

## Top 10 Tips to Prevent Type 2 Diabetes

**E**ighty-six million Americans — more than one in three adults — have a disorder that greatly increases their risk for type 2 diabetes and cardiovascular disease (CVD). Although this disorder, prediabetes, can easily be detected with a blood test covered by almost all health plans, 90% of those with this extremely common blood sugar abnormality are unaware of their peril, according to the CDC.

Also known as “insulin resistance” (IR), this condition is the root cause of about 70% of heart attacks and almost all cases of type 2 diabetes. The good news is that there is a lot you can do to avoid IR or to reverse it, if you are already prediabetic. With November marking American Diabetes Month, here are the BaleDoneen Method’s top 10 diabetes prevention tips.



### 1. Know your risk

In the time it takes to watch a movie you can get the best screening test for diabetes, prediabetes and IR, which is covered by almost all health plans. The American Diabetes Association (ADA) advises screening if you’re 40 or older, or at a younger age if advised by your medical provider due to such factors as obesity or family history. The ADA rates the 2-hour oral glucose tolerance test (OGTT), in which you drink a sugary liquid after an overnight fast, as the “gold standard” in accuracy. Blood is drawn at the one- and two-hour marks to check glucose levels. Studies show that other widely used screening tests, such as the A1c test, which doesn’t require fasting, are much less accurate. For example, a 2011 BaleDoneen study found that of 547 patients checked with various blood sugar tests, the A1C test missed 63% of those with IR/prediabetes. Moreover, 27% of the patients classified as prediabetic by the A1C actually had normal blood sugar when checked with the highly accurate OGTT.



### 2. Lose a few pounds

More than 90% of people who develop diabetes are overweight or obese. Research suggests that if you’re overweight, every 2.2 pounds lost cuts risk by 16%. Very large studies also show that shedding 5% to 7% of your body weight (7 to 10 pounds for someone who weighs 150) through diet and exercise cuts risk for developing full-blown by 70% — even if you are already pre-diabetic. Try [our seven heart-smart weight-loss tips](#) — they really work!

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Larry Greenblatt, DO

*Care* **MA**  
MEDICAL ASSOCIATES, PLLC  
conierge healthcare that's all about you

**Care Medical Associates, PLLC**  
1407 116th Ave. NE, Suite 102  
Bellevue, WA 98004  
425.637.0636  
[www.cmadoc.com](http://www.cmadoc.com)  
[info@cmadoc.com](mailto:info@cmadoc.com)

**BALEDONEEN STUDY REVEALS EASY WAY TO**

# **LOWER HEART ATTACK RISK IN PEOPLE WITH TYPE 2 DIABETES**



**G**lobally, nearly 500 million people have type 2 diabetes, the world's fastest growing chronic disease. Patients with diabetes have the same heart attack risk as non-diabetic people who have already suffered a heart attack. More than 75% of diabetic patients ultimately die from coronary heart disease (CHD). These frightening facts highlight the urgency of aggressively managing cardiovascular (CV) risk factors in diabetic patients to protect their arterial health.

A new [BaleDoneen study](#), published in the peer-reviewed journal *Frontiers in Cardiovascular Medicine*, offers compelling scientific evidence that a one-time genetic test can reveal which diabetic patients carry a gene that quintuples CHD risk. The test results can guide precision-medicine treatments to almost eliminate this risk. These therapies include dietary changes and an inexpensive over-the-counter supplement that most people should avoid but can be potentially lifesaving for diabetic patients with a certain genotype. Here's a closer look at the study and key takeaways for people with diabetes:

### **Which genetic test does the BaleDoneen Method recommend for people with diabetes?**

The BaleDoneen study analyzes the latest research findings about the haptoglobin (Hp) genotype test, which can be performed by a simple oral rinse. The test checks for variants of the Hp gene that have been shown in numerous recent studies to raise risk for CHD dramatically in people with type 2 diabetes. In fact, one variant boosts lifetime risk in such patients as much as smoking does!

### **What are the possible results of the Hp genotype test and what do they mean?**

The Hp gene has two alleles, called Hp1 and Hp2. Since you inherit one allele from each of your parents, there are three possible combinations as follows:

- Hp 1-1 (low-risk for CHD)
- Hp 2-1 (intermediate risk)
- Hp 2-2 (high risk)

Seven independent long-term studies have demonstrated that the Hp 2-1 and 2-2 genotypes predict increased risk for CHD in type 2 diabetes. If you are diabetic and have the Hp 2-2 genotype, your life-

time risk for CHD is triple that of a diabetic with the Hp 2-1 genotype and five times higher than that of a diabetic with the Hp 2-2 test. About 16% of people carry the Hp 1-1 genotype, 48% carry the Hp 2-1 genotype and 36% carry the Hp 2-2 genotype.

### **I'm diabetic. How important is it for me to know my Hp genotype?**

Research shows that carrying the Hp 2-2 genotype can greatly increase your risk for a heart attack or stroke if you are diabetic, and it also raises risk for other complications of diabetes, such as heart failure, end-stage renal disease and diabetic retinopathy (damage to blood vessels in the retina, the light-sensitive part of the eye), a condition that can cause vision problems or even blindness.

Therefore, it's extremely important for you and your medical provider to be aware of your Hp genotype so you can get the best personalized treatments to help prevent serious complications of diabetes, especially CHD, which claims the lives of 75% of people with the disease. The BaleDoneen study suggests that Hp genotype should be considered an independent risk factor for heart disease and treated as such, just as medical providers strive

to aggressively treat other major CV risk factors — such as high blood pressure, high cholesterol and obesity — in diabetic patients.

### **What's the link between Hp genotype and risk for heart disease in diabetics?**

The Hp gene regulates haptoglobin, a protein produced by the liver that binds to hemoglobin, a substance produced when red blood cells die. If hemoglobin isn't bound quickly, it will release iron, which can harm your blood vessels. For example, the iron will oxidize LDL (bad) cholesterol, making it even more harmful to your arteries. When Hp binds to hemoglobin, white blood cells can quickly clear this damaging substance from your blood, neutralizing these threats.

In diabetics, iron can also bind to HDL (good) cholesterol, negating many of its usually heart-protective properties. Therefore the Hp 2-2 genotype packs a double punch of bad news!

### **If I have a high-risk Hp genotype, what's the best treatment?**

The BaleDoneen study and other published research reports that type 2 diabetics can counteract almost all of the increased risk for heart disease by taking 400 i.u. of vitamin E daily. While you might wonder if everyone with diabetes should take this inexpensive supplement — and skip the gene test — studies show that unless you have the Hp 2-2 genotype, taking vitamin E not only has no CV benefits, but it can be downright dangerous for your heart.

In most people, vitamin E supplementation raises risk for heart attacks and early death. The only people who benefit from it are diabetics with the Hp 2-2 genotype. This actionable insight is why the BaleDoneen Method recommends that all type 2 diabetics get this test. Before taking any dietary supplement, discuss the potential risks and benefits with your medical

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November Recipe



# HEARTY TURKEY VEGGIE CHILI

Ready in 40 minutes, this easy gluten-free recipe is low in calories but rich in flavor and heart-healthy nutrients. A diet high in carrots has been linked to lower risk for heart attacks and some forms of cancer. Studies also show that people who eat several servings of high-fiber fruits and vegetables daily have decreased risk for stroke and may live longer. Turkey is high in protein and tryptophan, an amino acid that improves sleep and mood, and also contains cholesterol-lowering niacin. For a flavor variation, add chunks of avocado or cooked corn to each bowl before serving.

## INGREDIENTS

- 1 tablespoon olive or avocado oil
- 1 pound ground turkey
- 2 garlic cloves, minced
- 1 medium onion, diced
- 2 carrots, diced
- 1 large green bell pepper
- 1 15½-ounce can unsalted red or white kidney beans, drained and rinsed.
- 2 14-ounce cans of diced tomatoes, no salt added
- 1 cup water
- 2 tablespoons chili powder
- 1 tablespoon ground cumin
- 2 tablespoons fresh cilantro, chopped

### Optional ingredients

- ½ teaspoon salt
- 1 medium lime
- ⅔ cup plain yogurt

## PREPARATION

In a large pot over medium-high heat, heat oil. Add turkey and cook until brown and crumbly, about seven minutes. Add garlic, onion, carrots and bell pepper to pot and cook until carrots and pepper are softened, stirring occasionally, about five minutes. Add beans, tomatoes, water, chili powder and cumin. Season with salt, if using, and reduce heat to medium. Cook until flavors are blended, about 15 minutes. Serve with lime wedges and a dollop of yogurt, if using. Garnish with cilantro and enjoy! Serves six.

Adapted from [Cookingmatters.org](http://Cookingmatters.org) and [therealfoodsrd.com](http://therealfoodsrd.com)

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provider. We recommend [a diet based on your DNA](#) for all patients, whether they have diabetes or not. It is also very important for people with diabetes to keep their blood sugar under tight control. Talk to your medical provider about the best ways to manage your blood sugar.

#### Are there any benefits to getting the Hp genotype test if I'm not diabetic?

If you're not diabetic, you can find out if you have a genotype linked to increased risk for intestinal, autoimmune and inflammatory

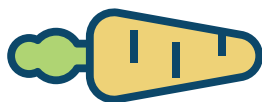
disorders and if you'd benefit from a gluten-free diet and probiotics. Recent studies suggest that people with the Hp 1-2 and Hp 2-2 genotypes benefit from a gluten-free diet as part of their heart-attack-and-stroke-prevention plan, while there's no CV advantage for those with the Hp 1-1 genotype.

#### How does going gluten-free help people with these genotypes?

Recent studies have identified Hp2's precursor protein, zonolin, as "the biological door to inflammation, autoimmunity and cancer." As discussed more fully in our book, [Beat the Heart Attack Gene](#), chronic

inflammation is a key player in causing CHD. Once plaque has formed in the arteries, this fiery process can also ignite a heart attack or stroke. Think of plaque as kindling and inflammation as the match.

Since gluten activates the zonolin pathway with adverse effects on the intestines, the lining of blood vessels and other parts of the body, increasing risk for chronic disease, including CHD, we recommend that people with the Hp 1-2 and Hp 2-2 genotypes limit or avoid gluten in their diet and consider taking a daily probiotic supplement, after consulting with their medical provider to make sure this is appropriate for them.



### 3. Follow a plant-based diet

Many large studies have shown that an eating plan that is high in legumes, fruits, vegetables, nuts and seeds, and low in animal products, can significantly trim risk for diabetes. To optimize your heart and systemic health and maintain a healthy weight, the BaleDoneen Method recommends following [a diet based on your DNA](#). For people with certain haptoglobin genotypes, we advise [a gluten-free diet](#).



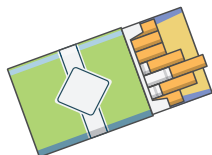
### 4. Move more

Move more. Getting 30 minutes of moderate- to high-intensity exercise daily has been shown to be a safe and effective way to prevent diabetes. A [recent study](#) also found that working out regularly can prevent or manage more than 40 diseases, including coronary heart disease — even in people with high-risk genes, such as the 9P21 “heart attack gene.” Check with your medical provider before starting a new fitness regimen to make sure it’s right for you.



### 5. Rethink your drink

Consuming just one or two sugar-sweetened beverages daily — such as energy drinks, fruit drinks, soda, or coffee drinks — raises risk for a heart attack or dying from CVD by 35 percent, diabetes risk by 26 percent, and stroke risk by 16 percent, according to a Harvard study. Sometimes called “liquid candy,” sweet drinks rank as the top source of added sugar in the U.S. diet. Quench your thirst with plain, sparkling or fruit-infused water.



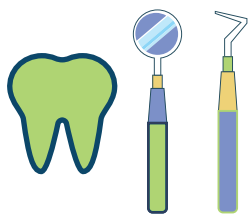
### 6. Avoid nicotine use or exposure

Smokers are up to 40% more likely to develop diabetes than nonsmokers, according to the CDC, which offers tips that have helped more than five million smokers kick the habit. Avoiding nicotine use or exposure will also dramatically reduce your risk for CVD, the leading killer of Americans, and many other potentially lethal diseases.



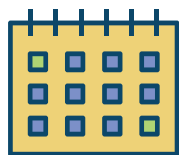
### 7. Control your blood pressure

In a seven-year study of more than 4 million initially healthy people whose average age was 46, those with high blood pressure were 77% more likely to develop diabetes. Nearly half of U.S. adults (46%) — many of whom are undiagnosed — are considered to have high blood pressure under new guidelines. The good news is that high blood pressure is both preventable and highly treatable. Therapies include lifestyle and dietary changes and, in many cases, medication.



### 8. Optimize your oral health

About 50% of adults ages 30 and older have periodontal disease (PD), a chronic oral infection that can lead to tooth loss. Also known as “gum disease,” PD has been shown to raise blood sugar levels in people with and without diabetes and has been linked to higher risk for developing the type 2 form of the disease. Here’s more motivation to take great care of your teeth and gums: A landmark peer-reviewed BaleDoneen study was the first to identify oral bacteria from PD as a contributing cause of CVD. Use our easy four-step plan to optimize your oral health and prevent heart attacks.



### 9. Stress less

Having a moderate-to-high level of stress more than doubles a person’s risk for developing type 2 diabetes three years later, according to a 2017 study of 12,844 middle-aged women. The researchers theorize that by repeatedly activating the body’s “fight-or-flight” response, chronic tension may increase levels of inflammatory compounds and impair metabolism of glucose. One of the best ways to tame tension is practicing mindfulness, which has been shown to have powerful benefits for the heart, brain and arteries.



### 10. Sleep well

Many studies have shown that people who sleep seven to eight hours a night have the lowest risk for type 2 diabetes, while slumbering for five or fewer hours — or more than nine — raises risk for the disease by up to 52%. Chronically skimping on slumber is linked to reduced production of insulin, a hormone that regulates blood sugar, and also increases risk for cardiovascular disease, obesity, depression and other chronic disorders. To make sure you get the restorative rest you need for optimal health, try our five natural ways to sleep better.