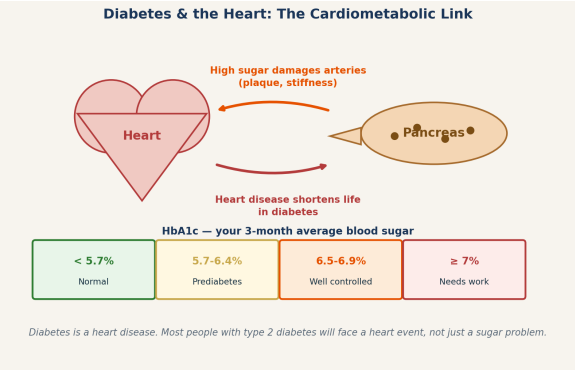
Diabetes and the Heart

Why type 2 diabetes is a heart disease — and what to do about it.

Most people with type 2 diabetes will face a heart event. The plan has changed.



Online: https://go.riasalimd.com/diabetes-heart-guide

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Names & Terms You Will Hear

Term	Meaning
Type 2 diabetes (T2DM)	The most common type of diabetes. Body cells stop responding well to insulin, and blood sugar rises over the years.
Type 1 diabetes (T1DM)	An autoimmune type. The pancreas stops making insulin. It is less common but lasts for life, and heart risks still apply.
Prediabetes	Blood sugar that is higher than normal but not yet diabetes. It already raises heart risk.
HbA1c (A1c)	A blood test that shows your average blood sugar over the past 3 months. Doctors use it to diagnose diabetes and track treatment.
Insulin resistance	Cells in muscle, fat, and liver stop responding well to insulin. The pancreas makes extra insulin to make up for this, until it cannot keep up.
Cardiometabolic disease	One name for a group of problems. It includes diabetes, obesity, high blood pressure, and high cholesterol, all driving heart disease.
ASCVD (atherosclerotic cardiovascular disease)	Heart attack, stroke, and clogged leg arteries, all from a buildup of fatty plaque. Diabetes more than doubles this risk over time.
Microvascular disease	Damage to the smallest blood vessels. This affects the eyes (retinopathy), kidneys (nephropathy), and nerves (neuropathy).
Macrovascular disease	Damage to larger arteries that feed the heart (CAD), brain (stroke), and legs (PAD). This is the top cause of death in diabetes.
SGLT2 inhibitor	A group of pills, such as Jardiance and Farxiga. They lower blood sugar and also protect the heart and kidneys — now a first choice if you have heart disease, heart failure, or kidney disease.

Term	Meaning
GLP-1 agonist	Shots or pills, such as Ozempic, Trulicity, Victoza, and Mounjaro. They lower blood sugar, help you lose weight, and lower heart risk.
Silent ischemia	A heart attack or blocked artery with no typical chest pain. It is more common in diabetes because of nerve damage.

Diabetes and the Heart?

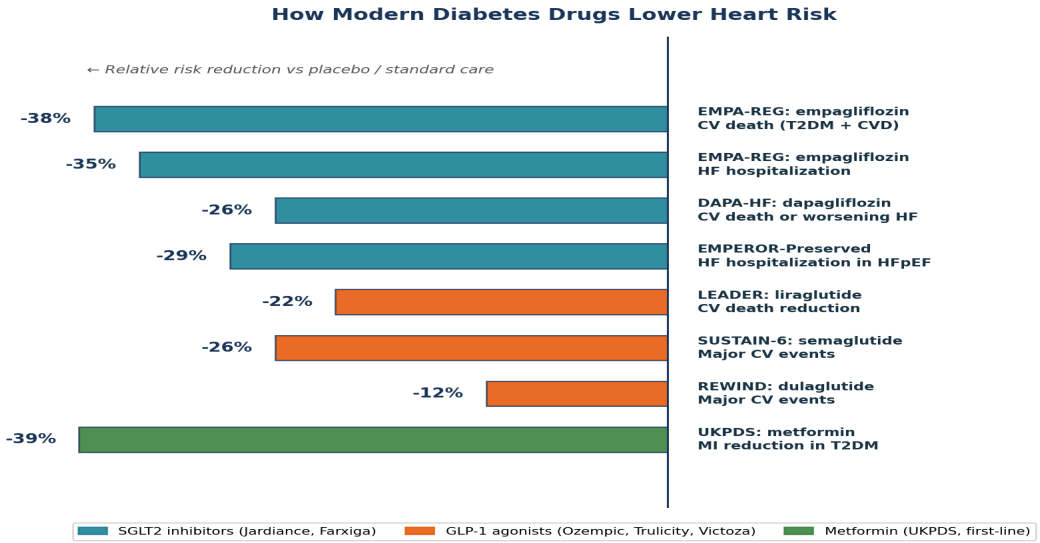
- Diabetes is not just a sugar problem. In type 2 diabetes, cells stop responding well to insulin. That same problem also damages blood vessels all over the body.
- Heart disease is the top cause of death in people with diabetes. About two of three will die of a heart attack, stroke, or heart failure, not the eye or nerve damage most people think of first.
- Diabetes more than doubles your long-term risk of heart attack, stroke, and heart failure. The American Heart Association treats diabetes like existing heart disease for this reason.
- Risk does not come from blood sugar alone. Diabetes also raises blood pressure and changes cholesterol, with high triglycerides and low HDL. It also causes swelling in artery walls, which builds plaque.
- Modern treatment is not just about lowering sugar. The newest diabetes drugs (SGLT2 inhibitors and GLP-1 agonists) protect the heart and kidneys even if blood sugar is not brought down all the way.

HbA1c targets by patient type (ADA 2024)

Profile	HbA1c Target	Why
Young adult, no CV disease, low hypoglycemia risk	< 6.5%	A longer life ahead means lower is worth it.
Most adults with T2DM	< 7%	Best balance of benefit vs. low-sugar risk.
Older adult with limited life expectancy or multiple comorbidities	< 8%	Tight control can cause harm in this group.
Older adult, frail, history of severe hypoglycemia	< 8.5%	Quality of life matters most here.

Why It Matters

- Diabetes affects about 11% of US adults, more than 37 million people, and another 38% have prediabetes. Heart disease is the top killer in both groups.
- Heart problems in diabetes tend to happen 14-15 years earlier than in people without diabetes. A 50-year-old with diabetes can carry the heart risk of a 65-year-old without it.
- Symptoms can be silent. Nerve damage from long-standing diabetes can hide the warning signs of a heart attack. This is why we test earlier and treat harder.
- Modern trials have changed the rules. In 2015, EMPA-REG showed empagliflozin cut heart deaths by 38%. In 2016, LEADER showed liraglutide cut heart deaths by 22%. Later trials (DAPA-HF, EMPEROR-Preserved) made SGLT2 inhibitors a first choice in heart failure, even without diabetes.
- Together, these steps add up. The right diabetes drug, blood pressure below 130/80, and a statin (LDL under 70 if you have heart disease) can cut your 10-year heart risk in half or more.



Risk drops seen in the trials that reshaped diabetes care. SGLT2 inhibitors (blue) and GLP-1 agonists (orange) lower heart death and hospital stays on their own, not just by lowering blood sugar. Metformin (green) is the base.

The two-out-of-three rule. Two of every three deaths in type 2 diabetes come from heart disease, stroke, or heart failure. Eye, kidney, and nerve damage cause disability. Heart and brain damage cause death. Both need attention, but the heart side often gets less.

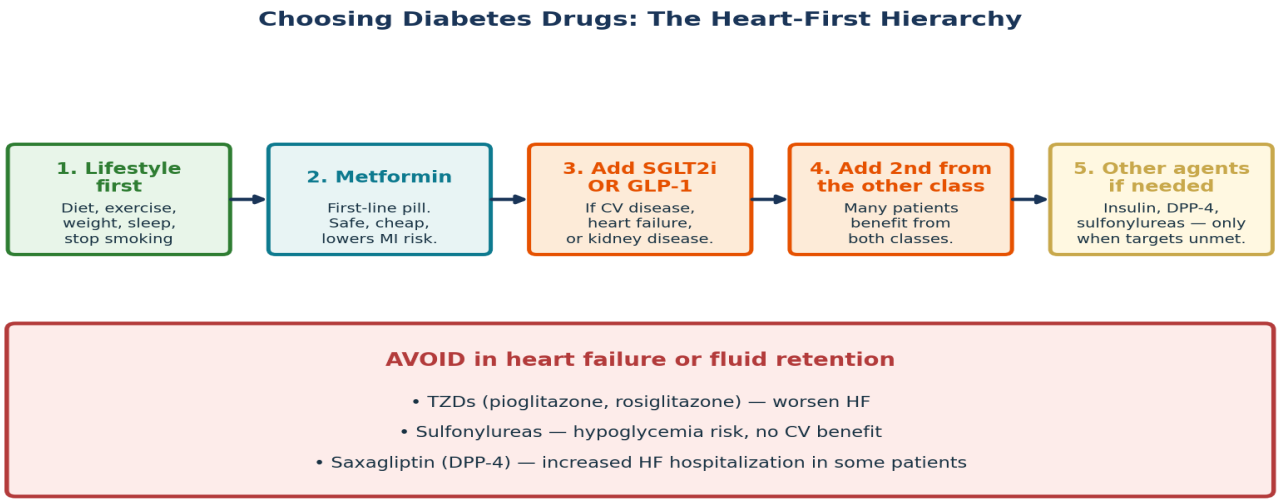
Risk Factors

Some patients are more likely to develop this condition. Knowing your risk helps your care team take extra precautions.

Risk Factor	Why It Increases Risk
Long diabetes duration	The longer you have had diabetes, the more damage builds up in artery walls and kidneys. Risk rises each year.
HbA1c above target	Each 1% rise in HbA1c above target raises major heart events by about 10-20%. Lower is usually better, but not below 6%.
High blood pressure	Common in diabetes — over 70% of people with type 2 diabetes have it. Each 10-point rise above 130 adds more heart and kidney risk.
High LDL cholesterol	Often paired with low HDL and high triglycerides. This mix is common in diabetes and it drives plaque buildup.
Smoking	Doubles the heart risk that diabetes already causes. Quitting is the single best step you can take.
Obesity and abdominal fat	Belly fat sends out signals that cause swelling. This makes insulin resistance worse and harms artery walls.
Chronic kidney disease	Often silent in the early stages. Even a small drop in kidney function raises heart risk a lot.
Family history of early heart disease	A parent or sibling with a heart attack before 55 (men) or 65 (women) adds extra risk for you.

Treatment Options

- Metformin is the first choice for type 2 diabetes. It is safe, cheap, and the UKPDS trial showed it cuts heart attack risk by 39% in overweight patients. Doctors start at a low dose and raise it slowly to avoid stomach side effects.
- Doctors add an SGLT2 inhibitor, such as empagliflozin (Jardiance) or dapagliflozin (Farxiga), if you have heart disease, heart failure, or kidney disease, no matter your HbA1c. The benefits happen on their own, apart from sugar control.
- Doctors may add a GLP-1 agonist, such as semaglutide (Ozempic), dulaglutide (Trulicity), or liraglutide (Victoza). This lowers heart risk further, especially if you already have artery disease or need to lose weight.
- HbA1c target: below 7% for most adults. Younger patients without heart disease may aim below 6.5%, if it is safe to do so. Older patients with several health problems may aim below 8% — the ACCORD trial showed very tight control can harm this group.
- Blood pressure target: below 130/80. ACE inhibitors or ARBs are preferred. They also protect the kidney.
- Cholesterol target: a high-dose statin for people with diabetes who have artery disease, or who are over 40 with several risk factors. LDL goal: below 70 if you have heart disease, below 100 if you do not.
- Avoid TZDs, such as pioglitazone and rosiglitazone, if you have heart failure, since they cause fluid buildup. Use sulfonylureas, such as glipizide and glyburide, with care, since they can cause low blood sugar.
- Aspirin is no longer given automatically to prevent a first heart event in diabetes. Ask your cardiologist if it makes sense for you, based on your own bleeding and clotting risk.



The heart-first order of treatment. Lifestyle is always the foundation. Metformin comes first. Add an SGLT2 inhibitor or GLP-1 agonist if you have heart disease, heart failure, or kidney disease — no matter your HbA1c. Avoid TZDs in heart failure.

SGLT2 Inhibitors — the new heart-failure first-line

- Examples: empagliflozin (Jardiance), dapagliflozin (Farxiga), canagliflozin (Invokana).
- How it works: it blocks a kidney protein that pulls sugar back into the blood. Extra sugar leaves in urine, along with sodium and water. This fluid loss is what helps the heart.
- Heart benefit: cuts heart death or heart failure hospital stays by 26-38% across major trials. Works the same with or without diabetes.
- Kidney benefit: 30-40% reduction in kidney failure (DAPA-CKD, EMPA-KIDNEY).
- Cautions: stop the drug on sick days, such as vomiting or dehydration, due to a rare DKA risk. Genital yeast infections happen in 5-10% of patients. A small, early dip in kidney function is normal.
- See the companion SGLT2 Inhibitors guide for full details on dosing, side effects, and what to expect.

GLP-1 Agonists — heart benefit plus weight loss

- Examples: semaglutide (Ozempic, Wegovy), dulaglutide (Trulicity), liraglutide (Victoza, Saxenda), tirzepatide (Mounjaro, Zepbound).
- How it works: it copies the gut hormone GLP-1. It slows stomach emptying, raises insulin release, and lowers appetite. Weight loss of 5-15% is typical with semaglutide and tirzepatide.
- Heart benefit: cuts major heart events by 12-26% across major trials. The benefit is strongest in patients who already have artery disease.
- Cautions: nausea at first, which improves over 2-4 weeks as the dose rises slowly. Rare pancreas swelling. Avoid if you have a family history of medullary thyroid cancer or MEN2.
- Most are weekly injections. Oral semaglutide (Rybelsus) is daily.

Silent Ischemia — the diabetic heart attack

- Nerve damage from diabetes can mute heart attack warning signs. The classic crushing chest pain may not happen.
- Other signs are more common instead: shortness of breath, sudden tiredness, nausea, sweating, or jaw or upper-back discomfort.
- We test for blocked arteries sooner in patients with diabetes. This may mean an earlier stress test, heart CT scan, or catheterization.
- Trust unusual symptoms. If something feels wrong, even without classic chest pain, call us or 911. In diabetes, unusual does not mean harmless.
- A yearly heart-risk check is a standard part of diabetes care. It includes questions about symptoms and tests for blood pressure, cholesterol, and kidney health.

Comfort Measures at Home (No Medication Needed)

These simple steps support healing and ease symptoms. Use them alongside any medication your doctor prescribes.

- Walk every day, even for 20 to 30 minutes. Walking after meals lowers sugar spikes and improves insulin sensitivity within weeks.
- Eat a Mediterranean-style diet: olive oil, fish, nuts, beans, vegetables, and whole grains. The PREDIMED trial showed this diet lowers heart events by 30%.
- Lose 5% to 10% of your body weight if you are overweight. Even a small weight loss can lower HbA1c by 1% or more and improve blood pressure.
- Sleep 7 to 8 hours a night. Poor sleep raises blood sugar and blood pressure, and makes insulin resistance worse.
- Stop smoking. Diabetes plus smoking multiplies your risk — together, they are far worse than either one alone.
- Check your feet every day for cuts, blisters, or color changes. Foot sores from diabetes are the top cause of amputation.
- Drink water instead of sugary drinks. One sugary drink a day raises your risk of type 2 diabetes and makes existing diabetes worse.
- Manage stress. Ongoing stress raises the hormone cortisol, and cortisol raises blood sugar.

Checking your blood sugar every day is part of protecting your heart, not just controlling sugar — a fingerstick reading like this one guides when you take your medicine and helps you and your care team spot patterns early. Image: Amanda Mills, CDC Public Health Image Library #13565, 2011 (Public Domain).

Risks, Benefits, and Alternatives

Every choice has trade-offs. Use this table to start the shared decision conversation.

Option	Risks	Benefits	Alternatives
Metformin (first-line)	Stomach upset (nausea, diarrhea) in 10-20% — improves with the slow-release form. Low vitamin B12 is rare. Lactic acidosis is very rare with normal kidney function.	Lowers HbA1c by 1-2%. Cuts heart attack risk by 39% in overweight patients (UKPDS trial). It is cheap. Weight stays the same or drops slightly. It does not cause low blood sugar.	An SGLT2 inhibitor or GLP-1 agonist if metformin is not tolerated. Insulin if HbA1c is very high at diagnosis.
SGLT2 inhibitors (Jardiance, Farxiga)	Genital yeast infections in 5-10% of women and 3-4% of men. A rare form of DKA — stop the drug on sick days. Mild dehydration. A small, early dip in kidney function.	Cuts heart deaths by 38% (EMPA-REG trial), heart failure hospital stays by 30%, and kidney failure by 39%. Works even without diabetes. Also brings modest weight loss and lower blood pressure.	A GLP-1 agonist works a different way. A loop diuretic only eases symptoms; it does not extend life.
GLP-1 agonists (Ozempic, Trulicity, Victoza)	Nausea or vomiting early on, which improves over 2-4 weeks. Slower stomach emptying. Rare pancreas swelling. A warning label about thyroid tumors seen in rodents but not in humans.	Cuts major heart events by 12-26%. Leads to real weight loss — 10-15% with semaglutide. Lowers HbA1c by 1.5-2%. Given as a shot once a week.	An SGLT2 inhibitor works a different way. Tirzepatide (Mounjaro) acts on two hormones and leads to even more weight loss.

Option	Risks	Benefits	Alternatives
Insulin	Low blood sugar is the most common problem. Weight gain of 5-10 pounds is common. Some plans need several shots a day.	The strongest drug for lowering blood sugar. It saves lives in type 1 diabetes and advanced type 2 diabetes.	Doctors try pills and GLP-1 drugs fully first. Insulin is saved for HbA1c that stays high despite other treatment.
Sulfonylureas (glipizide, glyburide)	Low blood sugar, much more often than with newer drugs. Weight gain. No proven heart benefit. Glyburide, in particular, has been linked to more heart deaths in some studies.	Cheap. Lowers HbA1c by 1-1.5%.	An SGLT2 inhibitor, GLP-1 agonist, or DPP-4 inhibitor like sitagliptin — all safer and often more effective.

The 'ABCs' of diabetes care.
A1c < 7% (see your own target above).
Blood pressure < 130/80 mmHg.
Cholesterol — a high-dose statin if you have artery disease or are over 40 with risk factors; LDL under 70 if you have heart disease.
Drug — add an SGLT2 inhibitor or GLP-1 agonist if you have heart, heart failure, or kidney disease.
Eat well, exercise, do not smoke.
All five together cut your 10-year heart event risk in half.

Common Misconceptions

Myth	Reality
Diabetes is just about avoiding sugar.	Diabetes is mainly a heart disease. Two of every three people with type 2 diabetes will die of a heart attack, stroke, or heart failure. Avoiding sugar matters, but the bigger fight is stopping the damage to the heart and blood vessels.
If my HbA1c is below 7%, I'm safe.	HbA1c is only one number to watch. Blood pressure, cholesterol, kidney function, weight, and smoking matter just as much. A patient with HbA1c of 6.8% but blood pressure of 160/95 and LDL of 140 still faces very high heart risk.
Newer diabetes drugs are just expensive marketing.	SGLT2 inhibitors and GLP-1 agonists are backed by strong evidence and named in treatment guidelines. Large trials of over 30,000 patients showed they help people live longer. They are no longer optional for people with diabetes and heart disease.
If I feel fine, my diabetes must be controlled.	Diabetes can stay silent for years. By the time you notice symptoms — vision change, leg numbness, swelling, chest pain — the damage is often advanced. Yearly tests for HbA1c, kidney function, eye disease, and heart risk catch problems while there is still time to act.
Tighter sugar control is always better.	The ACCORD trial proved this wrong. Pushing HbA1c below 6% in older patients with heart disease caused more deaths, not fewer. Targets depend on the patient. Younger, healthy patients can aim lower. Older patients with several health problems should aim for about 7-8%.

Myth	Reality
I cannot take Ozempic or Jardiance because I am not heavy enough.	These drugs were first approved for diabetes. But their heart and kidney protection works on its own, apart from weight or blood sugar. SGLT2 inhibitors are now a first choice for heart failure, even without diabetes. Whether they fit you depends on your heart, kidney, and diabetes risk, not your weight.
I had a heart attack — now I should stop my diabetes pills.	The opposite is true. After a heart event, the right diabetes drugs — an SGLT2 inhibitor, a GLP-1 agonist, or both — matter even more. They cut the risk of a second event by 20-30%. Talk to us before stopping any diabetes medicine.

Possible Complications

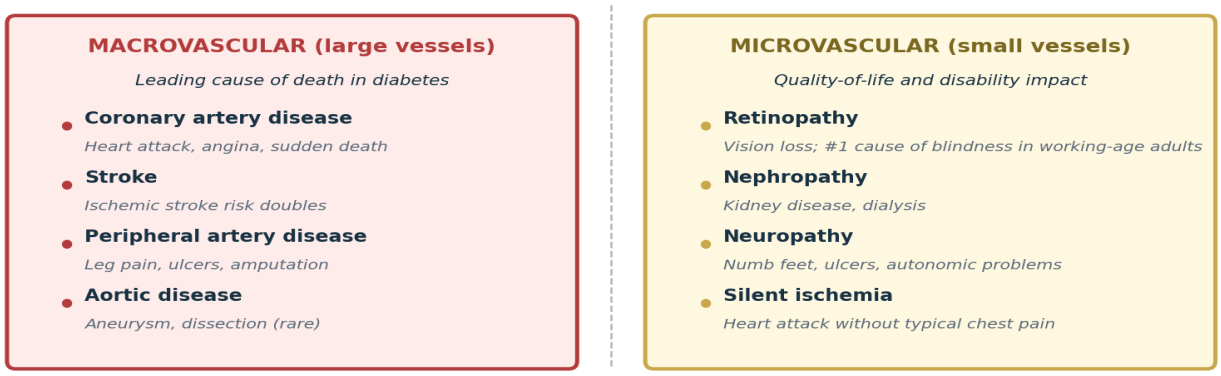
Knowing what can go wrong helps you spot problems early. Most complications are uncommon, especially with treatment.

Where / What	What Can Happen
Coronary artery disease (CAD)	Plaque buildup in the heart arteries. This is the top cause of heart attack in diabetes. It often spreads across more vessels than in people without diabetes. Stents alone are less likely to work, so doctors often prefer bypass surgery.
Heart attack and acute coronary syndrome (ACS)	People with diabetes are more likely to have a silent heart attack. It may come with no typical chest pain. We test for blocked arteries sooner in diabetes.
Heart failure	Diabetes raises heart failure risk by 2 to 4 times. Diabetic cardiomyopathy is a separate problem: the heart muscle grows thick and stiff, even when the arteries are open. SGLT2 inhibitors are now the first choice for treatment.
Stroke	Stroke risk doubles in diabetes. Small-vessel strokes are more common, and they add up to slow, ongoing memory loss.
Peripheral artery disease (PAD)	Blocked leg arteries cause calf pain when walking, called claudication. They also slow wound healing, and in advanced cases can cause gangrene and amputation.
Diabetic nephropathy	Kidney damage that comes from diabetes over the years. It is the top cause of dialysis in the US. ACE inhibitors, ARBs, SGLT2 inhibitors, and finerenone (Kerendia) can slow it down.
Diabetic retinopathy	Damage to the blood vessels at the back of the eye. It is the top cause of blindness in working-age US adults. Yearly eye exams matter.
Diabetic neuropathy	Nerve damage that numbs the feet and can cause other issues, such as dizziness on standing or a slow gut. This is what causes silent heart attacks in diabetes.

Where / What	What Can Happen
Silent ischemia	A heart attack or blocked artery with no typical chest pain, because nerve damage blocks the warning signal. Instead, a person with diabetes may feel short of breath, nauseous, or unusually tired.

Diabetes Affects Every Blood Vessel — Big and Small

Diabetes damages large AND small blood vessels



Diabetes harms both large and small arteries throughout the body. The large vessels (heart, brain, legs) drive most deaths, while the small vessels (eyes, kidneys, nerves) drive most disability.

Points to Know

If you remember nothing else, remember these key points.

- Diabetes is a heart disease. Two-thirds of people with type 2 diabetes will die of heart disease, stroke, or heart failure.
- HbA1c is your 3-month sugar average. The target is below 7% for most adults, but your doctor sets your own goal.
- The newest diabetes drugs — SGLT2 inhibitors and GLP-1 agonists — protect the heart and kidneys, even if sugar is not fully controlled.
- Blood pressure target in diabetes: below 130/80. Cholesterol target: LDL below 70 if you have heart disease. Both targets matter as much as HbA1c.
- Walking 30 minutes a day, eating a Mediterranean diet, losing 5-10% of your weight, and quitting smoking can cut your heart risk almost in half, on top of any medicine.
- A heart attack in diabetes can be silent. Trust unusual tiredness, shortness of breath, or upper-body discomfort, even without chest pain — call us or 911.
- Yearly checks: HbA1c (every 3-6 months), blood pressure, lipids, kidney function (eGFR plus urine albumin), eye exam, foot exam.
- See our companion guides: SGLT2 Inhibitors, Statin Therapy, Hypertension, CAD, Heart Attack, HFrEF, HFpEF, and Heart-Healthy Eating.

When to Call Us - and When to Call 911

If you are not sure, call. We would rather hear from you twice than miss a real problem.

- Chest pressure, tightness, or jaw or arm discomfort lasting more than a few minutes — call 911. Diabetes can mute these warnings, so trust any unusual feeling.
- Sudden shortness of breath, sudden tiredness, nausea, or sweating — call 911. These can be silent heart attack signs in diabetes.
- Weakness on one side, sudden vision change, slurred speech, or facial droop — call 911 (stroke).
- Blood sugar above 300 mg/dL with fruity breath, vomiting, or extreme thirst — call us today (DKA / hyperglycemic crisis).
- Blood sugar below 54 mg/dL or repeated lows without warning — call us this week (hypoglycemia unawareness).
- New leg swelling, sudden weight gain (3-5 lb over 2-3 days), or worsening shortness of breath when lying down — call us today (possible heart failure).
- A foot sore, blister, or wound that is not healing — call us today. Diabetic foot care cannot wait.
- Blurred vision or new floaters — call your eye doctor and our office (possible retinopathy).
- Your yearly diabetes review is due — book a visit if it has been more than a year since your last full check.

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For diabetes specialty care: If your diabetes is complex, an endocrinologist may help manage it with us. For heart, kidney, and blood vessel care linked to diabetes, our office is your home base.

See our other guides: SGLT2 Inhibitors · Statin Therapy · Hypertension · Heart-Healthy Eating.

Trusted Resources

The links below are the trusted resources Dr. Ali used to write this guide and that he recommends you visit for more information. Each is a clickable link in the digital version and a Short.io tracked URL on the printed version.

- Cleveland Clinic — Diabetes and Heart Disease - A simple overview of the diabetes-heart link.
- American Heart Association — Why Diabetes Matters - AHA page on diabetes and heart risk.
- American Diabetes Association — Heart Disease & Diabetes - ADA guide on diabetes and prevention.
- Mayo Clinic — Type 2 Diabetes - A guide on type 2 diabetes and the problems it can cause.
- NIH NIDDK — Preventing Diabetes Problems - A government source on diabetes problems.
- Dr. Ali — SGLT2 Inhibitors Guide - More on Jardiance and Farxiga for the heart.
- Dr. Ali — Statin Therapy Guide - More on statins and diabetes.
- Dr. Ali — Hypertension Guide - More on managing high blood pressure.
- Dr. Ali — Heart-Healthy Eating Guide - More on the Mediterranean and DASH diets.

Sources Used to Build This Guide

Every recommendation in this guide is grounded in one or more of the studies, guidelines, or trusted resources below. Short links are tracked so Dr. Ali can see which references patients are reading; nothing personally identifying is captured.

- ADA Standards of Care in Diabetes 2024 — Cardiovascular Disease & Risk Management (Section 10) *[Guideline]*
  Authoritative source for HbA1c targets, individualized goal-setting (<7%, <6.5%, <8%), BP target <130/80 in diabetes, and preferred glycemic agents with proven cardiovascular benefit.
- EMPA-REG OUTCOME — Empagliflozin and CV outcomes in T2DM (Zinman et al, NEJM 2015) *[Clinical Trial]*
  First major SGLT2i CV outcomes trial: empagliflozin reduced CV death by 38% and HF hospitalization by 35% in T2DM with established CV disease. Anchors the SGLT2i-for-cardiometabolic discussion.
- LEADER — Liraglutide and CV outcomes in T2DM (Marso et al, NEJM 2016) *[Clinical Trial]*
  Landmark GLP-1 agonist trial: liraglutide reduced major adverse CV events by 13% and CV death by 22% in high-risk T2DM. Defines GLP-1 class CV benefit.
- SUSTAIN-6 — Semaglutide and CV outcomes in T2DM (Marso et al, NEJM 2016) *[Clinical Trial]*
  Showed semaglutide reduced major CV events by 26% in T2DM with high CV risk. Supports semaglutide as a preferred agent in patients with established CVD.
- REWIND — Dulaglutide and CV outcomes (Gerstein et al, Lancet 2019) *[Clinical Trial]*
  Showed dulaglutide reduced MACE by 12% in T2DM patients — most without prior CV disease — extending GLP-1 CV benefit to primary prevention.
- DAPA-HF — Dapagliflozin in Heart Failure (McMurray et al, NEJM 2019) *[Clinical Trial]*
  Dapagliflozin reduced worsening HF or CV death by 26% regardless of diabetes status — proving SGLT2i benefit extends to HFrEF patients without diabetes.
- EMPEROR-Preserved — Empagliflozin in HFpEF (Anker et al, NEJM 2021) *[Clinical Trial]*
  First positive HFpEF trial: empagliflozin reduced HF hospitalization by 29%. Critical for diabetic patients with preserved-EF heart failure.
- CANVAS — Canagliflozin and CV outcomes (Neal et al, NEJM 2017) *[Clinical Trial]*
  Confirmed CV benefit of SGLT2 class beyond empagliflozin: canagliflozin reduced MACE by 14% in T2DM with high CV risk.
- UKPDS — Long-term metformin and CV outcomes in T2DM (UKPDS Group, Lancet 1998 & follow-up) *[Clinical Trial]*
  Established metformin as first-line: 39% reduction in MI vs conventional treatment in overweight T2DM, with sustained benefit on 10-year post-trial follow-up.
- ACCORD — Intensive vs Standard Glucose Control in T2DM (NEJM 2008) *[Clinical Trial]*
  Critical caution: very tight glucose control (HbA1c <6.0%) increased mortality in older patients with established CVD. Supports individualized targets — not 'lower is always better.'
- 2018 AHA/ACC/Multisociety Cholesterol Guideline *[Guideline]*
  Defines high-intensity statin recommendations for diabetes ≥40 yrs with risk factors and LDL <70 target for diabetics with established ASCVD.

- 2017 ACC/AHA Hypertension Guideline *[Guideline]*
  Confirms BP target <130/80 in patients with diabetes — guides combined cardiovascular risk reduction in diabetics.
- ADA / ACC / AHA — Diabetes & Cardiovascular Disease Consensus 2024 *[Guideline]*
  Joint society guidance on integrated cardiometabolic care including drug-class hierarchy for T2DM with CV/HF/CKD.
- Cleveland Clinic — Diabetes and Heart Disease *[Clinical]*
  Patient-friendly overview of how diabetes drives cardiovascular disease and which lifestyle and medication strategies reduce risk.
- American Heart Association — Diabetes and Cardiovascular Disease *[Clinical]*
  AHA patient page explaining why diabetes more than doubles cardiovascular risk and what to do about it.
- American Diabetes Association — Heart Disease and Diabetes *[Clinical]*
  ADA patient overview of the heart-diabetes connection, prevention strategies, and when to escalate care.
- Mayo Clinic — Type 2 Diabetes and Heart Disease *[Clinical]*
  Patient-facing reference on how T2DM causes heart disease and the importance of integrated risk management.
- NIH / NIDDK — Preventing Diabetes Complications *[Clinical]*
  Government source on the full spectrum of diabetic complications — macrovascular (CAD, stroke, PAD) and microvascular (eyes, kidneys, nerves).

About This Guide

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Reviewer note: Reviewed against the AHA 'Why Diabetes Matters' page, Cleveland Clinic Diabetes & Heart Disease page, Mayo Clinic Type 2 Diabetes overview, and ADA patient pages. Ours adds: a heart-pancreas cardiometabolic cover diagram, a CV-benefit-cascade trial chart (EMPA-REG, DAPA-HF, LEADER, SUSTAIN-6, REWIND, UKPDS), an explicit drug-class hierarchy with the AVOID list (TZDs in HF), color-coded HbA1c targets by patient profile, the silent-ischemia caution, and direct cross-links to companion SGLT2i, statin, BP, and heart-failure guides.

Disclaimer

This guide is for educational purposes only and does not replace medical advice from your physician. Recommendations may not apply to every patient. Always follow the specific instructions of Dr. Ali and your care team. In an emergency call 911 or go to the nearest emergency department.

Take This Guide With You

Scan or visit: https://go.riasalimd.com/diabetes-heart-guide

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