



Feeling Fatigued or Irritable? There's a 1 in 4 Chance You Suffer from Diabetes...

Story at-a-glance

- ▶ Type 2 diabetes, which involves loss of insulin and leptin sensitivity, is easily preventable, and nearly 100 percent reversible without drugs.
- ▶ About eight percent of the US population have type 2 diabetes, and nearly 26 percent of U.S. adults over the age of 20 and more than 35 percent of seniors are pre-diabetic (insulin-resistant)
- ▶ Type 1 diabetes, also called insulin-dependent diabetes or juvenile-onset diabetes, involves lack of insulin and is relatively uncommon
- ▶ One of the driving forces behind obesity and type 2 diabetes is excessive dietary fructose, which has adverse metabolic effects on your leptin, insulin, triglycerides, and ghrelin (the "hunger hormone")
- ▶ Diabetes drugs fail to address the underlying problem, and many, like Avandia, can have dangerous side effects. Avandia is linked to 43 percent increased risk of heart attack and 64 percent higher risk of cardiovascular death, compared with other treatments
- ▶ Important lifestyle factors to help prevent insulin resistance and type 2 diabetes include exercise, avoiding fructose, and optimizing your vitamin D levels and gut flora

By Dr. Mercola

Much of what you have probably heard about diabetes from your health care provider may be incorrect. There is an enormous amount of misinformation circulating from seemingly knowledgeable sources about this epidemic disease.

The vast majority of [diabetics](#) are clueless about how to reverse it, and many don't even realize that they can. They believe their fate has been sealed and all they can do now is "control" it. More than 50 percent of type 2 diabetics are also not even aware they have diabetes.

Diabetes rates for both adults and children are climbing out of control and one in four Americans either have diabetes or pre-diabetes. Unfortunately, by following conventional medical advice, you could be putting yourself on the path toward life-threatening health problems—and even premature death.

We Are in the Midst of a Diabetes Epidemic

The latest statistics¹ indicate the U.S. now has up to 24 million people with diagnosed diabetes, which is eight percent of our total population. However, the picture is even grimmer when it

comes to the prevalence of pre-diabetes (impaired fasting glucose).

Almost 26 percent of U.S. adults over the age of 20 and more than 35 percent of seniors (age 60 and older) are pre-diabetics. In total, that's 57 million Americans walking around with pre-diabetes, in addition to the 24 million who have already crossed the line.

That means more than one in four Americans has either pre-diabetes or the full-blown disease!

Not only is type 2 [diabetes](#) completely preventable, it is usually curable if you are willing to make some simple, inexpensive lifestyle adjustments that will restore your insulin and leptin sensitivity.

Diabetes, Type 1 and Type 2: What's the Difference?

Diabetes (also known as diabetes mellitus) is a chronic condition traditionally marked by high levels of glucose in your blood (high blood sugar).

Type 1 is called insulin-dependent diabetes (also known as juvenile onset diabetes), and type 2 is called non-insulin-dependent diabetes (or adult onset diabetes).

Type 1: 'Insulin-Dependent' Diabetes

In Type 1 diabetes, your body's own immune system destroys the insulin-producing cells of the pancreas, resulting in a *complete deficiency of the hormone insulin*. This deficiency of insulin is why Type 1 is called "insulin-dependent"—because more often than not, type 1 diabetics must give themselves supplemental insulin.

Type 1 is relatively uncommon, affecting only about 1 in 250 Americans. It usually occurs in people before the age of 20. There is no known cure.

However, recent research has shown that our preoccupation with sun avoidance may play a major role in the development of type 1 diabetes. The further you move away from the equator, the greater your risk for this disease.

Women can help reduce their children's risk of type 1 diabetes by optimizing their vitamin D levels prior to, and during their pregnancy as vitamin D has been shown to suppress certain cells of the immune system that may play a role in the development of the disorder.

Type 2: 'Non-Insulin-Dependent Diabetes'

Type 2 diabetes is by far the more common form of the disease, affecting 90 to 95 percent of diabetics, and is completely preventable and nearly 100 percent curable.

If you have type 2, your body is producing some insulin but is *unable to recognize insulin and use it properly*. This is an advanced stage of insulin resistance.

Since your insulin is inadequate, sugar can't get into your cells and instead builds up in your blood, causing a variety of problems. This is why diabetics have elevated blood sugar levels.

Symptoms of type 2 diabetes include:

Excessive thirst
Extreme hunger (even after eating)
Nausea and possible vomiting
Unusual weight gain or loss
Increased fatigue
Irritability
Blurred vision
Slow healing of wounds
Frequent infections (skin, urinary, vaginal)
Numbness or tingling in hands and/or feet

Medications and supplements are NOT the answer for type 2 diabetes; restoring your sensitivity to insulin and leptin is what's needed.

Diabetes Is NOT a Disease of Blood Sugar

Diabetes is a disease of insulin and leptin signaling, not a disease of blood sugar, which is why the medical community's approach to its treatment is not getting us anywhere.

In addition to diabetes, elevated insulin levels are associated with a number of diseases, including:

- [Heart disease](#)
- Peripheral vascular disease
- Stroke
- [High blood pressure](#)
- [Cancer](#)
- Obesity

Diabetes, like all chronic disease, results from cellular miscommunication.

Leptin: Is It the Missing Link Between Obesity and Diabetes?

Leptin is a hormone produced in your fat cells.

One of leptin's primary roles is regulating your appetite and body weight. It tells your brain when to eat, how much to eat, and most importantly, when to stop eating. And leptin tells your brain what to do with the energy it has. Leptin is largely responsible for the accuracy of insulin signaling and whether or not you become insulin-resistant.

The only known way to reestablish proper leptin (and insulin) signaling is through proper diet.

When your blood sugar becomes elevated, insulin is released to direct the extra energy into storage. A small amount is stored as a starch called glycogen, but the majority is stored as your main energy supply—fat.

Therefore, insulin's major role is not to lower your blood sugar, but rather to store the extra energy for future times of need. Insulin's effect of lowering your blood sugar is merely a "side effect" of this energy storage process.

This is why diabetes treatments concentrating merely on lowering blood sugar can actually worsen, rather than remedy the actual problem of metabolic miscommunication.

Taking insulin is one of the WORST things you can do for type 2 diabetes, since it will actually worsen your insulin and [leptin resistance](#) over time.

Fructose—One of the Major Culprits in Obesity and Diabetes

The presence of massive amounts of fructose in today's Western diet is a driving force behind our diabetes epidemic.

Regular table sugar is 50 percent fructose and 50 percent glucose, and the two are metabolized very differently. Nearly every cell in your body was designed to use glucose for energy—especially your brain cells—but fructose breaks down into a variety of toxins that can have devastating effects on your health.

Fructose has the following adverse metabolic effects:

- Fructose does not stimulate a rise in leptin, so your satiety signals are suppressed.
- Fructose raises your insulin and your triglycerides, which effectively reduces the amount of leptin crossing your blood-brain barrier. This interferes with the communication between leptin and your hypothalamus. Your brain senses starvation and prompts you to eat more.
- Fructose does not suppress [ghrelin](#) like glucose does. Ghrelin is the "hunger hormone," making you want more food.

All of this also sets the stage for overindulgence and hence overweight, placing you on the path toward diabetes.

I strongly advise keeping your total fructose consumption below 25 grams per day.

However, it would be wise for most people to limit fructose to 15 grams or less as it is virtually

guaranteed you will be getting "hidden" sources of fructose from just about any processed food you eat.

This includes fruits, which also need to be carefully measured to make certain that you're not inadvertently going over the fructose limit. Please see this helpful chart listing showing the [fructose content of several common fruits](#).

Diabetes Drugs Miss the Mark, and Are Dangerous

Regardless of what you may have heard, you cannot successfully treat the underlying cause of diabetes with drugs.

For example, consider [Avandia](#).

Avandia works by making diabetes patients more sensitive to their own insulin, helping to control blood sugar levels. In fact, most conventional treatments for type 2 diabetes utilize drugs that either raise insulin or lower blood sugar. Avandia, for example, reduces your blood sugar by increasing the sensitivity of your liver, fat and muscle cells to insulin.

The problem is, diabetes is not a blood sugar disease, as I have already explained. So, drugs that focus on *the symptom* of elevated blood sugar, rather than addressing the underlying cause, are doomed to fail in most cases.

Not only that, but drugs like Avandia have dangerous side effects, including causing extensive [heart problems](#) that have killed literally thousands of people. In fact, Avandia has been linked to a 43 percent increased risk of [heart attack](#) and a 64 percent higher risk of cardiovascular death compared to patients treated with other methods!

The good news?

Nearly 100 percent of type 2 diabetics can be successfully cured without medications.

Preventing or Reversing Diabetes in Six Simple Steps

Here are my top six actions to take for increasing your insulin and leptin sensitivity, thus reducing your chances for developing diabetes—or reversing it if you already have the disease:

1. Exercise

Exercise is an absolutely essential factor, and without it, you're unlikely to get this devastating disease under control. It is one of the fastest and most powerful ways to lower your insulin and leptin resistance.

If you're unsure of how to get started, I recommend reviewing my exercise program for tips and guidelines. It is also critical to work your way up to include some Peak Fitness exercises.

2. Eliminate Grains and Sugars, Especially Fructose

A large reason for the failure of conventional diabetes treatment over the last 50 years has to do with seriously flawed dietary recommendations. [Fructose and grains](#) are largely responsible for your body's adverse insulin reactions.

You will want to eliminate ALL sugars and grains—even "healthful" grains such as whole, organic or sprouted ones. This means avoiding all breads, pasta, cereals, rice, potatoes, and corn (which is in fact a grain).

You might even need to avoid fruits until your blood sugar is under control.

3. **Eat Right for Your Nutritional Type**

Exercising and avoiding grains and sugars might not be enough unless you balance your protein, carbohydrate and fat ratios for your specific genetic biochemistry. The first step is finding out your nutritional type, which then gives you information about your optimal protein/carbohydrate/fat ratio. I now offer the [full nutritional typing program for FREE](#), so you can get started today!

4. **Monitor Your Fasting Insulin Level**

This is every bit as important as your fasting blood sugar. You'll want your fasting insulin level to be between 2 and 4. The higher your level, the worse your insulin sensitivity is.

5. **Optimize Your Vitamin D**

Interestingly, optimizing your vitamin D levels not only treats type 2 diabetes but as already mentioned, can virtually eliminate your children's risk for type 1 diabetes if you are pregnant. It's also vital for infants to receive the appropriate amounts of vitamin D in their early years for the same reason.

Ideally, you'll want to do this by exposing a large amount of your skin to [appropriate amounts of sunshine](#) (or a [safe tanning bed](#)) on a regular basis, year-round. Your body can safely create up to 20,000 units of vitamin D a day by direct UV exposure. If you are not getting regular sun exposure on large amounts of your skin you may need anywhere from 5 to 20,000 units of oral vitamin D3 per day.

However, if neither of these options is available, you may want to use an oral [vitamin D3 supplement](#). But remember, if you choose to take an oral supplement, it's essential that you get your level tested regularly by a proficient lab to make sure it's in the therapeutic range, which is 50 to 70 ng/ml.

6. **Probiotics**

Your gut is a living ecosystem, full of both good bacteria and bad.

Multiple studies have shown that obese people have different intestinal bacteria than lean people. The more good bacteria you have, the stronger your immune system will be and the better your body will function overall.

Fortunately, optimizing your gut flora is relatively easy. You can reseed your body with good bacteria by eating fermented foods (like natto, raw organic cheese, miso, and cultured vegetables) or by taking a high-quality probiotic supplement.

For Further Information

This is just a brief overview of the causes, prevention, and treatment of diabetes.

Over the years, I have posted many articles that go into far greater detail on this subject. Below you will find a list of these articles, and I encourage you to do some further reading. Knowledge is power, and with that you can arm yourself against ignorance and misinformation—bringing you one step closer to taking charge of your health.

Diabetes Articles/Links:

What You Know About Diabetes May Be All Wrong

» **Diabetes is Not a Disease of Blood Sugar!**

Startling as that may seem, find out the real cause of diabetes from one of the country's leading experts in this original exclusive article.

» **The Diabetes Conundrum: What Physicians Are Teaching You May be Killing You**

Read the surprising conclusion Dr. Rosedale, one of the leading diabetic doctors in the country, reaches about the current state of knowledge in diabetes.

» **Leptin: How Diabetes and Obesity Are Linked**

Leptin, a hormone that regulates blood sugar in your body, may be the "missing link" between obesity and diabetes. Learn why normalizing leptin and insulin levels reduces your obesity-diabetes risk.

» **Insulin and Its Metabolic Effects**

One of the most read articles on the entire web site; Great foundation for understanding how controlling insulin and leptin is the key to defeating diabetes.

» **Diabetes Epidemic Expected to Double**

Cases of diabetes is growing rapidly in the United States. Discover why this disease is surging in men and women.

» **This Hormone Makes Counting Calories Irrelevant**

This article by diabetes expert Dr. Rosedale MD will help you understand the basics of diabetes, as well as the role of leptin in your health.

» **Is Insulin Condemning You to a Premature Death?**

Are today's conventional diabetes treatments harming diabetics more than the disease could? Discover what really causes diabetes and how to really treat the disease.

» **A Possible Cure for Diabetes Ignored by Big Pharma**

Stem cell treatments have shown potential in treating diabetes. Unfortunately, pharmaceutical companies seem to ignore the science and focus on profits instead.

» **Diabetes or Pre-Diabetes Now Strikes One in Four Americans**

Statistics shows that diabetes has become a serious epidemic among Americans. Instead of succumbing to this, learn how to live diabetes-free.

The Fructose/Uric Acid/Diabetes Connection

» **WORSE than a Diabetes Diagnosis...**

Struggling with diabetes means correcting faulty leptin and insulin signaling. With the proper lifestyle, you can reverse diabetes, as well as other chronic diseases.

» **Is this Popular Natural Sweetener Worse than High Fructose Corn Syrup?**

With the rising diabetes rates among the American population, more people are finding natural

alternatives like agave to replace sugar and fructose. However, findings show that these sweet alternatives are turning out to be a health disaster.

How Probiotics Can Help Diabetics

» **Diabetes Alert: Your Gut Microflora May Be Out of Balance**

Your digestive system, populated with trillions of gut organisms, influence your overall health. Discover how an unbalanced gut flora can make you prone to diabetes.

» **Friendly Bacteria Protect Against Type 1 Diabetes**

Could exposure to certain forms of bacteria help prevent chronic problems like type 1 diabetes?

Vitamin D Against Diabetes

» **Type 2 Diabetics Need More Sunshine**

Research detects vitamin D deficiency in a large percent of diabetics. This nutrient deficiency may be key to preventing the disease.

» **5 Reasons Why Type One Diabetes is on the Rise**

Studies have linked the onset of type 1 diabetes to a certain vitamin deficiency. Learning more about how to stop this deficiency, as well as other type 1 diabetes causes, will enable you to apply lifestyle changes that can prevent the disease.

The Benefits of Exercise

» **Pumping Iron Can Cut Your Diabetes Risk**

Diabetics should consider adding weight training to their exercise plan, as recent findings show that this has significant effects in diabetics and pre-diabetics.

» **This One Thing Is the Highest Risk for Diabetes**

Not only does your diet influence your risk for diabetes, but the amount of exercise you have also plays a role in the development and prevention of the disease.

» **Beat Teen Diabetes With Exercise**

Diabetes can attack anyone – including children and teenagers. In one study, it was found that exercise contributed to the treatment AND prevention of diabetes.

» **Two Foods You Should Never, Ever Eat After Exercise**

What you eat after working out can greatly influence your insulin levels either for the better or for worse. Whether you're a diabetic, pre-diabetic, or a healthy individual, this article brings important information.

Choose Slow Carb Foods to Control Diabetes

» **How Carbohydrates & Obesity are Linked: The Kind, Not the Amount**

Learn how achieving your optimal weight lies in the kind of carbs you consume, not the amount.

» **Eat Fast Food and Fight Diabetes?**

Is a new compound to protect against high-fat food & diabetes all that it is cracked up to be?

» **Corn Syrup Linked to Diabetes**

The startling jump in diabetes in America is mirrored by our growing consumption of refined carbohydrates.

» **Infants Fed Cereals May Have an Increased Risk of Diabetes**

Although many pediatricians recommend starting young infants on cereal, the grain may present a number of problems, including an increased risk of diabetes. Find out what's a better option to feed your child.

» **Shocking! This 'Tequila' Sweetener is Far Worse than High Fructose Corn Syrup**

Is agave better than high fructose corn syrup, or worse? Find out by reading this article.

» **Sugar May Be Bad, But This Sweetener is Far More Deadly**

A diet rich in fructose can lead to a number of serious consequences, including diabetes, obesity, and heart disease. Discover how it is metabolized in your body.

» **This Common Food Ingredient Can Really Mess Up Your Metabolism**

Not many people know, but your metabolism goes awry when your body's sensitivity to leptin (the satiety hormone) is reduced. This is caused by excessive consumption of sugar.

» **Why High-Fructose Corn Syrup Causes Insulin Resistance**

It is not a mystery why obesity and diabetes cases are rising in the United States. Soda, a widely consumed beverage, contains large amounts of fructose, which is the number one source of unhealthy calories in the US.

» **The Mediterranean Diet Can Stop Diabetes**

Compared with the standard American diet, the Mediterranean Diet – which includes plenty of olive oil and fresh vegetables – may be able to promote overall health and prevent chronic diseases like diabetes.

» **Breast-Feeding Curbs Type 2 Diabetes**

The health benefits of breastfeeding are endless. According to studies, it can also contribute to type 2 diabetes prevention.

» **Insulin-Dependent Diabetes and Rheumatoid Arthritis Improved by Food Choices**

Dietary choices can impact your overall health. What you eat can contribute to the development of diseases or their prevention.

How Diabetic Drugs Can Make Your Diabetes Worse and Further Endanger Your Health

» **Newest Blockbuster Diabetes Drug Can Increase Your Risk of Cancer**

Discover Januvia and DPP-4 inhibitors, a new breed of diabetes drugs, and how they can harm your health.

» **Why Did the FDA Approve a Generic Version of this Dangerous Drug?**

Despite studies revealing the dangers of diabetes medications, the FDA continues to approve them.

» **The Risks of Treating Diabetes with Drugs Are FAR Worse than the Disease**

Diabetes drugs can be more dangerous than helpful. Case in point: Avandia. Rather than exposing yourself to drug risks, these lifestyle changes are a safer and more effective way to address diabetes.

» **Beware: This Popular Drug Can Actually Cause Diabetes**

Statins may succeed in lowering cholesterol levels, but their adverse effects outweigh their promoted benefits.

» **Diabetes Drug Causing Deaths**

While majority of diabetics are prescribed diabetes drugs, the US Food and Drug Administration have issued warnings about the adverse effects linked to such medications.

» **8 Drugs Doctors Would Never Take**

Read through this list of drugs that even doctors don't recommend, and what side effects – minor or adverse – are linked to each.

» **Deaths Halt Diabetes Study**

Diabetes is hardly a disease of blood sugar. Instead, it is a disease of insulin resistance and faulty leptin signaling. Learning how to regulate insulin can make a huge difference in your life.

» **Not Again! More Diabetes Drug Dangers...**

As more diabetes drugs are surfacing, reports and studies of drug side effects also increase. Instead of depending on these medications, learn how to prevent diabetes the natural way.

» **Green Tea -- Beats Avandia for Diabetes, and No Deadly Side Effects**

With reports of adverse side effects associated with diabetes drugs, it's time for you to consider natural and safe treatment methods – like drinking green tea.

» **Diabetes Drug Avandia -- Side Effect Reports Triple**

Tackling the underlying causes of diabetes is much better than treating its symptoms with dangerous drugs like Avandia. Avandia, while on the market for years, has been linked to detrimental health consequences.

» **Merck's Latest Drug Scam a Worthless Diabetes Drug**

Lifestyle changes can induce significant changes in diabetes patients, compared with taking drugs.

» **Dangerous Antidepressants Elevate Diabetes Risk**

Treating depression shouldn't involve drugs – in one study, taking these depression drugs increased risk of diabetes. Instead, you should consider natural ways to curb depression and other emotional problems.

» **Diabetes Doubles Among American Children**

Cases of type 2 diabetes, which is referred to as a disease more prevalent in adults, is rapidly increasing in children and teenagers.

How Lifestyle Choices Influence Your Risk for Diabetes

• **Night Shift Work May Raise Diabetes Risk**

Diet and exercise may be key players in the treatment and prevention of diabetes, but it is important not to exclude sleep. Working the night shift can cause numerous changes in your body, including an increased risk of diabetes.

• **Diet Soda May Do More Harm Than Good**

It may seem that diet soda is a healthy alternative to regular soda. But don't be misled. Read this article on how artificial sweeteners can wreak havoc on your health.

• **Low-Fat Diet and Avoidance of Vitamin D – Two Health Recommendations You're Best Off Rejecting**

Unlearn what conventional medicine and mainstream media say about these two recommendations, and find out which ones really promote optimal health.