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Take Control of Your Health

Studies Link Common Diabetes Medications to More Heart Problems

Analysis by Dr. Joseph Mercola | September 27, 2025

STORY AT-A-GLANCE

- Older diabetes drugs like glipizide are linked to higher rates of heart attack, stroke, and even death compared to newer options
- People with Type 2 diabetes already face double the risk of heart problems, making it especially important to avoid medications that add to that danger
- Older diabetes drugs like glipizide are still widely prescribed because they're inexpensive and familiar, but research shows they come with hidden dangers that put your heart at greater risk
- Lifestyle changes such as cutting vegetable oils, choosing the right carbohydrates, and lowering toxin exposure restore your body's natural ability to regulate blood sugar
- A simple HOMA-IR blood test detects insulin resistance early, giving you a chance to reverse course before Type 2 diabetes leads to life-threatening complications

Type 2 diabetes affects tens of millions of adults in the U.S., and its complications are among the most serious of any chronic disease — heart attacks, strokes, kidney failure, nerve damage, and blindness. For many people, these outcomes develop quietly until they become life-altering or life-threatening.

The symptoms that often signal the disease — constant thirst, frequent urination, fatigue, unexplained weight changes, and wounds that don't heal quickly — are just the surface. What lies underneath is a much deeper problem: Type 2 diabetes doesn't just

coexist with heart disease; it makes you far more likely to experience it.

In fact, people with diabetes are at roughly double the risk of cardiovascular complications compared to those without it. That makes the choice of how to manage diabetes key. Drugs prescribed for Type 2 diabetes should avoid compounding the very risks that make the disease so dangerous in the first place.

Yet, growing evidence suggests that some of the most commonly prescribed older drugs are doing just that. Many people are placed on medications that research links to higher rates of heart attack, stroke, and even death. This raises an unsettling question: are the very treatments meant to protect patients instead increasing their chances of serious complications?

Glipizide Linked to Higher Heart Risks in Diabetic Patients

In a study published in JAMA Network Open in July 2025, researchers analyzed the safety of older diabetes drugs called sulfonylureas compared with newer options like DPP-4 inhibitors.[1] They focused specifically on glipizide, glimepiride, and glyburide to see how they influenced the risk of major heart problems such as heart attack, stroke, hospitalization for heart failure, and death from cardiovascular causes.

- **Participants included thousands of adults with Type 2 diabetes —** The study involved 48,165 patients, all of whom were receiving treatment for Type 2 diabetes. The researchers compared outcomes in people who used sulfonylureas versus those who were prescribed DPP-4 inhibitors, giving them a clear picture of how different drugs performed in the real world.

- **Glipizide increased heart risks —** Those treated with glipizide (brand name Glucotrol) had a 13% higher risk of experiencing serious cardiovascular events than people taking DPP-4 inhibitors.

- **The elevated risk was consistent across groups —** The greater danger linked to glipizide showed up in younger and older patients, men and women, and those with varying levels of blood sugar control. This suggests the problem is widespread and not limited to one type of patient.

- **The findings carry major implications for patients —** Because sulfonylureas are still commonly prescribed and relatively inexpensive, many patients rely on them daily. Yet for glipizide in particular, the data raise serious questions about whether its use undermines long-term health by increasing the very risks diabetes already amplifies.

Older Diabetes Drugs Linked to Higher Risk of Heart Problems

A study published in JAMA Network Open in 2018, followed 132,737 adults with Type 2 diabetes who had just started a second drug for blood sugar control.[2] Scientists compared six common medication types and watched who ended up hospitalized for major heart issues like stroke, heart failure, or blocked arteries over about two years.

- **Nearly half the patients were on older drugs —** Sulfonylureas were prescribed to 47.6% of participants, making them by far the most common option. These numbers highlight how heavily doctors still rely on older drugs — meaning millions of people are facing higher risks.

- **Older drugs showed the biggest red flags —** Compared to DPP-4 inhibitors, sulfonylureas increased the risk of major heart complications by 36%, while basal insulin more than doubled the risk. In everyday terms, for every 103 people on sulfonylureas, one extra person had a major heart event in two years. For basal insulin, the risk was even starker — just 37 people needed to be treated before one extra ended up in the hospital.

- **Why the older drugs posed greater danger —** Sulfonylureas and insulin boost insulin production or exposure, which often leads to weight gain and episodes of low blood sugar. Low blood sugar, in particular, puts serious strain on your heart, which helps

explain the higher complication rates.

- **Clear warning signs emerged despite limitations —** Even without long-term follow-up or weight data, the trend stood out: sulfonylureas and basal insulin were consistently tied to greater cardiovascular risks.

Practical Steps to Get Ahead of Type 2 Diabetes

If you want to get ahead of Type 2 diabetes — or even reverse the path you're already on — the focus has to be on fixing the underlying causes, not just covering up the symptoms with medication. When you give your body the right environment, you restore your ability to regulate blood sugar naturally, rebuild energy at the cellular level, and stop the cycle of damage before it progresses. Here are five steps you can take right now:

1. **Cut linoleic acid (LA) down to 2 grams or less per day —** The single most impactful step is lowering your intake of LA, a polyunsaturated fat found in vegetable oils like soybean, canola, and sunflower. LA gets stored in your tissues for years, where it drives inflammation, insulin resistance, and stress in your mitochondria — the power plants of your cells.

   Replace these oils with traditional fats such as grass fed butter, ghee, or tallow. Even oils marketed as "healthy," like olive and avocado, contain more LA than you think and should be used sparingly, if at all. Keep your daily intake under 5 grams, ideally closer to 2 grams. It's wise to track your LA intake using an app like Food Buddy in my Health Coach, which is coming out this year.

2. **Choose carbohydrates wisely to fuel your cells —** Glucose from carbohydrates is your body's preferred source of energy. The key is eating the right kinds and amounts for your lifestyle. Most adults need 250 grams per day to power their cells. Reintroduce carbs gradually so your gut can adjust. If you have gut imbalances, start with easy-to-digest foods like white rice and fruit.

As your gut heals, expand to root vegetables, then non-starchy vegetables, starchy vegetables like squash or sweet potatoes, beans and legumes, and finally minimally processed whole grains. This progression prevents harmful bacteria from releasing toxins that inflame your body and worsen insulin resistance.

3. **Reduce your exposure to environmental toxins —** Modern living exposes you to countless pollutants that sap your energy and harm your metabolism. Endocrine-disrupting chemicals (EDCs) — including hormone-mimicking xenoestrogens in plastics — interfere with insulin signaling and cellular energy.

   Electromagnetic fields (EMFs) add further stress to your mitochondria, tipping your gut toward unhealthy, toxin-producing bacteria. Limit plastics in food storage, choose products free of EDCs, and take steps to lower EMF exposure in your home. Protecting your cells from these constant assaults helps restore healthy energy production and improves your body's resilience.

4. **Get daily sun exposure and support NAD+ levels —** Sunlight triggers your body to produce melatonin directly inside your mitochondria, where it protects against damage and boosts energy production. But here's an important detail: until you've reduced LA stored in your tissues for at least six months, limit strong midday sun, since high LA levels in your skin make you more prone to sunburn.

   Alongside healthy sun habits, support your NAD+ — a key molecule for energy production — with niacinamide (vitamin B3). A dose of 50 milligrams three times daily helps your mitochondria run more efficiently and strengthens your ability to produce energy.

5. **Test for insulin resistance with HOMA-IR —** Recognizing insulin resistance early is essential, as it's a warning sign for your metabolic health — one that often precedes Type 2 diabetes. The HOMA-IR (Homeostatic Model Assessment of Insulin Resistance) test is a valuable diagnostic tool that helps assess insulin resistance through a simple blood test, so you can spot issues early and make necessary lifestyle changes.

Created in 1985, it calculates the relationship between your fasting glucose and insulin levels to evaluate how effectively your body uses insulin. Unlike other more complex tests, HOMA-IR requires just one fasting blood sample, making it both practical and accessible. The HOMA-IR formula is as follows:

HOMA-IR = (Fasting Glucose x Fasting Insulin) / 405, where

- Fasting glucose is measured in mg/dL
- Fasting insulin is measured in μIU/mL (microinternational units per milliliter)
- 405 is a constant that normalizes the values

If you're using mmol/L for glucose instead of mg/dL, the formula changes slightly:

HOMA-IR = (Fasting Glucose x Fasting Insulin) / 22.5, where

- Fasting glucose is measured in mmol/L
- Fasting insulin is measured in μIU/mL
- 22.5 is the normalizing factor for this unit of measurement

Anything below 1.0 is considered a healthy HOMA-IR score. If you're above that, you're considered insulin resistant. The higher your values, the greater your insulin resistance. Conversely, the lower your HOMA-IR score, the less insulin resistance you have, assuming you are not a Type 1 diabetic who makes no insulin.

Interestingly, my personal HOMA-IR score stands at a low 0.2. This low score is a testament to my body's enhanced efficiency in burning fuel, a result of increased glucose availability. By incorporating additional carbohydrates into my diet, I provided my cells with the necessary energy to operate more effectively.

This improved cellular function has significantly boosted my metabolic health, demonstrating how strategic dietary adjustments lead to better insulin sensitivity and overall metabolic performance.

FAQs About Diabetes Medications and Heart Risks

Q: Why are older diabetes drugs like glipizide a concern?

A: Research shows glipizide and other sulfonylureas raise your risk of serious heart problems, including heart attack, stroke, and hospitalization for heart failure. Since people with Type 2 diabetes are already at higher risk for these conditions, using drugs that add to that danger makes outcomes worse.

Q: Why do older diabetes drugs increase heart risks?

A: Sulfonylureas and insulin increase insulin production or exposure, which often leads to weight gain and low blood sugar episodes. Both of these strain your heart and make cardiovascular events more likely.

Q: Why are older drugs like glipizide still prescribed so often?

A: Despite newer and safer options being available, older medications such as sulfonylureas remain widely used because they're inexpensive and have been on the market for decades. This means many people are still exposed to higher heart risks simply because these drugs are more accessible and familiar to prescribers.

Q: What steps can I take beyond medication to lower my diabetes risk?

A: You can dramatically improve your metabolic health by lowering LA (vegetable oil) intake, choosing the right types of carbohydrates, limiting exposure to environmental toxins, getting regular sun exposure, and supporting your NAD+ levels with niacinamide.

Q: How can I check if I have insulin resistance?

A: The HOMA-IR test is a simple blood test that compares fasting glucose and insulin. Scores below 1.0 suggest good insulin sensitivity, while higher numbers indicate insulin resistance — a key warning sign for Type 2 diabetes.

Sources and References

- [1] JAMA Netw Open. 2025 Jul 24;8(7):e2523067
- [2] JAMA Network Open 2018;1;(8):e186125