

## PREVENTING TYPE 2 DIABETES

by Ann Gerhardt, MD *Subscribe to DrG'sMediSense newsletter at [www.drsgmedisense.com](http://www.drsgmedisense.com)*

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People with a genetic predisposition to diabetes often drift through the warning signs of the metabolic syndrome (see accompanying article for a description of this syndrome) to full-blown Type II diabetes before they realize they have a problem. They do this by allowing themselves to gain excessive weight, eat excessive sugar or live a sedentary lifestyle.

**The absolute best way to prevent diabetes is to practice a lifestyle of prudent diet, moderate exercise, happiness and ideal body weight maintenance.**

Healthy lifestyle not only prevents or delays the onset of metabolic syndrome, diabetes and vascular disease, but also prevents or diminishes a host of other diseases.

Type II diabetes is often preventable; Type I diabetes usually is not. (See box for the differences between Types I and II)

**The other method to prevent diabetes involves medications:** Studies show that metformin (Glucophage), or a thiazolidinedione (Actos or Avandia) work. A study published in 2002 in the New England Journal of Medicine showed that diet and exercise OR metformin effectively delay the onset of diabetes. The most recent effective prevention trial, with rosiglitazone (Avandia), was just published in the Lancet.

**Type I diabetes:** Absolutely requires insulin. Caused by pancreatic destruction by the immune system, alcohol or surgical removal.

**Type II diabetes:** Only end-stage disease requires insulin. Caused by burn-out of the pancreas from over-work and disordered metabolism.

The easy part of preventing a disease with a pill is that it is as easy as taking a pill. The downside is that pills often have side effects. And they usually aren't as good as lifestyle to prevent diabetes. Metformin primarily exerts its effect on the liver, normalizing sensitivity to insulin and reducing unnecessary glucose production. It is a good drug that tends to reduce appetite and carbohydrate craving. Unfortunately it can also cause death from lactic acidosis in people with heart failure, or liver or kidney disease. Clearly people with those disorders should not take it.

Avandia and Actos not only improve sugar metabolism, but also reduce cholesterol levels and vascular disease. Unfortunately they also cause fluid retention that may

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lead to heart failure. Those most at risk already have some degree of heart weakness or failure. Even people without heart disease can develop fluid retention and heart failure, unless they strictly limit carbohydrate intake (starch or sugar). Such dietary control would assist the effort to retard progression to diabetes.

**EXERCISE** at a **moderate level of exertion, for at least 30, preferably 45 minutes, almost every day.**

Being able to talk in short sentences but not sing characterizes a moderate level of exertion. If the exertion is easy, it has to be done for more time. People who walk more than 15 miles per week (about 45 miles cycling) seem to accrue health benefits and have less metabolic syndrome and diabetes. Walking 3 miles per day, at 15 minutes per mile, fulfills guidelines for exercise frequency, intensity and duration. One does not need to do the same type or quantity of exercise every day – It's all good and adds up.

**DIET: Eat as little high fructose corn syrup (sodas, sweets, prepared foods) as possible.**

Eat beans, nuts, beans, soy, beans, low-fat dairy, beans.

**Eat large volumes of cooked or raw, non-starchy vegetables (At least 2.5 cups packed full).**

Limit the starchy vegetables - corn, peas, carrots, yams, potatoes, turnips, beets and any other vegetable found underground (the root vegetables).

**Eat the whole grain or high-fiber versions of starches, and limit their quantity.**

Eat lean and non-deep-fried seafood, poultry and meat.

**Do eat fat, but minimize trans- and saturated fats.**

**Eat only when physically hungry and stop when the hunger is gone.**

**Do not smoke** – it makes the complications of having disorder sugar metabolism a LOT worse.

**Severely limit alcohol intake** - give your poor pancreas a chance. No sense whipping it with a toxic substance.

**Reduce your stress level** – Psychological stress raises cortisol and adrenaline-type hormones, which adversely affect sugar metabolism. So, think happy thoughts, laugh, have a good relationship with your spouse or partner, accept the demands of your job or get a new one and spend within your limits. Life is not stressful, it is your reaction to your life that is either stressed or not.