

# TYPE 2 DIABETES -

## NEEDLESS SUFFERING, EXPENSE AND MORTALITY

**Bad News:** Recent research has shown that life expectancy has declined in the U.S. for the first time in 20 years. Type 2 diabetes and obesity are factors in this declining life expectancy. Presently, 30 million Americans have diabetes with another 86 million diagnosed with pre-diabetes, which is a precursor to diabetes.

Let's take a moment to talk about **"pre-diabetes"**. This is a condition characterized by an elevation in fasting blood glucose over 100 mg/dl, but lower than 125 mg/dl. When I examine my clients' labs, if their fasting glucose is over 90 mg/dl (normal is 80-89), I already consider them pre-diabetic. The reason for this higher than normal fasting glucose is something called **insulin resistance**. Insulin, a hormone secreted by your **pancreas**, is released into your bloodstream in response to a meal/snack high in grains/sugar/carbohydrates. It's job is to lower your glucose levels because prolonged high glucose levels can lead to death. Insulin is so efficient at lowering glucose levels because it basically turns the sugar into fat. The more insulin you secrete, the closer we move towards obesity. If you consistently eat a high-sugar, high-grain diet, your body becomes de-sensitized to insulin...insulin resistance...weight gain...obesity...type 2 diabetes.

What are other measurements (besides fasting glucose) to help us determine whether someone is pre-diabetic or diabetic? **Hemoglobin A1c** measures the average glucose in your blood (usually over 3 months). An A1c level between 5.7 and 6.4 is considered pre-diabetic. Anything over 6.5 is diagnosed as diabetes, indicating severe insulin resistance. We also look at serum fasting **insulin** levels. Ideally, this number should be below 3, some docs look for it to be below 5.

**Good News:** Type 2 diabetes is treatable and/or completely reversible with lifestyle changes. For pre-diabetics, lifestyle changes are more effective than the diabetes drug, Metformin in preventing and/or delaying the development of diabetes.

Remember, at the core of pre-diabetes and diabetes is insulin resistance and insulin resistance is caused by a diet high in grains (sorry, this includes alcohol), sugar, fruit and carbs. This means that you are burning

glucose as your primary fuel, inhibiting your body's ability to burn body fat and moving more towards obesity. By the way, one of the reasons that the **Ketogenic Diet** is so effective for many conditions (besides weight loss) is that it promotes eating healthy fats, a more efficient source of fuel than carbs. So, limiting net carbs (total carbs minus fiber) and protein and replacing them with high quality healthy fats is key. It's important to keep net carbs below 50 grams per day. Also important is to increase your **fiber** intake to 50 grams per 1000 calories consumed. Research shows that the higher the intake of dietary fiber, the lower the risk of obesity and diabetes.

What else can we do? **Exercise** is one of the best ways to lower insulin (and glucose). If you're not exercising now, then just start walking or cycling. Optimize your levels of omega-3 fatty acids (fish oil), vitamin D, magnesium, vitamin B12, K2, C and folate. Most importantly, optimize your gut flora. You cannot read a newspaper or health-related article anymore that doesn't talk about the **gut microbiome**. Numerous studies show that people with autoimmune conditions or obese people have different intestinal bacteria than others. So, it's not just about taking **probiotics** with billions of bacteria, it's about reseed your gut with healthy bacteria from fermented foods and taking a high quality, multi-strain probiotic supplement.

It's not complicated, just take one step at a time, the first step always being to cut out the **SUGAR!**



**IMPROVE YOUR HEALTH...  
IMPROVE YOUR LIFE!**

- ↓ Body Fat
- ↓ Diabetes
- ↓ Cholesterol
- ↓ Hormonal Imbalances
- ↓ Metabolic Syndrome
- ↓ Gluten Allergies
- ↓ Chronic Fatigue
- ↓ Gut Imbalances

Longevity is not a gift, it has to be earned.  
Discover a medication-free approach to better health,  
better energy and longevity. **ARE YOU READY?**

**Tricia Talerico, D.C., M.S., Nutr.**  
**Nutrition and Weight Loss Center of Ocean**  
Dow Plaza - 1819 Highway 35 North  
Oakhurst, N.J. 07755  
**732-609-3366**



By **Tricia Talerico, D.C., M.S., Nutr.**

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