

Medications

KRKT:TIDE · KRKT's Type 1 Diabetes Education

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.

Medications

Which medicines move blood sugar, which way they move it, and what to do on the days everything is already going wrong.

This section is for people who are newly diagnosed with type 1 diabetes, and for the people around them. It covers which medicines move your blood sugar, which way they move it, and what to do on the days everything is already going wrong.

Almost every medicine you will ever take was studied mostly in people whose pancreas works. A handful of them move blood glucose, hard. The problem is rarely that they are unsafe for you — it is that the prescription arrives with no mention of it, and a week later you are fighting numbers you assume are your fault.

Read these pages as a list of medicines to *expect something from*, not a list of medicines to refuse. The goal is knowing which conversations to start, and with whom.

This is education, not medical advice. Nobody should change a dose because of something they read here. Every dose decision belongs with your diabetes team or your pharmacist — they know your doses, your kidneys and your history.

Sources: Diabetes Canada clinical practice guidelines · Health Canada

Why medicines need a second thought with type 1

The one rule that never changes — the insulin does not stop — and the three ways any medicine can get in the way of your numbers.

Most people with type 1 diabetes find out about medicine interactions the hard way: a number they can't explain, a few days after starting something new. This page sets out the one rule that comes before everything else, and the three ways a medicine can interfere with managing your blood sugar.

Nobody warns you

Almost every medicine you will ever take was studied mostly in people whose pancreas works. For them, a small shift in blood glucose goes unnoticed, because their body corrects it automatically. For you, it shows up on the screen.

A handful of common medicines move blood glucose, hard. The danger isn't that they are unsafe for you. It is that the prescription often arrives with no mention of it, and a week later you are fighting numbers

you assume are your fault. They aren't. Knowing in advance which medicines do this turns a confusing week into an expected, planned one.

So the right way to read the rest of this section is not as a list of drugs to refuse. It is a list of drugs to expect something from — and to ask about before you start.

Before anything else: the insulin does not stop

This is the single most important idea in this whole topic. Everything else is detail by comparison.

Not when you're too sick to eat. Not when you're throwing up. Not when the number looks fine. Your body needs background insulin whether food goes in or not. Without it, ketones start building within hours and keep building.

The doses may change. The insulin does not stop.

If you ever think your insulin should stop — because you're ill, not eating, or your numbers look low — that is a phone call to your diabetes team, not a decision to make alone.

Illness, other medicines, activity and hormones can all change how *much* insulin you need. Adjusting the dose is normal and expected. Stopping it entirely is not.

Three ways a medicine can get in the way

Any medicine that affects your diabetes does it in one of three ways.

1. It pushes glucose up

Steroids are the big one, but they are not the only one. While you're on a medicine like this, you are likely to need more insulin than usual, for as long as you're taking it. See [medicines that raise blood sugar](#).

2. It pushes glucose down — or hides the fall

Of the two halves, hiding the fall is the more serious one. A low you can still feel is a low you can still treat. Some medicines lower glucose directly; others leave the number alone but quiet the warning signs your body uses to tell you a low is coming.

3. It leaves glucose alone but fools your sensor

Your body is fine. The number on the screen isn't. The risk here is that you dose insulin for a reading that was never real.

This third category surprises almost everyone — including some prescribers. It is covered on the page about [over-the-counter medicines and sensors](#).

Knowing which of the three categories a new medicine falls into tells you what to watch for, and what to ask your team or pharmacist before the first dose.

Sources: Diabetes Canada clinical practice guidelines

Medicines that raise blood sugar, and why steroids stand out

Steroids, some antipsychotics, diuretics, decongestants and more can push glucose up. What to expect, and why the steroid taper matters most.

Some medicines push blood sugar up, usually by making insulin work less well. This page lists the common ones and explains why steroids deserve special attention. None of these is a reason to refuse a medicine you need — they are reasons to expect the change, and to ask what to do about it before you start.

The common ones

Corticosteroids

Prednisone, dexamethasone and cortisone injections. By far the largest effect of anything on this list — they get their own section below.

Some antipsychotics. Olanzapine and quetiapine especially. They reduce how well insulin works.

Thiazide diuretics. Hydrochlorothiazide and its relatives, commonly prescribed for blood pressure.

Decongestants. Pseudoephedrine, sold over the counter in cold and sinus products. It often hides inside combination products, so it is worth reading the ingredient list.

Beta blockers. They push glucose up a little — but they also hide lows, which matters more. That is covered on the page about [medicines that lower blood sugar or hide a low](#).

Hormonal contraceptives. These can shift how your body handles glucose. It is worth watching your numbers closely for the first few cycles.

Some HIV medicines. Protease inhibitors in particular are linked to higher glucose.

Transplant medicines. Tacrolimus and cyclosporine raise glucose, and they are usually non-negotiable. The plan is to adjust insulin around them.

Please don't read this list as a set of medicines to avoid. People do stop needed medication after reading lists like this one, and that is a worse outcome than a week of higher numbers. The better move is to ask, at the moment of prescribing: "Will this raise my blood sugar, and what should I do about my insulin?"

Steroids deserve their own section

A short course of prednisone for a chest infection, or one cortisone shot in a knee, can double how much insulin you need for days. Most people are never told.

Prednisone, once each morning

The rise begins around four hours after the dose and can run for twelve. The classic pattern is a normal morning, a high afternoon and evening, and a better dawn. Knowing that shape helps you and your team plan where the extra insulin goes.

Dexamethasone

Dexamethasone works for twelve to thirty-six hours, so it covers the night too. There is no quiet window in the day where its effect drops away.

The injection counts

A joint, spine or skin injection is a steroid dose. People often don't report it because it didn't come in a bottle — but it can raise your glucose just the same. Say "I have type 1 diabetes" at the moment any steroid is offered, including by a physiotherapist or a surgeon.

The taper needs as much attention as the start

As the steroid dose comes down, your insulin needs fall with it. If you stay on the raised insulin doses while the steroid is tapering, the risk of lows goes up instead. Plan the step-down with your team at the same time as the step-up.

Call your team when it's prescribed

Call your diabetes team when a steroid is prescribed — not three high days later. Adjusting insulin for a steroid course is a planned change, and diabetes teams do it all the time. Calling early means you get a plan for the rise *and* for the taper, rather than chasing numbers after they have already climbed.

Medicines that lower blood sugar, hide a low, or hide DKA

Alcohol, some antibiotics, beta blockers and SGLT2 inhibitors: how each one can lower glucose or hide the warning signs, and what to do if you take one.

Some medicines lower blood sugar. Others barely move it, but take away the signals you rely on to know something is wrong. This page covers both, including the one medicine class that can lead to diabetic ketoacidosis (DKA) while your glucose reads normal.

Anything that causes lows is more of a concern when it is combined with insulin than it would be for someone who doesn't take insulin.

Medicines that push it down

Alcohol, including in medicine. Your liver stops releasing glucose while it clears alcohol. Some liquid medicines and syrups contain alcohol — read the label.

Some antibiotics. The fluoroquinolones — levofloxacin, moxifloxacin and ciprofloxacin — can move glucose in either direction, sometimes sharply. These are the practical ones to know: they are prescribed often, and the warning about blood sugar swings rarely gets mentioned at the pharmacy counter.

High-dose salicylates and quinine. Both are recognised causes of lows. They are uncommon, but they turn up in older prescriptions and in travel kits.

Beta blockers take away the alarm, not the fire

Beta blockers such as metoprolol, propranolol and bisoprolol barely move the number. What they take away is your ability to feel it move.

Your early warning for a low is mostly adrenaline: the shaking, the pounding heart, the sudden anxiety. That is your body telling you to eat something now. Beta blockers blunt exactly those signals. The low still happens; the alarm is turned down.

Sweating usually still gets through, because it runs on a different nerve pathway. For some people on a beta blocker, sweating and confusion are the only warnings left. It is the one signal people can still trust, and almost nobody is told that it survives.

If you're on a beta blocker

- Check more often, not less
- Always check before driving
- Set your sensor's low alert higher
- Tell the people around you that you may not feel a low coming
- Treat an unexplained sweat as a low until proven otherwise

Beta blockers are often the right drug after a heart attack or for blood pressure. This is about managing around them, not avoiding them.

SGLT2 inhibitors: when DKA arrives with a normal reading

SGLT2 inhibitors include empagliflozin (Jardiance), dapagliflozin (Forxiga) and canagliflozin (Invokana). They are type 2 diabetes drugs, but they are also prescribed for heart failure and kidney disease — so people with type 1 do end up on them.

They work by flushing glucose out through the urine. In type 1, that creates a specific trap: you can go into full diabetic ketoacidosis **while your glucose meter reads normal**. This is called euglycemic DKA.

The alarm you have relied on since diagnosis — a high number — may never sound. Health Canada and other regulators have flagged this risk specifically.

If you take an SGLT2 inhibitor

Keep ketone strips, not just glucose supplies. Any vomiting, stomach pain or unusual breathlessness gets a ketone check, whatever the glucose number says.

Using an SGLT2 inhibitor in type 1 diabetes is off-label in most places. It is a decision to make with a specialist, before starting — never a pill to try because it helped someone else. If you are already taking one and didn't know about this, it may be the most useful thing on this page — and a good reason to raise it with your prescriber and your diabetes team.

Sources: Health Canada · Diabetes Canada clinical practice guidelines

Sick days: what keeps going, what pauses

On a sick day, basal insulin always continues while some other medicines pause. What to keep in a sick-day box, and when to get help.

Being sick changes how your body handles insulin and how some of your other medicines act on your kidneys. This page explains what keeps going on a sick day, which medicines usually pause, what to have ready at home, and when to stop managing at home and get help.

What counts as a sick day

A sick day means vomiting, diarrhea, a fever, or not managing to eat and drink properly for about a day. Illness raises your insulin needs even when you're eating nothing — which is why the rule on the first page of this section matters most here: the doses may change, but the insulin does not stop.

What keeps going

Keeps going

- Your long-acting or basal insulin — always
- Glucose checks every two to four hours, through the night too
- Ketone checks, whatever the glucose says
- Fluids, steadily, in small amounts
- Correction doses as your plan sets out

What usually pauses while you're dehydrated

Some common medicines strain the kidneys when you're dry. Many people with type 1 take at least one of them, for blood pressure or kidney protection. The usual sick-day hold list:

- SGLT2 inhibitors
- ACE inhibitors and ARBs
- Diuretics (water pills)
- Metformin
- NSAIDs — ibuprofen, naproxen

The hold list is not universal. Someone with heart failure, for example, may be told to keep a diuretic going. That is why it needs to be personalised in advance. Ask your pharmacist to mark your own hold list on paper, before you are ever sick enough to need it.

The sick-day box

Have it ready before you need it. A written plan matters because judgement is harder when you're unwell — and the person reading it may be a parent or partner rather than you.

- Ketone strips, in date — check the expiry twice a year
- Fast sugar, and sugary drinks you can sip
- Something salty — broth or bouillon
- A thermometer
- Your team's number and their after-hours number
- Your written sick-day plan, on paper

When to stop managing at home

Get help now if

- Ketones are moderate or large
- Vomiting has gone on more than a couple of hours
- You can't keep any fluid down
- Glucose stays high after correction doses
- Breathing goes fast and deep, or breath smells sweet
- You're getting drowsy or hard to rouse

Your diabetes team can help you write a sick-day plan that fits your own insulin, your own medicines and your own kidneys. The best time to ask for one is on a day when you feel well.

Sources: Canadian sick-day medication guidance · Diabetes Canada clinical practice guidelines

The pharmacy aisle, and medicines that fool your sensor

Syrups, decongestants, NSAIDs and supplements bought without a prescription, plus the medicines that make a CGM read falsely high.

Nobody asks you anything when you pick a cold remedy off the shelf. This page covers the over-the-counter products that most often catch people with type 1 diabetes off guard, and the medicines that leave your blood sugar alone but make your sensor show the wrong number.

The pharmacy aisle, where nobody asks you anything

Syrups carry carbs. Cough and cold liquids are often sugar-based, and the dose is repeated every four hours, all day. Sugar-free versions exist — ask for one.

"Non-drowsy" usually means a decongestant. That is typically pseudoephedrine, which pushes glucose up, and heart rate with it. It hides inside combination products, so the box may not say "decongestant" on the front.

NSAIDs on a sick day. Ibuprofen and naproxen are on the sick-day hold list when you're dehydrated. Acetaminophen is usually the safer choice for fever — with one sensor caveat, below.

"Blood sugar support" supplements

These products are not standardised and not tested alongside insulin, and some genuinely lower glucose — which is how they can cause lows on top of your insulin doses. People often don't mention supplements because they don't think of them as drugs. Tell your pharmacist and your team about them by name.

The simplest habit of all: carry the box to the counter and ask the pharmacist. It takes a minute and it is free.

Medicines that lie to your sensor

This is the third way a medicine can get in the way: your glucose is fine, but the number on the screen isn't. The examples below come from Dexcom's interference guidance.

Acetaminophen, above the maximum

On Dexcom G6 and G7, normal dosing is fine. Going past the maximum — more than about 1 g every six hours in an adult — can make the sensor read falsely high.

This is not a reason to avoid acetaminophen. At normal doses on a current sensor it is a non-issue. Older sensor generations were affected by acetaminophen at ordinary doses; newer ones are not.

Hydroxyurea

Hydroxyurea makes G6 and G7 read falsely high at any dose. Dexcom says not to use sensor readings for treatment decisions while taking it.

Every brand has its own list

Dexcom, Libre and the other sensors differ. Look up the interference list for your own sensor rather than assuming this one transfers.

The rule that covers all of it

When the number and the person disagree, believe the person

Do a finger prick. A falsely high reading is the more dangerous direction: you correct for glucose that was never there, and the low that follows is real.

If you feel low but the sensor says you're in range — or the reading simply doesn't match how you feel — trust the finger prick over the sensor until you know why.

Sources: Dexcom interference guidance · Canadian sick-day medication guidance

Glucagon, and treating a low

Glucagon is the medicine someone else gives you in a severe low. How nasal and injectable glucagon work, and the 15 g, 15-minute rule.

This page is for the person with type 1 diabetes and, just as much, for the people around them. It covers glucagon — the rescue medicine for a severe low — and how to treat an ordinary low with fast sugar.

Glucagon: the medicine somebody else gives you

Glucagon reverses a severe low when the person can't swallow. That means the person with diabetes is never the one who uses it. It is given by whoever is with them — so family, friends, coworkers and roommates all need to know where it is and how it works.

A fair question to ask yourself honestly: do you know where your person's glucagon is right now?

Nasal, 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, 1 mg. Into the thigh, through clothing if you have to. Newer pens come ready to use instead of needing to be mixed.

Then, every time

- Call 911.
- Roll them onto their side — vomiting is common afterwards.
- Stay until they are properly awake and have eaten.

After drinking, glucagon works less well. Glucagon tells the liver to release glucose. Alcohol stops the liver doing that. Past two drinks, call the ambulance rather than wait to see if glucagon works.

Everyone on insulin should have glucagon, in date, somewhere the people around them can find it — not buried in a drawer they don't know about.

Treating a low: 15 grams, 15 minutes

Below 3.9 mmol/L, Diabetes Canada says to take 15 g of fast-acting carbohydrate — preferably glucose or sucrose as tablets or dissolved in water, which work better than juice or gels.

15 grams looks like

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

Then

Wait 15 minutes at rest. Check again. Still under 3.9? Repeat.

Once you're back up, eat the meal that was due. If the meal is more than an hour away, have a snack with 15 g of carbohydrate and some protein.

What doesn't work

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

The diet drink mix-up is the one that catches families at the dinner table, where both cans look the same. If you're handing someone a drink for a low, check that it's the regular one.

How much is enough?

Diabetes Canada's starting amount is 15 g. In practice many people need more — one Canadian study found an average of 32 g. Start at 15, recheck, and agree your own amount with your diabetes team.

Sources: Diabetes Canada

Your pharmacist, four questions, and five myths

Why your pharmacist belongs on your care team, four questions to ask before any new medicine, and five common beliefs that aren't true.

The best protection against a medicine that surprises you is asking the right person the right questions before you take it. This page explains why your pharmacist is that person, gives you four questions to carry with you, and clears up five common beliefs about medicines and type 1 diabetes.

Your pharmacist is the most underused person in your care

If you are newly diagnosed, it may not have occurred to you that your pharmacist is part of your care team. They are.

Your pharmacist is the only person who sees every prescription from every doctor you have — including the ones your endocrinologist never hears about, and the walk-in clinic that prescribed the prednisone.

No appointment, no wait, no fee. And they will happily go through your whole list with you.

Three habits

- **Use one pharmacy for everything**, so the interaction check actually has all the pieces.
- **Say "I have type 1 diabetes" every single time**, even when you assume it's on file.
- **Book a medication review once a year**. In most provinces it is covered.

Four questions, before anything new goes in

Put these four in a note on your phone. At the counter, under pressure, almost nobody remembers them unprompted.

1. Will this move my blood sugar, and in which direction?

2. When — straight away, hours later, or only for the first week?
3. Does it interact with insulin, or hide the signs of a low?
4. Do I hold this on a sick day — and does it change my insulin plan?

Ask the same four about vitamins, herbal products and anything bought online. "Natural" doesn't mean it does nothing — it usually means nobody measured what it does.

Five things that aren't true

"They can't take that."

Almost nothing is off-limits. Living with type 1 is about expecting a medicine's effect and planning around it, not about refusing it.

"The insulin dose is fixed."

Insulin needs move with illness, steroids, activity and hormones. Changing the dose *is* the management, not a failure of it.

"Vaccines are risky with diabetes."

This one is backwards. Flu and similar illnesses are what push people into DKA, which is why annual vaccination is recommended. This belief circulates widely, and it lands people in hospital — so it is worth stating plainly.

"Sugar-free means free."

Sugar alcohols still carry carbohydrate, and in quantity they upset stomachs. Read the whole Nutrition Facts table, not just the front of the package.

"The sensor says it's fine."

Not on hydroxyurea, not above maximum acetaminophen doses, and not when the number and the person disagree. See [medicines that fool your sensor](#).

Sources: Diabetes Canada clinical practice guidelines

For family, friends and caretakers

What the people around someone with type 1 diabetes are worth knowing about medicines and lows — and what is worth not doing.

If someone you love has type 1 diabetes, you don't need to know their doses. You do need to know a few practical things — and a few things that, however well meant, make daily life harder. This page is for you.

Worth knowing

Worth knowing

- Where the fast sugar is kept
- Where the glucagon is, and which kind it is
- That sweating and confusion can mean a low
- To say "they have type 1 diabetes" to any paramedic
- That a new steroid or antibiotic may throw their numbers off for a week

Medicines belong on this list because a new prescription can change their numbers for days, through no fault of theirs. If they seem to be fighting their numbers after starting a steroid or an antibiotic, that may well be the medicine, not a lapse in effort — and a good moment to offer help rather than advice.

Sweating and confusion matter especially if the person takes a beta blocker: for some people on one, those may be the only warning signs left. The page on [glucagon and treating a low](#) explains what to do if you ever need to act.

Worth not doing

If you take only one thing from this page, make it this list. Most of what is on it comes from good intentions.

- Commenting on what they eat
- Reading their numbers back at them
- Moving or rationing their supplies
- Blaming a bad mood on their blood sugar, out loud
- Changing meal times without telling them

Type 1 diabetes is managed roughly a hundred and eighty times a week, for life. Being watched and checked on wears people down faster than the condition itself does.

Better phrasing

Small changes in wording make a real difference.

- "Have you checked?" lands better than "you look low".
- "What do you need?" beats guessing and handing them the wrong thing.
- "I'm eating at seven" is more useful than "are you allowed this?"

The first version of each is information or an offer of help. The second is a judgement, even when it isn't meant as one.

Being a good support doesn't mean becoming the person's diabetes manager. It means knowing where things are, knowing when to act, and trusting them with the rest.

Sources: Diabetes Canada clinical practice guidelines

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.