

## Nutriline Audiofile #22: Pre-Diabetes

This is Dr. Chet Zelasko.

We have a serious problem on our hands – pre-diabetes. The latest numbers show more Americans than ever before are pre-diabetic.<sup>i</sup> So what is pre-diabetes? How many pre-diabetics are there? And, how do you know if you're pre-diabetic? I'll answer those questions today.

So, what exactly is pre-diabetes? In short, it is when someone experiences prolonged or uncontrolled elevated blood sugar levels.<sup>ii</sup> Two tests are normally used to determine your blood sugar levels – the fasting plasma glucose test and the oral glucose tolerance test. When you take either of these tests, you get a number that measures how much glucose is in your blood. Basically, the test is looking to see whether your body is removing sugar from the bloodstream the way it's supposed to. If it's not, you have a condition called insulin resistance. This means your body is making plenty of insulin, but it's not reacting properly to the insulin that's being produced.

Now, how many people are pre-diabetic? The number may surprise you! Nearly 30-percent of Americans older than twenty are considered pre-diabetic!<sup>iii</sup> That means more than 65 million people are pre-diabetic.<sup>iv</sup>

Exactly what causes abnormal blood sugar levels? Well, there are several factors at play. Being overweight is one risk factor.<sup>v</sup> As a whole, Americans are eating more than they need to and storing the excess as fat. Many of us have reduced our fat intake, but we've replaced those calories with refined carbohydrates. These extra carbs can't all be used, so they're converted into fat. And the more fat on our bodies, the more insulin-resistant we become.

A sedentary lifestyle is another risk factor for diabetes. Most of us have sedentary jobs, and then we go home and sit around some more. We're a nation of watchers – not movers. The more sedentary we are, the more obese we become – leading to diabetes. Luckily, exercise can help. Research shows that simply moving more improves the way our body uses insulin in as little as seven days, even if we're overweight!<sup>vi</sup>

Finally, genetics plays a role pre-diabetes. Researchers compared children with similar activity levels, weight, and age, and found children of diabetics are more likely to be insulin resistant than children of non-diabetics.<sup>vii</sup> The good news is that after completing an exercise program, the children of diabetics improved their insulin resistance levels – even without weight loss. Yet another good reason to get moving!

Remember, if you are pre-diabetic it doesn't mean you will become diabetic. If you take action now by eating better, losing weight, and exercising you can reduce your risk of getting diabetes. Remember, your health is in your hands!

This is Dr. Chet Zelasko saying health is a choice. Choose wisely.

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<sup>i</sup> "F as in Fat 2009: How Obesity Policies Are Failing In America." Trust for America's Health. July 2009. [www.healthyamericans.org](http://www.healthyamericans.org).

<sup>ii</sup> Cowie CC et al. "Full Accounting of Diabetes and Pre-Diabetes in the U.S. Population in 1988–1994 and 2005–2006." *Diabetes Care*. 2009; 32(2): 287-294.

<sup>iii</sup> Cowie CC et al. "Full Accounting of Diabetes and Pre-Diabetes in the U.S. Population in 1988–1994 and 2005–2006." *Diabetes Care*. 2009; 32(2): 287-294.

<sup>iv</sup> US Population 2008  $\geq$  20 years - 221,419,638. [www.census.gov](http://www.census.gov).

<sup>v</sup> Khan LK et al. "Recommended community strategies and measurements to prevent obesity in the United States." *MMWR Recomm Rep*. 2009 Jul 24;58(RR-7):1-26.

<sup>vi</sup> Kirwan JP, et al. "Effects of 7 days of exercise training on insulin sensitivity and responsiveness in type 2 diabetes mellitus." *Am J Physiol Endocrinol Metab*. 2009;297(1):E151-6.

<sup>vii</sup> Barwell ND, et al. "Exercise training has greater effects on insulin sensitivity in daughters of patients with type 2 diabetes than in women with no family history of diabetes." *Diabetologia* (2008) 51:1912–1919.