, which can last up to 24 hours.

Glucagon may not be effective if the low blood sugar is caused by alcohol consumption.

Storage

Store glucagon at room temperature. Ensure family members and caregivers know where it is and how to use it. Check the expiration date - typically 1 year from dispensing.



IMPORTANT NOTE: After calling 911, and after your child has stabilized, contact the care team at the Best Centre for a follow-up, as insulin doses may need to be adjusted.

Diabetic Ketoacidosis (DKA)

Diabetic Ketoacidosis (DKA) is a serious condition caused by a severe shortage of insulin. It can occur when diabetes is first diagnosed, or if insulin doses are missed, or if illness is not well managed

What Are Ketones?

Ketones are produced when the body lacks enough insulin to use sugar for energy. Without sufficient insulin, sugar builds up in the blood and cannot enter the cells. As a result, the body breaks down fat and protein for energy, which leads to the production of ketones. These ketones then enter the bloodstream and eventually spill into the urine. Ketones can make you very sick.

Ketones are not caused by eating too much. While consuming more food than usual can lead to high blood sugars, it does not directly cause ketones. The absence of insulin is what triggers ketones in type 1 diabetes.

Symptoms of Ketones:

- **High blood sugar** (above 14 mmol/L)
- **Fruity-smelling breath**
- **Frequent urination**
- **Dry mouth, increased thirst**
- **Fatigue**
- **Nausea/vomiting**
- **Stomach pain**
- **Difficulty breathing** (in severe cases)

How Can I Check for Ketones?

You can check for ketones through a finger poke blood test using a meter designed to check ketones using a blood ketone test strip.

It's common for children newly diagnosed with diabetes to have small amounts of ketones for the first few days. This is normal and will resolve once the insulin dose is adjusted and blood sugars are better controlled.

How to Manage Ketones

Encourage your child to drink plenty of water. While drinking water won't eliminate ketones on its own, it can help flush out some of the ketones from the body. However, only insulin can effectively reduce and treat/eliminate ketones.



IMPORTANT TIP: If symptoms of ketones are present, check blood ketones and contact your educator or go to the hospital immediately. Ketones are a serious medical emergency. They can be life threatening if not treated properly.

Creating a New Routine

In this section, you will learn about diabetes education and daily management in order to establish a new routine.



A New Normal: Living with Type 1 Diabetes

Living with type 1 diabetes can be challenging, but with the right support, knowledge, and management, it's possible to return to a new normal. Embracing a proactive approach allows individuals to lead fulfilling lives, pursue their passions, and thrive with the condition.

Family Matters

Diabetes is a disease that affects the whole family. It requires the active involvement of parents for many years. You can lessen the emotional burden by sharing in the day-to-day tasks of diabetes management which include blood sugar checks, insulin injections, carb counting, communication with the school/daycare, time off for appointments as well as paging and emailing the Best Centre.

Extended family/friends/coaches

Please share this resource with extended family as it provides basic education in type 1 diabetes management. If needed, we can provide education to family or caregivers that are directly involved in the day-to-day care of your child. Additionally, we recommend bringing caregivers to appointments with you.

Multi-household families

We encourage parents that are separated be educated together as this ensures consistency in education and communication. Unless there are legal reasons, we encourage all initial education, follow-up visits, and clinics be booked together.



What Can My Child Eat?



A diagnosis of type 1 diabetes often comes with worries about what to feed your child. Parents often wonder if their child can still eat certain foods, have foods with sugar or treats. You will meet with a Diabetes Educator Dietitian who will answer your questions and put your mind at ease since your child can eat many of the same meals and snacks as before diagnosis.

For some families, meal planning is the hardest part of managing diabetes. The dietitians at the Best Centre will help you every step of the way.

Healthy Eating and Diabetes: What You Need to Know

At diagnosis, it is common for children with diabetes to experience weight loss, increased hunger, and excessive thirst. Meeting with a dietitian is an important part of managing your child's T1D. They will help ensure your child's nutritional needs are met and provide guidance on planning balanced meals and snacks tailored to your child's individual needs.

Goals of Healthy Eating for Diabetes

- Promote normal growth and development
- Satisfy your child's appetite
- Align insulin doses with the amount of food your child wants to eat.

Understanding Key Nutrients

By understanding the role of protein, fat and carbohydrates, you can create a well-balanced meal plan that supports your child's growth, satisfies their appetite, and helps manage their diabetes effectively.

What Is Protein?

Protein is essential for growth, healing, and tissue repair. Protein-rich foods also provide vital vitamins and minerals.

Examples of Protein-Rich Foods:	Key Facts About Protein:
• Animal Sources: Meat, poultry, fish, shellfish, eggs • Plant-Based Sources: Beans, lentils, nuts, nut butters, tofu • Dairy: Milk, yogurt, cheese, cottage cheese, ice cream, pudding.	• Protein alone does not directly raise blood sugar levels. • Foods that contain both carbohydrates and protein, such as milk, yogurt, ice cream, and legumes, can affect blood sugar levels.

What Is Fat?

Fats are a vital part of a balanced diet. They serve as building blocks for growth and development and help the body absorb certain vitamins.

Examples of Fat-Rich Foods:	Key Facts About Fat:
• Oils: Butter, margarine, lard, shortening • Other Sources: Salad dressings, gravies, nuts, seeds, olives, coconut, avocado • Meats: Especially red meat, but also poultry, fish, and shellfish • Dairy: Milk, cream, cheese • Eggs	Like protein, fat does not directly raise blood sugar levels.

What Are Carbohydrates?

Carbohydrates are one of the three main nutrients in food, along with fat and protein. When consumed, carbohydrates break down into sugar, which enters the bloodstream. Insulin helps move this sugar into the muscles, liver, and other cells to be used as energy.

Carbohydrates are the body's primary energy source, particularly for the brain. Many carbohydrate-rich foods are also excellent sources of fiber, vitamins, and minerals that promote overall health and regular digestion.



Examples of Carbohydrate-Rich Foods:

- **Starches:** Bread, pasta, rice, grains, roti, cereals, corn, potatoes, cookies, crackers
- **Fruits and Vegetables:** Fruits, fruit juices, turnip, squash, carrots, peas, beets, parsnip
- **Dairy Products:** Milk, yogurt, pudding, ice cream
- **Sugars:** White and brown sugar, honey, molasses, syrups, jam, jelly, candy, chocolate, regular soft drinks.

Key Facts About Carbohydrates:

- Carbohydrates are the only nutrient group that directly raises blood sugar levels.
- The impact of carbohydrates on blood sugar depends on the amount and type of carbohydrate consumed.

Carbohydrate Counting

Carbohydrate counting, or "carb counting," is an effective technique for managing blood sugar levels. Since carbohydrates in food raise blood sugar, and rapid-acting insulin lowers it, carb counting helps match insulin doses to food intake, keeping blood sugars within the target range of 4-10 mmol/L. Protein and fats have minimal impact on blood sugar and do not need to be counted.

Working with a dietitian, you and your child will establish target carbohydrate ranges for meals and snacks. These ranges are tailored to your child's lifestyle, eating habits, hunger, and growth needs. Carbohydrates are a vital source of vitamins, minerals, and nutrients essential for healthy growth and development. **Limiting or eliminating carbohydrates is not recommended.**

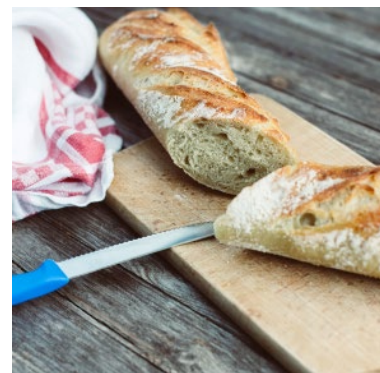
Once you become comfortable with carb counting and your child's blood sugars stabilize, we will help you calculate the amount of rapid-acting insulin needed for a specific amount of carbohydrates. This calculation, known as a carb ratio, allows for more flexibility and freedom in your child's intake.

How to Count Carbohydrates

To count carbohydrates, you need to determine the total carbohydrate content and, where applicable, the fibre content of the foods your child eats. You can find this information using:

- **Food labels:** Check the nutrition facts on packaged items.
- **Nutrition/diabetes apps:** such as RxFood, Cronometer, Gluroo which use AI powered photo analysis.
- **Google or AI:** for increased accuracy provide details such as how the food was prepared, portion size and specific brands. Ask google or AI to reference verified websites such as calorie king, chronometer or restaurant websites.
- **Nutritional food scales:** Weigh food to determine carbohydrate content.
- **Restaurant nutrition guides:** Ask for pamphlets at restaurants or check their websites.
- **Government resources:** Visit the Government of Canada's Nutrient Value of Foods database at www.canada.ca.
- **Nutrient analysis apps:** Tools like MyFitnessPal or CalorieKing are available in mobile app stores. Review your choices with your dietitian.
- **CalorieKing website:** www.calorieking.com (please note this is a U.S.-based resource, so some information may differ slightly.)
-

Carbohydrate counting provides a structured yet flexible approach to managing diabetes, empowering your child to enjoy a balanced intake while maintaining stable blood sugar levels.



Instructions for Calculating Carbohydrates

1. Check the Nutrition Facts Table

Locate the serving size of the food item on the Nutrition Facts table. This will be your starting point.

2. Identify Total Carbohydrates

Find the total carbohydrate amount (in grams) listed for the serving size on the Nutrition Facts table.

3. Subtract Fibre

Subtract the fibre (in grams) from the total carbohydrates. The result is the amount of carbohydrate that impacts blood sugar, also known as “net” carbohydrate.

Note: Fibre is a carbohydrate but does not raise blood sugar, which is why it's excluded.

4. Adjust for Actual Portion Size

If your child is eating more or less than the listed serving size, adjust the carbohydrate and fibre amounts accordingly. Multiply or divide the values based on the portion they are consuming.

5. Measure Accurately

Use measuring cups or a food scale to ensure the portion size matches your calculation. Accuracy is essential for managing blood sugar effectively.

Nutrition Facts	
Valeur nutritive	
Per 125 mL (87 g) / par 125 mL (87 g)	
Amount Teneur	% Daily Value % valeur quotidienne
Calories / Calories 80	
Fat / Lipides 0.5 g	1 %
Saturated / saturés 0 g + Trans / trans 0 g	0 %
Cholesterol / Cholestérol 0 mg	
Sodium / Sodium 0 mg	0 %
Carbohydrate / Glucides 18 g	6 %
Fibre / Fibres 2 g	8 %
Sugars / Sucres 2 g	
Protein / Protéines 3 g	
Vitamin A / Vitamine A	2 %
Vitamin C / Vitamine C	10 %
Calcium / Calcium	0 %
Iron / Fer	2 %

How much total carbohydrate is in a 125 mL serving? → **Total carbohydrate = 18 g**

How much fibre is in the 125 mL serving? → **Fibre = 2 g**

How much “available” carbohydrate is in the 125 mL serving? → 18 g total carb – 2 g fibre = **16 g of available carbohydrates**

Therefore, 16 grams of carbohydrate will have an effect on your blood sugar.

Putting It All Together

Carbohydrate counting can feel daunting, but it gets easier with practice. Once you've learned the carbohydrate counts for the foods your child eats most often, the process becomes more intuitive. Keep a handy reference list of these foods and their carbohydrate amounts. You can store it in a binder, on your phone, or near your recipes for quick access.

Using a Nutrition Food Scale

A nutrition food scale can simplify carb counting by providing the carbohydrate content of a food based on its weight. This is especially useful for foods without labels, like fruits and vegetables. Many people find scales more convenient and accurate than measuring cups. Your dietitian can guide you on how to use one effectively.



Accuracy matters, but don't sweat the small stuff

Carb counting is not an exact science, and slight variations (e.g., whether a slice of multigrain bread has 15g or 16g of carbohydrates) won't significantly impact your child's blood sugar. Focus on consistency and approximate accuracy for the best results.

Tips to Keep in Mind

1. **Keep Your Normal Eating Habits Until You Meet Your Dietitian** → stick to your regular routine for now. Your dietitian will provide personalized advice and adjustments as needed.
2. **Avoid Concentrated Sugars** → Steer clear of juice, regular pop, syrup, and candies unless treating low blood sugar. These foods raise blood sugar quickly and are not ideal for everyday consumption.
3. **Encourage Water for Thirst** → If your child feels thirsty, water is always the best choice.
4. **Include Carbohydrates, Protein, and Fats** → Carbohydrates are an essential part of a balanced diet. Do not restrict or eliminate them; instead, pair them with proteins and healthy fats for balanced meals.
5. **Follow a Balanced Eating Schedule** → Aim for three main meals and 1-4 snacks daily. Meals should follow Canada's Food Guide for Healthy Eating, emphasizing variety and balance.

Meals and Snack Ideas for Your Child

Here are examples of balanced meals and snacks. Choose one option from each group to create a well-rounded menu:

Breakfast

- **Grains:** Toast, bagel, cereal, or waffles
- **Drink:** Milk and/or water
- **Fruit:** Any fresh or frozen fruit
- **Protein:** Peanut butter, eggs, or bacon

Example: Toast with peanut butter, a glass of milk, and strawberries

Lunch

- **Main Dish:** Sandwich, pasta, or soup with crackers
- **Drink:** Milk and/or water
- **Vegetables:** Any fresh or cooked vegetable
- **Fruit:** A serving of fresh fruit
- **Optional Treat:** Cookies, granola bar, or yogurt

Example: Grilled cheese sandwich, a glass of milk, an apple, and yogurt

Dinner

- **Protein:** Meat or legumes (e.g., beans, lentils)
- **Starch:** Pasta, rice, potato, corn, or bread
- **Vegetables:** Any fresh or cooked vegetable
- **Drink:** Milk and/or water
- **Optional Treat:** Fruit or plain cookies

Example: Grilled chicken, rice, green beans, a glass of milk, and one chocolate chip cookie

Snacks

- **Quick Options:** Fruit, granola bar, milk, or yogurt
 - **Heartier Options:** Half a sandwich
 - **Crunchy Snacks:** Popcorn, crackers, pretzels, plain cookies, or chips
-



Additional foods to add anytime:

For variety and added nutrition, include these foods as desired:

- **Protein and Dairy:** Cheese, nuts, sliced meats, chicken pieces, or peanut butter
- **Vegetables:** Cucumbers, peppers, celery, tomatoes, or salad
- **Savory Additions:** Pickles or olives.

These options provide flexibility while ensuring your child gets the nutrients, they need for a balanced diet.

Physical Activity

An active lifestyle is important for everyone with and without diabetes as it:

- Builds strong bones and muscles, and strengthens your heart
- Helps promote healthy growth
- Reduces stress and improves mood
- Provides social interaction with other children.

Physical activity recommendations for type 1 diabetes management:

- Be active for a minimum of 60 minutes a day
- Before activity, check blood sugar and use the chart below to assist you.

Blood Sugar Level	Recommendation
*4 mmol/L	Do not participate in activity. Treat with 15 grams of fast-acting sugar. Follow low blood sugar treatment guidelines
*5 mmol/L	Consume 10 - 20 grams of carbohydrates and delay activity until blood sugar is above 5 mmol/L.
5-7.9 mmol/L	Consume 10 - 20 grams of carbohydrates before performing aerobic activity
8-14 mmol/L	Aerobic and anaerobic activity can be started
>14 mmol/L	If the high blood sugar is unexplained, check blood ketones. If ketones are greater than 0.6, delay activity until your child no longer has ketones. Contact the Best Centre for assistance.

*If your child is participating in activity longer than 30 minutes, more carbohydrates may be needed. Check blood sugars during activity to determine if your child needs more.

Aerobic activity is any activity associated with an increased rate of breathing such as running, swimming, bicycling, brisk walking, aerobics classes, dancing, cross country skiing, and kickboxing. Anaerobic activity consists of brief intense bursts of physical activity, such as muscle building, sprinting and jumping.



IMPORTANT TIP:

- Check blood sugar before and after activity. This will help you learn how much, if any, extra food your child needs for each activity. Sometimes it is also a good idea to check part way through an activity.
- Do not give insulin near muscles that will be active. For example, do not give insulin in the arms while swimming, use the abdomen area instead.
- Wear a medical ID.
- Keep records of the amount and type of food eaten so you are able to adjust as needed or share with your diabetes care team.

Returning to Sports

We encourage full participation in all sports as soon as your child is feeling strong enough and no longer has ketones. It may take 1-2 weeks for your child to regain their energy and muscle mass.

It is important to communicate with your diabetes educators the activities your child participates in, at school, after school and weekends as adjustments to insulin doses and food (carbohydrates) may be necessary.

It is also important that their coaches have education in type 1 diabetes.



Encouraging Responsibility in Diabetes Management

Most children above four years of age do their own blood sugar checks while parents supervise and read the blood sugar on the device.

Children should not be responsible or pressured to do their own insulin injection until they feel confident and ready. Injections, regardless of how capable the child is, should always be directly supervised by a parent to prevent errors. Injections should always be done in a common area such as the kitchen or living room. Avoid doing injections in bedrooms or washrooms as this often leads to children hiding their diabetes, feelings of shame and challenges in diabetes management.



Adolescents can take on a significant amount of responsibility. Although many teens are capable of managing their diabetes, they still require guidance and support from parents. They should not be left to manage diabetes on their own.

After the initial learning phase, it is important to maintain the momentum with all aspects of diabetes management. Most children and adolescents are capable of managing much of the diabetes management on their own. However, as the novelty of these new routines wears off, the reality quickly sets in that this is a long-term condition with ongoing daily demands. It is common to hit a rough patch several weeks to months after diagnosis.



IMPORTANT TIP: Parents should look out for disappearing routines, such as decreased or lack of blood sugar checks, false reporting or omitting insulin doses. Please let us know if this happens so that we can work with you to find strategies for improvements.

Returning to School

It is important to keep your child in school. Diabetes should not become a reason to stay home from school or get out of class. Occasionally, children may stay home due to illness, but generally the attendance and academic performance of children with diabetes is no different than for any child.



To support your child's transition back to school, we offer specialized training for school staff to create a safe and positive learning environment. This training is typically provided to teachers, the principal or vice principal, and other staff, such as gym teachers, resource teachers, or educational assistants involved in your child's care. Additionally, we can provide education for daycare staff if needed.



IMPORTANT TIP: Notify your child's school about their type 1 diabetes diagnosis as soon as possible. We encourage you to ask the school to contact the Best Centre to arrange a training session for their staff. Ideally, this should be completed within the first week after they return to school.

Be a positive advocate for your child and help the school staff understand the role of diabetes in your child's life. Communication between the teacher and parents regarding class trips, gym class, timing of meals and snacks, frequency of low blood sugars, and special occasions/events in the classroom is a key part of diabetes management at school. Communication can be done through your child's school agenda, a specific communications log, texting or any other method that works for you and the teacher.

Insulin injections at school



A parent is required to do the lunch time injection for the first few weeks. Once your child's insulin doses are stable, a nursing agency can assist with lunch time injections at school. Nursing agencies do not go into daycares. Nursing agencies cannot give injections if your child is on a school trip, therefore alternate plans must be made. Many parents feel more comfortable attending school trips with their child.

For more information on diabetes in the school and the resources we provide to the school, refer to diabetesatschool.ca and see the next page for a reference guide for educators and classmates.

Notes:

Low blood sugar

What it is and what to do

**When blood sugar is below 4 mmol/L, you must act IMMEDIATELY.
Do not leave a student alone if you think blood sugar is low.**

Low blood sugar is also called **hypoglycemia**. It can be caused by:

- Too much insulin, and not enough food
- Delaying or missing a meal or a snack
- Not enough food before an activity
- Unplanned activity, without adjusting food or insulin

Some of the most common symptoms of low blood sugar are:



Shakiness



Irritability/grouchiness



Dizziness



Sweating



Blurry vision



Headache



Hunger



Weakness/Fatigue



Pale skin



Confusion

Diabetes School Supplies Checklist

The following items should be kept at school, ideally in both the office and classroom. Supplies should be checked and replenished regularly.

Blood Sugar Monitoring Supplies

- Blood sugar meter
- “Finger poker” (lancing device)
- Lancets
- Test strips.

Low Blood Sugar Emergency Kit

- Juice boxes or fast-acting sugar (e.g., glucose tablets or Skittles or rockets)
- Snacks for follow-up treatment (e.g., granola bars or crackers)
- Keep low blood sugar treatments in the classroom, office, gym, or any other frequently used areas.

Insulin Supplies

- Insulin and insulin pen(s)
 - Note: Date insulin once opened and replace it every 28 days. Many parents provide new insulin on the first of each month.
- Sharps container.

Emergency Contact Information

- Updated emergency contact phone numbers (parents, caregivers, and healthcare providers).



Medical Alert Identification

Medical alert identification is **extremely important** for all people with diabetes, especially children who may not be able to speak for themselves. First responders and emergency department staff are trained to look for medical alert identification in emergency situations and when a person is acting confused or is unconscious.

Your child's medical identification can be as unique as they are. There are many options available online to choose from:

Medic Alert: www.medicalert.ca

Universal Medical: canada.universalmedicalid.com

Emergency ID: <https://ca.emergencyid.com> Lauren's Hope: www.LaurensHope.com



"We have diabetes. It gets to come along with us, it doesn't get to stop us."

Illness and Type 1 Diabetes

Children with well-managed diabetes are not more prone to illness or infections than those without diabetes. However, during illness, the body releases stress hormones that can cause blood sugar levels to rise, increasing the need for insulin. At the same time, illness can sometimes lead to low blood sugar levels, especially if food and fluid intake decreases.



Follow these general guidelines during illness

1. **Never skip an insulin dose**, even if your child is vomiting or unable to eat. Insulin is essential for converting sugar into energy, helping the body fight infection. Many illnesses can raise blood sugar levels but vomiting or diarrhea may cause blood sugar to drop, especially in young children. Long-acting insulin is particularly important and should never be omitted.
2. **Check blood sugar and blood ketones every 2-3 hours**, especially if your child is vomiting. If blood sugar is low (less than 4 mmol/L) and your child cannot keep food down, mini-dose glucagon may be needed. (*Talk to your educator about mini-dose glucagon).
3. **Use rapid-acting insulin** if blood sugar levels are high and ketones are present. Contact the Best Centre during operating hours or use the after-hours pager for guidance **if blood ketones exceed 0.6**. Note that some children may develop "starvation ketones" due to vomiting or poor eating, which might not require

additional rapid-acting insulin. Stay calm, refer to this guidebook, and know that managing illness will become easier with experience.

4. **Prevent dehydration** caused by vomiting or diarrhea by offering clear fluids frequently. Encourage small sips rather than large amounts, as these can worsen vomiting.
5. **Adjust fluid type based on blood sugar levels:**
 - If blood sugar is below 10 mmol/L, offer fluids containing sugar.
 - If blood sugar is above 10 mmol/L, provide sugar-free fluids.
6. **Encourage rest and avoid physical activity** to help your child recover.
7. **Over-the-counter medications** can be used to treat short-term illnesses like colds or fevers. When taken as directed, they generally do not have a significant effect on blood sugar levels.

Sick Day Supplies

Keep a supply of sick day items regularly available	• Blood sugar meter and strips • Blood ketone meter and blood ketone strips • Nasal glucagon (Baqsimi™), and injectable glucagon kit for mini-dose glucagon
Low sugar and sugar-containing fluids, such as:	• Juice • G2 and regular Gatorade • Sugar free and sugar containing jello • Kool-aid and sugar-free kool-aid or crystal light • Sugar-free and regular popsicles and freezies • Broth • Pedialyte drink and freezer pops (oral electrolyte solution) • Lollipops to keep blood sugars up when children cannot tolerate fluids

Managing Diabetes and Financial Support

Living with diabetes can create a financial burden, even if you have medical insurance. The added costs of medications, supplies, and medical appointments can quickly become overwhelming. To help alleviate some of these expenses, the Government of Canada offers the **Disability Tax Credit (DTC)**. This non-refundable tax credit is designed to assist individuals with disabilities, or their caregivers, by reducing the amount of income tax they may need to pay.

Who Can Apply for the DTC?

Parents or caregivers of children under the age of 18 with type 1 diabetes are eligible to apply for the DTC. Once your child turns 18, they must reapply as an adult to continue receiving the credit.

How to Apply for the DTC

1. **Complete the T2201 Form:** Download and complete the **Disability Tax Credit Certificate (T2201)** from the Government of Canada's website.
2. **Obtain a Physician's Signature:** Your child's pediatrician must sign the form to confirm they meet the eligibility criteria.

Where to Learn More

For additional information, visit these helpful resources:

Government of Canada - Disability Tax Credit

<https://www.canada.ca/en/revenue-agency/services/tax/individuals/segments/tax-credits-deductions-persons-disabilities/disability-tax-credit.html>

Registered Disability Savings Plan (RDSP)

A savings plan intended to help parents and guardians save for the long-term financial security of the person eligible for the Disability Tax Credit (DTC).

<https://www.canada.ca/en/revenue-agency/services/tax/registered-plans-administrators/registered-disability-savings-plans-rdspd.html>

Trusted Resources Beyond the Charles H. Best Diabetes Centre

There are many websites that have diabetes information. Be careful to seek information from reliable sources.

Here is a list of websites that can be trusted.

Education & Research:

- **Diabetes Canada:** offers connection opportunities and a wealth of diabetes resources including podcasts, nutrition, fitness, local programs and events diabetes.ca
- **Beyond Type 1:** resources focused on education, advocacy and research: <https://beyondtype1.org>
- The forum for **injection techniques:** fit4diabetes.com
- **Diabetes at school:** resources and videos for families, schools and caregivers to help support children at school: <https://www.diabetesatschool.ca/>
- **Learn Diabetes:** virtual T1D education website from BC Children's Hospital: <https://learndiabetes.ca/>
- **Breakthrough T1D Canada:** resources, programs, blogs and fundraising focused on T1D and research: <https://breakthrought1d.ca/>
- **Trialnet:** offers screening for relatives of people with T1D and clinical studies testing ways to slow down and prevent T1D progression: <https://www.trialnet.org/>
- **Type 1 Better:** a project led by researchers, health care professional and people or caregivers living with T1D in Canada. Join the BETTER registry to participate in research that can help improve T1D care. Access practical guides, resources and videos: <https://type1better.com/en/>

Peer Support:

- Diabetes camps: dcamps.ca/home.aspx
- Children with Diabetes online community: childrenwithdiabetes.com

- iChallenge Diabetes: ichallengediabetes.org
- Diabetes Hope Foundation: diabeteshopefoundation.com Connected in Motion: connectedinmotion.ca
- diatribe: actionable information that provides insight into the T1D experience and closely covers the latest research, treatments and initiatives in diabetes includes resources, recipes and programs <https://diatribe.org/>

Smart Phone Apps

- **Carb Counting with Lenny** (great for elementary age children)
- **My Fitness Pal:** Calorie Counter and Diet Tracker

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Pg 47 (girl at sink): CDC
 Pg 48 (father and son): Kelly Sikkema
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905-620-0360

360 Columbus Road East, Whitby,
Ontario L1M 1Z5

charleshbest.com

bestdiabetes@charleshbest.com

Charity # 13662 3295 RR0001