

The whole picture

KRKT:TIDE · KRKT's Type 1 Diabetes Education

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In an emergency. Someone with type 1 who is confused, very drowsy, can't swallow or is unconscious: call 911.

Education, not medical advice. Every dose, ratio and target belongs with your own diabetes team.

Start here

Everything that moves blood sugar, the two emergencies, and what the daily work is buying — in one place, for patients and the people around them.

This is the front door to the site. It gives the whole picture of type 1 diabetes in one pass — for people who live with it, and for the family, friends, coworkers and coaches around them. Deeper sections on food, movement, medications, drugs and alcohol, and complications pick up where these overviews leave off.

The site is ordered on purpose:

- **First, the emergencies.** A low and ketoacidosis come before everything else, because they are the parts that can hurt you this week. Start with the two emergencies.
- **Then the daily three.** Food, insulin timing and movement — the levers you pull several times a day, every day.
- **Then the interference.** Medications, alcohol, recreational drugs, illness and stress: everything else that moves the number.
- **Then the long game.** What the daily work is actually buying, what the targets are, and which appointments to book.
- **Last, the people.** What family, friends and coworkers need to know — and what not to say.

Newly diagnosed? Read the emergencies today. You have permission to stop there — safety is the only part that cannot wait. The rest will still be here next week.

This is education, not medical advice. Every dose, ratio and target belongs with your own diabetes team. Canadian numbers throughout.

Sources: Diabetes Canada Clinical Practice Guidelines · Diabète Québec

What type 1 diabetes is, and what the job actually is

Type 1 is autoimmune, nobody caused it, it is not type 2, and insulin is not optional. Here is what managing it by hand really involves.

This page answers two questions: what type 1 diabetes actually is, and what living with it asks of someone every day. Both are widely misunderstood — including, often, by the people closest to the person who has it.

An autoimmune condition

In type 1 diabetes, the immune system has destroyed the cells in the pancreas that make insulin. It is the same category of thing as coeliac disease or thyroid disease — which is why those conditions often turn up alongside it.

Nobody caused it

Not sugar. Not diet. Not parenting. Not anything anyone did or failed to do.

Say this to every relative

Nobody caused this. It is worth saying out loud to every relative who will be told about the diagnosis.

It is not type 2

Type 1 and type 2 have a different cause, a different treatment and different risks. Almost everything the public believes about diabetes is about type 2, and most of it does not transfer.

That confusion has a real cost. Roughly three in four people with type 1 report experiencing stigma — most often being seen as having a character flaw — and nearly all of that comes from being confused with type 2. This explains a lot of what people with type 1 experience socially. It can land hard with families who realize they have been contributing to it without knowing; the point is not blame, it is noticing.

Insulin is not optional

There is no diet, supplement or amount of exercise that replaces insulin in type 1. Anyone selling otherwise is selling something dangerous.

The job: replacing a feedback loop, by hand, forever

A working pancreas measures blood sugar and adjusts insulin continuously, hundreds of times an hour, with no conscious effort at all.

Replacing that means:

- estimating what is in your food,
- predicting what your body is about to do,

- injecting a decision that cannot be taken back,
- and then living with the result for the next four hours.

Several times a day. Every day. With no days off.

That point about a decision that cannot be taken back is what separates insulin from most other medication. Once the dose is in, it works whether or not the meal arrives, whether or not the afternoon goes as planned.

Everything else on this site is detail. This is the actual work, and it is far harder than it looks from outside. For family members, this is the part that conveys the scale of it.

Where to go next

If you read only one more thing today, make it the two emergencies — how to recognize and treat a low, and when ketoacidosis means going to hospital. After that, the three daily levers explain what moves blood sugar up and down from hour to hour.

Sources: Diabetes Canada

The three daily levers: food, insulin timing and movement

Food pushes blood sugar up, insulin pushes it down, and movement can push it either way. An overview of the levers you pull every day.

Three things move blood sugar every single day, and they are the levers a person with type 1 pulls several times a day. This page gives a short overview of each — food, insulin timing and movement — and points to the deeper sections.

- **Food** pushes glucose **up**. Carbohydrate does nearly all of it, fast. Fat and protein arrive late and quietly.
- **Insulin** pushes glucose **down**. How much matters, and *when* matters nearly as much.
- **Movement** pushes it **either way**. Steady effort lowers it; hard, short effort raises it. And the effect lasts long after you stop.

Everything after these three — medication, alcohol, illness, stress, heat, hormones, sleep — is interference on top. Which is why two identical days can give two different numbers, and neither is anybody's fault. Doing the same thing twice and getting different results is one of the most common sources of self-blame; it is also completely expected.

Food: there is no diabetic diet

There is no forbidden list and no special aisle — birthday cake included. What changes is that somebody now has to estimate what is on the plate.

Carbohydrate is the one you dose for. It is fast and large, and it hides in starchy vegetables, milk, beans, juice and sauces — not just bread and sugar.

Fat and protein arrive late. Pizza, poutine, creamy pasta, fried food. A landmark study found a high-fat dinner needed **40% more insulin** than a low-fat one with identical carbohydrate — three to six hours later.

Reading a Canadian label. "Carbohydrate" is already the total — never add the sugars line on top. Subtract fibre in full, and about half of any sugar alcohols.

The perfect-then-3am pattern

An in-range number two hours after a fatty dinner and a high one overnight is not a mistake. The meal simply hadn't finished arriving. This late rise explains something nearly everyone has already experienced — and blamed themselves for.

Much more on carbohydrate, labels, the delayed rise, hosting and parties in [the Food section](#).

Insulin: when matters almost as much as how much

It takes time to start. Injected insulin has to be absorbed, and food doesn't wait for it. Diabetes Canada says rapid-acting insulin within 15 minutes of eating; dosing 15 to 20 minutes ahead gives a visibly lower peak, especially at breakfast.

Newer insulins change that. Faster-acting insulin is designed to go in right at the meal, and can be given up to 20 minutes after. So there is no universal rule — which insulin you have decides the timing. Your own timing is a conversation for your diabetes team.

When not to dose early

A restaurant that hasn't served yet. A small child who might not finish. Insulin working with no food arriving is a hypo — and it is why a delayed dinner is a genuine safety issue, not an inconvenience.

Hosts, take note: give an honest time for food, and update it if it slips. It is one of the most useful things a family member can do tonight.

Movement goes both ways

Steady effort lowers it. Jogging, cycling, swimming, a long walk. Muscles take glucose out of the blood, and injected insulin doesn't switch off the way a pancreas would. The drop often comes within 45 minutes. The starting range for most people is **7 to 10 mmol/L**; under 5, take 10 to 20 g of glucose first.

Hard, short effort raises it. Sprints, heavy lifting, intervals, a match. Adrenaline tells the liver to release glucose faster than muscles use it. The pre-game high is usually nerves, and it settles once play starts. **Correcting it hard is what causes the crash later.**

Understanding that exercise works in two directions removes most of the confusion people bring to it — and with it, a lot of the fear that stops them.

Diabetes Canada recommends 150 minutes a week, spread over at least three days, plus resistance work twice a week. Don't train with ketones at or above 1.5, or within 24 hours of a severe low.

The session ends. The risk doesn't.

Just 45 minutes of activity brings **7 to 11 hours** of raised hypo risk afterwards, and insulin sensitivity stays up for as long as 24 hours. That is why exercise after 4pm so often becomes a problem at 2am.

- **Drop the overnight basal by about 20%.** This is the best-evidenced single move after afternoon or evening activity — agree the details with your team.
- **A bedtime snack is not enough on its own.** It helps for about eight hours; the basal change is what covers the rest.
- **Or simply train earlier.** Forty-five minutes at midday doesn't carry the same overnight risk — reassuring for school sport.

Never stack corrections after a hard session

The exercise consensus statement says plainly that over-correcting after exercise can cause severe night-time hypoglycemia and can be fatal. It comes from a well-meaning instinct. Correct conservatively, or wait.

Starting glucose, insulin reductions, fuelling, competition nerves, kit and what coaches need are all covered in [the Movement section](#).

Sources: Wolpert et al., Diabetes Care 2013 · Diabetes Canada · Diabète Québec · Canadian Food Inspection Agency · ISPAD 2022 · Riddell et al., Lancet Diabetes & Endocrinology 2017

Everything else that moves your blood sugar

Medications, alcohol, recreational drugs, illness, stress, hormones, heat and sleep: the interference on top of food, insulin and movement.

Food, insulin and movement are the daily levers. On top of them sits a long list of other things that push blood sugar up or down — often without anyone mentioning them. This page is an overview of that interference: medications, alcohol, recreational drugs, and the everyday things nobody lists.

Medications nobody warns you about

Steroids, by far the biggest

Prednisone starts pushing glucose up about four hours after the dose and runs twelve. A cortisone injection counts. And the taper is when the lows arrive — call your team when a steroid is prescribed, not three bad days later.

Beta blockers hide lows. They blunt the shaking and pounding heart that warn you of a low. Sweating usually survives, because it runs on a different nerve pathway — so an unexplained sweat is a low until proven otherwise.

Over the counter. Cough syrups carry real carbohydrate. "Non-drowsy" usually means a decongestant, which pushes glucose up. And supplements sold for "blood sugar support" can cause lows on top of your insulin.

Your pharmacist is free. They see every prescription from every doctor, including the walk-in clinic your usual doctor has never heard from. Use one pharmacy, say "type 1" every time, and carry the box to the counter.

None of this is a reason to refuse a medicine you need. People do stop needed medication after reading lists like this one — please don't. It is a reason to expect the change and plan for it. Much more in [the Medications section](#).

Alcohol: the low arrives while you're asleep

Your liver has two jobs here: clear alcohol, and release glucose when you are running low. It will not do the second while it is busy with the first.

So the hypo doesn't come while you are drinking. It comes hours later, in bed. And drunk and hypo look identical from the outside. That is the whole danger — for the person, and for whoever decides to just let them sleep it off.

If there's drinking

- Eat carbohydrate with it, not instead of dinner
- Never skip the long-acting insulin
- Something to eat before bed
- An alarm, and an actual check overnight
- Tell whoever you're staying with

Sugary mixers push you up first, and the alcohol pulls you down later. Glucagon also works poorly after drinking — that one is an ambulance call. Alcohol is statistically the first substance most people meet, so it gets the same weight here as anything illegal.

Recreational drugs, without the lecture

This is harm reduction, not permission. The alternative to saying it is people doing all of it with none of the safeguards.

Nearly every drug interferes in the same three ways: you forget your insulin, your eating goes sideways, and you stop being able to tell a hypo from being high.

- **Nicotine — the slow one.** It damages the same blood vessels diabetes already strains, and makes your insulin do less work per unit. Vapes are the same drug.
- **Cannabis — the forgetful one.** Missed or doubled doses, uncounted munchies, and greening out looks exactly like a hypo — or like DKA. The only way to tell is to check.
- **Stimulants** — speed, cocaine, MDMA. They burn carbohydrate while switching your appetite off, and the racing heart and sweating that warn you of a low are also just the drug.

The rule under all of it

Never skip insulin. Never use alone. One sober person who knows you have type 1 and where your sugar is. Medical ID. Phone alarms to check.

NORS, 1-888-688-6677, will stay on the phone with anyone using alone, anywhere in Canada, at any age. Full detail in [the Drugs and alcohol section](#).

And the things nobody lists

- **Illness and infection** push glucose up sharply, even with no food. A cold can need more insulin, not less. See [sick days](#).

- **Stress and adrenaline** — an exam, a deadline, a fight, a job interview. Same mechanism as a sprint.
- **Hormones and cycles.** Insulin sensitivity shifts across the menstrual cycle, through puberty and in pregnancy. Real, documented, and rarely mentioned.
- **Heat and cold.** Warm skin absorbs insulin faster; cold slows it and can stop meters working altogether.
- **Sleep, shift work, travel.** Changing when you sleep changes when insulin is needed. Time zones move the whole schedule.

That is the real answer to "why was today different?" There are more inputs than anyone can track, and an unexplained number is usually just an unexplained number. Most people are never told how many variables are genuinely in play — knowing it takes a lot of the self-blame out of a strange day.

Sources: Canadian sick-day medication guidance · National Overdose Response Service (NORS)

The long game: the evidence, the targets and the screening

What the daily work is actually buying, what success looks like in numbers, which appointments to book, and the five levers of long-term risk.

The daily work of type 1 is not arbitrary. This page covers what it is actually buying, what the targets are (and why they are not 100%), which screening appointments to book, and the other four levers that matter as much as glucose over a lifetime.

What all this daily work actually buys

From 1983, a trial called the DCCT followed 1,441 people with type 1 in two groups. The only real difference between them was an average A1C of about 7% against about 9%. Here is what those two percentage points were worth:

76%

less eye disease

60%

less nerve damage

54%

less kidney protein leakage

57%

fewer heart attacks and strokes, decades later

33%

lower risk of dying, over 27 years

And the effect outlasted the effort: those benefits kept showing up **years after both groups' numbers had converged**. Researchers call it metabolic memory — and it fades, so a rough stretch is not a life sentence either.

The honest caveat

Intensive therapy in 1993 also tripled severe lows. Since then, modern sensors and insulins have largely broken that trade-off.

This is the most hopeful evidence in all of diabetes medicine, and the reason the daily work matters.

What success looks like — and it is not 100%

These are the time-in-range targets from the 2019 international consensus, for most non-pregnant adults, plus Diabetes Canada's A1C target. Children, older adults and pregnancy have their own targets.

>70%

time in range, 3.9 to 10.0
— about 17 hours a day

<4%

below 3.9 — about an
hour, and under 1%
below 3.0

<25%

above 10.0 — roughly six
hours a day

≤7.0%

A1C, for most adults —
Diabetes Canada's target

Read the first two together: **guideline-level success includes about seven hours a day outside range, and roughly an hour low**. If every high reading feels like a failure, the target itself disagrees with you. Perfectionism is what drives burnout, and the guideline is the best available argument against it. Your own targets are set with your diabetes team.

The appointments to actually book

What	When it starts	How often	What it involves
Eyes	5 years after diagnosis, age 15+	Annually	An optometrist looks at the retina
Kidneys	After 5 years' duration	Annually	A urine sample and a blood test
Nerves	5 years after puberty ends	Annually	A nylon filament and a tuning fork on the feet
Feet	From diagnosis	At least annually	Someone looks properly, shoes and socks off
Cholesterol	At diagnosis	Annually if untreated	A blood test, fasting or not
Blood pressure	From diagnosis	Every visit	Target below 130 over 80

Notice that every one of the microvascular screens starts at **five years**. Canadian guidelines do not expect a newly diagnosed person to have anything to find.

If you take one action from this page, book whichever of these appointments is overdue.

Glucose is the biggest lever. It is one of five.

Registry work models long-term risk by how many of five factors are on target, and the risk rises step by step for each one that is not. Only the first asks anything of you hour to hour.

1. **Glucose.** A1C at or under 7.0%, time in range over 70%. The one that never stops.
2. **Blood pressure.** Under 130 over 80. Usually one tablet.
3. **Cholesterol.** LDL under 2.0, or halved. A statin from 40, or from 30 with 15 years' duration.
4. **Kidney protection.** An ACE inhibitor or ARB where indicated — the strongest kidney intervention there is.
5. **Not smoking** — and moving regularly. Both sit in the same model as the other four.

Four of these are settled at an appointment rather than at every meal. That is genuinely good news, and chronically undersold. Most people with type 1 have never been walked through the other four, so asking your team about them is a concrete next step.

The full DCCT and EDIC evidence, each complication explained plainly, and how far the rates have fallen are in [the Complications section](#).

Sources: DCCT 1993 · EDIC follow-up, NEJM 2005 and JAMA 2015 · International consensus on time in range, 2019 (Battelino et al.) · Diabetes Canada Clinical Practice Guidelines · Rawshani et al., Diabetes Care 2022

Emergencies

A low is the fast one and needs sugar now. Ketoacidosis is the slow one and needs a hospital. What everyone around a person with type 1 should know.

Type 1 diabetes has two emergencies, and they come before everything else on this site because they are the parts that can hurt someone this week.

Too low — a hypo. Arrives in **minutes**, below 3.9 mmol/L. Shaky, sweating, pale, confused, irritable, clumsy. Caused by too much insulin for the food or the activity, and by alcohol hours later. Untreated, it goes to seizure and unconsciousness. **This is the fast one, and it needs sugar now.**

Too high — DKA (diabetic ketoacidosis). Builds over **hours**. Missed insulin, illness or a pump failure lets ketones build and the blood turn acidic. Stomach pain, vomiting, sweet-smelling breath, fast deep breathing, thirst, drowsiness. It does not fix itself. **This is the slow one, and it needs a hospital.**

Fast versus slow is the whole mental model. One is treated with sugar in your pocket; the other is treated by going in.

Anyone who spends time with the person — partner, roommate, coworker, coach — should be able to describe both. It takes two minutes to teach.

Call 911 if

- they are unconscious, having a seizure, or can't swallow
- there are ketones with vomiting

Sources: Diabetes Canada Clinical Practice Guidelines

Treating a low: 15 grams, 15 minutes

Below 3.9 mmol/L, take 15 g of fast sugar, wait 15 minutes, check again. What counts as 15 g, what doesn't work, and what to do after.

A low — hypoglycemia, or a "hypo" — is the fast emergency. It arrives in minutes and it needs sugar now. This page explains how to recognize one, exactly how to treat it, and the common mistakes that slow treatment down.

Recognizing a low

A low is a blood sugar below **3.9 mmol/L**. It can look like:

- shaking, sweating, looking pale
- confusion or slurred speech
- being suddenly irritable, angry or odd
- clumsiness, or going quiet
- drowsiness, being hard to rouse

It is caused by too much insulin for the food or the activity — and by alcohol, hours later. Untreated, it goes to seizure and unconsciousness. That is why it comes first.

The 15-15 rule

Below 3.9 mmol/L, Diabetes Canada says take **15 g of fast-acting carbohydrate** — ideally glucose or sucrose as tablets or a solution, which beat juice and gels.

Treat a low now

1. Take 15 g of fast-acting carbohydrate (see the list below).
2. Sit down and wait 15 minutes.
3. Check again. Still under 3.9? Repeat.
4. Once you're back up, eat the meal that was due — or, if it is more than an hour away, a snack with 15 g of carbohydrate and some protein.

What 15 grams looks like

15 grams is

- 4 glucose tablets
- 15 mL (3 tsp) sugar in water, or 3 packets
- 5 sugar cubes
- 150 mL juice or regular pop
- 6 Life Savers
- 15 mL (1 tbsp) honey

In practice, many people need more than 15 g — a Canadian study found an average of 32 g. Start at 15, recheck, and set your own amount with your diabetes team.

What does not work

Does not work

- Chocolate, biscuits, cake — fat slows the sugar
- Milk, for the same reason
- Diet or zero drinks — no sugar at all
- Glucose gel is slow; tablets are better

The diet-drink mistake is the classic one at a family table, where both cans sit in the same fridge and look identical. If you keep pop in the house for treating lows, keep it clearly separate from the diet version.

If they can't swallow

Someone who is unconscious, having a seizure, or can't swallow safely must not be given anything by mouth. That is when glucagon is used, and when you call 911. See [glucagon](#).

For the people around them

Sugar first, questions later. Always. If a person with type 1 seems confused, irritable or strangely quiet, the kindest thing is to offer juice, glucose tablets or regular pop straight away and ask questions afterwards. More on what family, friends and coworkers need to know is in [the people section](#).

Sources: Diabetes Canada Clinical Practice Guidelines

When they can't swallow: glucagon

Nasal 3 mg or injectable 1 mg glucagon for a severe low, then call 911. This page is for everyone around a person with type 1.

Glucagon is the treatment for a severe low — when the person can't swallow safely, has passed out or is having a seizure. The person with diabetes never uses this one themselves; by definition, they can't. So this page is for everybody else: partners, parents, roommates, coworkers, coaches.

The two forms

Nasal glucagon, 3 mg. A puff into one nostril. No needle, no mixing, and it works even if they are unconscious — they don't need to breathe it in.

Injectable glucagon, 1 mg. Into the thigh, through clothing if you must. Newer pens come ready to use.

Whichever form the person carries, it is worth reading its instructions ahead of time, not during the emergency.

What to do

Severe low: they can't swallow, have passed out, or are seizing

1. Give the glucagon — nasal 3 mg into one nostril, or injectable 1 mg into the thigh.
2. Call 911. Say the words "they have type 1 diabetes."
3. Roll them onto their side — vomiting is common afterwards.
4. Never put anything in the mouth of someone who is unconscious.
5. Stay until they are properly awake and have eaten.

Call 911 every time glucagon is used.

After drinking, it works less well

After drinking, call the ambulance

Glucagon works by asking the liver to release glucose, and alcohol stops the liver doing that. Past a couple of drinks, call the ambulance rather than wait to see whether the glucagon works.

Where is it right now?

Everyone on insulin should have glucagon, in date, somewhere the people around them can actually find it.

So ask the question now: do you know where it is? The honest answer is usually no — and that is exactly the point. Check the expiry date, agree on where it lives, and show the people you spend the most time with.

The dose and product that are right for a particular person, including for children, belong with their diabetes team and pharmacist.

Ketoacidosis (DKA): the slow emergency

DKA builds over hours, does not fix itself and needs a hospital. The signs, when to go in now, and why ketone strips save the most life-years.

Diabetic ketoacidosis — DKA — is the slow emergency. It builds over hours rather than minutes, it does not fix itself, and it needs a hospital. This page covers what causes it, the signs, and exactly when to stop waiting and go in.

What it is

When there isn't enough insulin working, ketones build up and the blood turns acidic. The usual routes in are:

- **missed insulin**
- **illness**, which raises insulin needs even when you are not eating
- **a pump failure** — with no long-acting insulin underneath, ketones can climb fast

The signs

- stomach pain
- vomiting
- sweet-smelling breath
- fast, deep breathing
- thirst
- drowsiness

Why it gets this much attention

Of the years of life lost before fifty in Scotland's national type 1 data, the largest single share came from **DKA and diabetic coma** — not from eyes, kidneys or nerves.

DKA is acute, fast and preventable. Delay is what makes it dangerous. That makes sick-day rules and ketone strips the part of diabetes education that saves the most life-years — and the part most often skipped. Most patient material gives DKA a footnote and eye disease a chapter; for young people, the evidence says to do the reverse.

When to go in

Go to the emergency department now if

- ketones are moderate or large
- vomiting has gone on more than a couple of hours
- nothing will stay down
- glucose stays high after corrections
- breathing is fast and deep, or breath smells sweet
- they are drowsy or hard to rouse

Call 911 if

- there are ketones with vomiting
- they are unconscious, seizing, or can't be roused

Nobody has ever been in trouble for arriving at an emergency department with ketones. If you are unsure, going in is the right call.

Preventing it

Three habits are the core of prevention:

1. **Never stop long-acting insulin** — not even when you are too sick to eat.
2. **Check ketones when you are unwell**, whatever the glucose says, and keep in-date ketone strips at home.
3. **Have a written sick-day plan** from your diabetes team before you need it.

The details are on the [sick days](#) page. Some medications can also bring on DKA even at a normal glucose reading; the [Medications section](#) covers that.

Sources: Diabetes Canada Clinical Practice Guidelines, Chapter 15 · Livingstone et al., Scotland national type 1 data

Sick days: the insulin does not stop

Illness raises insulin needs even when you are not eating. What keeps going, what usually pauses, and the sick-day box to have ready in advance.

Being sick with type 1 diabetes — a cold, the flu, a stomach bug, an infection — changes the rules. This page explains why insulin keeps going when food stops, what to keep doing, which medications usually pause, and what to have ready before you ever need it.

Why the insulin does not stop

Illness raises your insulin needs even when you are eating nothing at all. Stopping insulin because no food is going in is the single most common route into ketoacidosis.

Keeps going

- Your long-acting insulin, always
- Checks every two to four hours, overnight too
- Ketone checks, whatever the glucose says
- Fluids, sipped steadily

What usually pauses

While you are dehydrated, some medications are usually paused, because they strain the kidneys when you are dry:

- SGLT2 inhibitors
- ACE inhibitors and ARBs
- diuretics
- metformin
- anti-inflammatories like ibuprofen

Your own list will depend on what you take. Get your personal hold list from your pharmacist, on paper, before you are ever ill enough to need it — and do not stop or restart anything without that list or your team's advice.

Carbs in liquid form

If solids won't stay down, carbohydrate can come from:

- regular pop
- juice
- sports drink
- ice pops
- sweet tea

Plus something salty — broth or a rehydration solution.

The box, ready in advance

The sick-day box

In-date ketone strips, fast sugar, sugary and salty fluids, a thermometer, your team's after-hours number, and a written plan. Sick judgement is bad judgement — prepare while you are well.

The written plan matters because the person reading it may be a parent or partner while the person with diabetes is too unwell to think. Ask your diabetes team for one, and keep it in the box.

A pump failure is its own sick day

With a pump, there is no long-acting insulin depot underneath. If the pump stops delivering, ketones climb fast. Treat a pump failure with the same urgency as illness, and follow your team's plan for switching to injections.

When to go in

Go to the emergency department now if

- ketones are moderate or large
- vomiting has gone on more than a couple of hours
- nothing will stay down
- glucose stays high after corrections
- breathing is fast and deep, or breath smells sweet
- they are drowsy or hard to rouse

Call 911 if the person is unconscious, seizing, or has ketones with vomiting. Nobody has ever been in trouble for arriving at an emergency department with ketones.

More on sick-day hold lists and the medications that affect glucose is in [the Medications section](#).

The people around you

What family, friends, coworkers, coaches and hosts need to know about type 1 — how to help in an emergency, and what not to say.

Type 1 diabetes is managed by one person, but it is lived alongside many others: partners, parents, siblings, roommates, friends, coworkers, coaches, teachers and hosts. What those people know — and what they say — makes a real difference to safety and to how heavy the daily work feels.

This section is for them, and for the person with type 1 who wants something to show them. It covers why an A1C is not a report card on effort, what everyone nearby should know to spot and treat a low, the sentences that do damage and what to say instead, the emotional weight of diabetes distress, and a short guide for coaches, teachers and hosts.

A plan nobody else knows about is not a plan. If you have type 1, consider showing the emergency pages to two people who are around you often — a partner, a roommate, a sibling, a coworker.

Sources: Diabetes Canada Language Matters · dStigmatize

What the people around you actually need to know

How to spot a low, how to fix it, and when to call 911. A two-minute briefing for partners, family, roommates and coworkers.

If someone you live, work or spend time with has type 1 diabetes, this is the page for you. It takes about two minutes to read, and it covers the one situation where what you do in the moment matters most: a low.

You don't need to understand insulin doses or carbohydrate counting. You need to know three things — how to spot a low, how to fix it, and when to call 911.

Spot a low

A low (hypoglycemia) can come on in minutes. Watch for someone who is:

- confused or slurring
- shaking, sweating, pale
- suddenly angry or odd
- drowsy, hard to rouse
- clumsy, or gone quiet

These can be easy to mistake for tiredness, a bad mood or having had a drink. Drunk and hypo look identical from the outside — so don't assume someone just needs to sleep it off.

Fix it

If they can swallow

Give sugar straight away — juice, glucose tablets, regular (not diet) pop. Wait, then give them real food.

Sugar first, questions later. Always.

Diet or zero drinks do nothing for a low; neither do chocolate or milk, which are too slow. The full method is on treating a low.

Call 911

Call 911 if they

- can't swallow
- pass out
- have a seizure
- can't stop vomiting

Say the words "they have type 1 diabetes." Roll them onto their side. Nothing in the mouth.

If they have glucagon and you know how to use it, give it — see glucagon. Ambulances aren't police; nobody gets charged for calling one.

Also worth knowing

- **Where the fast sugar is** — in their bag, their desk, the car, the fridge.
- **Where the glucagon is**, and whether it is in date.
- **That a delayed meal is a real problem.** If someone has already taken their insulin and the meal slips by an hour, the insulin is working with no food arriving. That is a hypo in the making, not a small inconvenience. Give an honest time for food and update it if it slips.
- **The other emergency.** Vomiting, stomach pain, fast deep breathing or sweet-smelling breath can be signs of ketoacidosis, which needs a hospital.

Pass it on

A plan nobody else knows about is not a plan. If you have type 1, show this page to two people who are around you often — a partner, a roommate, a sibling, a coworker. If you are one of those people, thank you for reading it.

Sources: Diabetes Canada Clinical Practice Guidelines

Not a report card: the words that help and the words that hurt

An A1C is not a verdict on effort. The sentences that do damage, what to say instead, and why judgement is a safety problem.

What people say about diabetes — at the dinner table, at work, in the clinic — shapes how safely someone can live with it. This page explains why a number is not a grade, which sentences published guidance says to avoid, and what to say instead.

An A1C is not a report card on how hard someone tried

An A1C is the joint product of many things: biology, access to technology, insurance, food security, mental health, the quality of the education someone was given, whether their clinician's language made them want to come back — and effort. Effort is one input among many.

It is also the only one anyone ever gets blamed for. And blame makes every other input worse: people who experience stigma have higher A1C, more variable glucose, and are **less likely to come back for follow-up care**.

Shame is not a motivational tool that happens to fail. It is a risk factor.

If you are with a family, this is the sentence the person with diabetes most needs the others to hear.

The sentences that do damage

This list is not opinion — it comes from published guidance on diabetes language. If you recognize something you have said, you are in very large company; the point is what comes next, not blame.

Never

- "You'll go blind / lose a foot / end up on dialysis"
- "My grandmother had diabetes and she..."
- "Is your sugar *good* today?"
- "Should you be eating that?"
- "Are you allowed that?"
- "You just need more discipline"

Instead

- "How are you doing with it?"
- "What would actually help right now?"
- "That looks like a lot of work."
- "Tell me a bit more about what worries you."
- Or nothing at all about the number on the screen.

Why it matters

Judgement causes concealment. People under-report readings they expect to be judged for — and hidden numbers are a safety problem, not just a feelings problem.

People with diabetes are clear about the words they prefer. Across surveys, 96% of people with diabetes reject "sufferer," and 83% reject "good" and "bad" applied to blood sugar. That is why this site talks about glucose being in or outside the target range, and uses the actual numbers.

A few swaps

- "Diabetic" as a noun → "person with diabetes" or "person with type 1"
- "Good" or "bad" numbers → "in range," "high," "low," or the number itself
- "Control" → "manage"
- "Compliant" → describing what is actually happening, without a verdict

The food version of this — "are you allowed that?" — has its own advice for hosts in [For coaches, teachers and hosts](#).

Diabetes distress, burnout and disordered eating

The emotional weight of type 1 is common, expected and treatable. What distress and burnout look like, and a specific risk worth naming gently.

Some of the hardest parts of type 1 diabetes have nothing to do with blood sugar. This page is about the emotional weight of managing it every day — how common that is, what it is mostly about, and a specific risk worth naming. It is written for people with type 1 and for the people who care about them.

Diabetes distress is common

1 in 4

to as many as **2 in 5** adults with type 1 report high diabetes distress

Diabetes distress is the emotional weight of relentless daily management. The literature describes it as an expected response to living with type 1, not a mental health disorder. If you feel it, nothing has gone wrong with you; you are responding normally to a demanding job with no days off.

What it is mostly about

The most commonly reported source of distress is worrying about the future and about complications. The fear is already there — nobody needs to add to it. That is one reason why warnings like "you'll go blind" do harm rather than good (see [the words that help](#)).

Burnout is real too

Burnout is exhaustion and detachment from the whole thing. Depression also runs at roughly three times the general rate in type 1.

Neither is a character flaw, and neither is a verdict on effort. Both are worth mentioning to your diabetes team.

A specific risk worth naming

Reducing insulin to influence weight

Around a quarter of people on insulin screen positive for disordered eating, and about one in five report reducing insulin, often to influence weight. It damages eyes and kidneys faster than other weight-control behaviours — and it is common, treatable and nothing to be ashamed of.

It is named here so that anyone who recognizes it knows two things: they are far from alone, and it can be treated.

The instinct to restrict food usually comes from good intentions. Withholding food to correct a high is ineffective and a step toward disordered eating — which is why the guidance for children's parties says: afterwards, don't withhold food. More in [the Food section](#).

What to do with it

All of this is worth raising with your diabetes team the way you would raise a blood result. Distress and burnout are treatable, and they routinely go unmentioned.

If you are the person with type 1: you can say it plainly at your next appointment — "this is heavy right now" is enough to start the conversation.

If you are family or a friend: handle it gently. If someone recognizes themselves in this page, the next step is a clinician. Offer to help find one rather than pressing for detail. Questions like "What would actually help right now?" do more than advice.

For helplines, including support for people under 30, see [where to get help](#).

Sources: MILES-2 · ADA / NDSS · Eating Behaviors 2024

For coaches, teachers and hosts

A short briefing for anyone who coaches, teaches, hosts or goes out with a person with type 1, with links to the full guidance.

Coaches, teachers, hosts and friends are often the adults on the spot when something happens — and often the last to be told what to do. This page is a short briefing for each of those roles. The full detail lives in the Food, Movement and Drugs and alcohol sections, linked below.

Everyone in these roles needs the basics first: how to spot a low, how to fix it, and when to call 911. That is on [what the people around you need to know](#).

Coaches, teachers and training partners

Type 1 is **not** a reason to sit a child out of PE, training or competition — every guideline says so explicitly. A newly diagnosed athlete needs help getting back to normal training as soon as possible, not a season off.

What you need to have:

- a written plan from their team, shared with you
- fast glucose at the side — tablets, gel, sports drink
- a way to check, and permission to pause for it
- their emergency contact
- to know they may not feel a low coming

In a child, the signs of a low are harder to read and easy to mistake for effort or a bad mood. A pause to check is not a player being difficult. Sugar first, questions after.

If you coach or teach someone with type 1, ask whether you have actually been given their written plan. Often the answer is no. The full guidance is in [What coaches need to know](#) in the Movement section.

Hosts cooking a meal

Genuinely helpful

- Say what you're serving, beforehand
- Keep the packaging or the recipe
- Serve at the time you said
- Have regular, non-diet juice or pop in the house
- Say if something is unexpectedly sweet

Less helpful: making a separate "diabetic meal," pushing second helpings (that's a second dose, not just more food), asking "are you allowed that?", buying sugar-free versions as a kindness, or announcing to the table why the menu changed.

The biggest one is timing. Many people dose 15 to 20 minutes before eating. If dinner slips an hour, the insulin is already working and the food isn't there. Give an honest time, update it if it slips, and don't be offended if they eat a roll while waiting. A Nutrition Facts panel is worth more than any reassurance.

Parents hosting a kids' party

The answer is never for the child to stay home; it is to plan a bit and accept that it won't be perfect. Tell the family what food there is and roughly when, and put the running-around games after eating rather than before. The cake and the loot bag are both yes.

Afterwards, don't withhold food

If a child is running high that evening, insulin fixes that — skipping dinner doesn't. Withholding food to correct a high is ineffective and a step toward disordered eating.

Both hosting guides are in full in [Hosting and kids' parties](#) in the Food section.

Friends on a night out

The same three steps apply — spot it, fix it with sugar if they can swallow, call 911 if they can't — with one addition: drunk, high and hypo can look the same from the outside, so don't let them just sleep it off. Ambulances aren't police; nobody gets charged for calling one. More in [What your friends should know](#) in the Drugs and alcohol section.

Sources: ISPAD 2022, sections 10 and 11 · Riddell et al. 2017 · Breakthrough T1D party guidance

Help & resources

Québec and Canadian numbers worth writing on the fridge, who to call in what order, and what to do next.

This section gathers every helpline and resource named across the site in one place — emergency numbers, Info-Santé, Diabetes Canada and Diabète Québec, poison centres, substance-use and youth lines — along with the people on your own care team who are often the best first call.

It also covers what to do with everything you have read: three concrete things to do this week, and where to go for more depth.

Call 911 if

- someone is unconscious, having a seizure, or won't wake
- there are ketones with vomiting

Everything on this site is general education. Your doses, ratios, correction factors and targets are yours alone — they come from your diabetes team, and where their instructions differ from anything here, theirs win. They know your doses, your kidneys and your history.

Sources: Diabetes Canada · Diabète Québec · Health Canada

Numbers worth writing on the fridge

Every Québec and Canadian helpline on this site in one list: 911, Info-Santé 811, Diabetes Canada, poison centres, substance-use and youth lines.

This page lists every helpline and resource named on this site, grouped by what you need them for. Write the important ones down — on paper, on the fridge. The person who needs them may not be the person whose phone is unlocked.

Emergency

911

Call 911 if someone with type 1 is:

- unconscious or won't wake
- having a seizure
- vomiting with ketones

911 works across North America — Canada, the US and Mexico.

Health advice, day or night

Info-Santé (Québec): 811. A nurse, 24/7, free.

Your own care team

Often the most useful calls are to people who already know you.

- **Your pharmacy.** For anything new, anything over the counter, and your sick-day hold list. No appointment needed. They see every prescription from every doctor, so use one pharmacy and say "type 1" every time.
- **Your diabetes team.** Before a steroid course starts, when doses need changing, and for your written sick-day plan. Keep their after-hours number with the rest of these.
- **A registered dietitian.** The single highest-value appointment after diagnosis. Many newly diagnosed people are never referred to one and don't know they can ask — ask your team for a referral if nobody has offered one.

Your diabetes team has heard all of it before, at every age — including about alcohol and drugs. Their job isn't to judge you; it's to keep your numbers safe around whatever you are actually doing.

Diabetes organizations

- **Diabetes Canada:** 1-800-BANTING (1-800-226-8464)
- **Diabète Québec:** diabete.qc.ca — carb-counting guides and practical tools in French

Poison centres — took too much?

- **Québec:** 1-800-463-5060
- **Rest of Canada:** 1-844-764-7669

- **United States:** 1-800-222-1222

Poison centres take calls about recreational doses too. They are not police, and they will tell you whether this needs an emergency department.

Alcohol, drugs, smoking and vaping

In Canada, for all ages unless noted:

- **Drogue: aide et référence** (Québec): 1-800-265-2626 — 24/7, bilingual
- **NORS — using alone?** 1-888-688-6677. They stay on the line with you, anywhere in Canada, at any age.
- **Quit smoking or vaping:** 1-866-527-7383 (Québec) · 1-866-366-3667 (Canada-wide)
- **SAMHSA (United States):** 1-800-662-4357 — 24/7, free, English and Spanish

NORS and the poison centres are the two most underused numbers on this list. Neither is police.

Young people

Under 30: Kids Help Phone, 1-800-668-6868, or text CONNECT to 686868 — 24/7. In French, the same service is Jeunesse, J'écoute.

Before you close this page

Put 911, 811, your team's after-hours number and your pharmacy on paper where the people around you can find them — next to the glucagon is a good place.

Sources: Diabetes Canada · Diabète Québec · Health Canada

What to do next

Three things to do this week, where to go for more depth on food, movement, medications, drugs and alcohol, and complications — and the evidence for hope.

Reading about type 1 diabetes is the easy part. This page turns it into a short list of actions, points you to the deeper section that matches your situation, and ends with the most hopeful thing the evidence has to say.

Three things to do this week

1. **Book one appointment.** Eyes, kidneys or feet — whichever screening is overdue. That single action is worth more than everything else on this page. The schedule is in the long game.
2. **Ask your team for a written sick-day plan.** Sick judgement is bad judgement, and the person reading the plan may be a parent or partner. See sick days.
3. **Show the emergency pages to two people who are around you often.** A plan nobody else knows about is not a plan. Start with what the people around you need to know.

Two more, when you are ready:

- **Ask about the other four levers** — blood pressure, cholesterol, kidney protection and smoking. Most people with type 1 have never been walked through them.
- **Say it if it's heavy.** Distress and burnout are treatable and routinely go unmentioned. Bring it up the way you would a blood result. See diabetes distress.

Go deeper

Five sections go further than the overviews. Each is written for people with type 1 and the people around them, and each carries its own sources. You don't need to read all of them — pick the one that matches your situation.

- **Food** — food groups by speed, the delayed rise, insulin timing, glycemic index, fibre, Canadian labels, celiac disease, hosting and kids' parties.
- **Movement** — why exercise goes both ways, starting glucose, insulin reductions, fuelling, the overnight tail, competition nerves, kit, and what coaches need.
- **Medications** — steroids, beta blockers, SGLT2 inhibitors and DKA at a normal reading, sick-day hold lists, sensor interference, glucagon.
- **Drugs and alcohol** — nicotine, cannabis, alcohol, stimulants, MDMA and psychedelics. Harm reduction, not a lecture. Plus travel numbers.
- **Complications** — the full DCCT and EDIC evidence, each complication plainly, how far the rates have fallen, screening, and why outcomes are not a verdict on effort.

If you are passing this on to someone, share the link rather than a screenshot — the sources travel with it.

Your team comes first

Everything on this site is general education, not medical advice. Your doses, ratios, correction factors and targets come from your diabetes team, and where their instructions differ from anything here, theirs win. Every number on this site is a published starting point, not your dose. Take the patterns you notice to your team — that is a conversation they have all the time, and it goes much better with data than with guesses.

The last word belongs to the evidence

Two percentage points of A1C, held for six years in the 1980s, was still preventing heart attacks and deaths thirty years later. Almost nothing else in medicine pays off like that.

And the tools you have now — modern sensors and insulins — are far better than the ones that proved it.

That is not a promise about any one person's future. It is the reason the daily work is worth doing, and the reason a hard stretch is not a life sentence.

Sources: Diabetes Canada Clinical Practice Guidelines · DCCT/EDIC · ISPAD 2022 · Riddell et al. 2017 · ADA Standards of Care · Battelino et al. 2019 · Rawshani et al. 2022 · Diabète Québec · Health Canada · NDSS

KRKT's Type 1 Diabetes Education (KRKT:T1DE), from the KRKT Library.

Education, not medical advice. Every dose, ratio and target belongs with your own diabetes team.