

# **Daniel's Diabetic Miracle**

It's no secret that diabetes is one of the fastest-growing health crises in America.

According to the American Diabetes Association, 29.1 million American have diabetes. That makes up 9.3 percent of the entire population.<sup>1</sup> Of that number, only about 5 percent have Type 1 diabetes. The other 90–95 percent have Type 2 diabetes. (For the rest of this report, I'll use the term "diabetes" to refer to the Type 2 variety, which is much more within our control.)

What's more, 37 percent of American adults over the age of 20 have prediabetes, which means that their blood glucose levels put them at a higher risk of developing the disease.

These statistics are no laughing matter. Diabetes is a serious and possibly deadly disease. It contributes to the death of 234,051 Americans every single year, and costs the nation about \$245 billion annually.

If you're diagnosed with diabetes, you're at a higher risk for heart disease and strokes, kidney failure, loss of eyesight, painful neuropathy, and loss of limbs.

The prevalence of Type 2 diabetes also goes hand in hand with obesity.

Here's what's frightening: The "experts," particularly the American Diabetes Association, seem to recommend diet and lifestyle trends that are the exact opposite of what people living with diabetes should be doing.

I'm here today to set the record straight, starting with one trick that you can use to help rid yourself of the complications of diabetes.

You see, I was online one day, feeling frustrated about the ever-growing cycle of nonsense being circulated when it comes to this issue.

That is, until I came across this quote from the Bible.

"I ate no delicacies, no meat or wine entered my mouth, nor did I anoint myself at all, for the full three weeks." — Daniel 10:3

When I read it, I had to laugh. Because this idea is so close to one of the main tenets of health that I firmly believe in.

One that could help you live a life free from the painful injections, expensive pills, and irritating blood sugar tests that so often come along with diabetes.

Let me introduce you today to the trick I call "Daniel's Diabetic Miracle" — intermittent fasting.

### How to Time Your Meals

I'm sure you've heard the supposedly sage advice "Eat five or six small meals per day" for health and weight loss. As a young man in the 1970s, I never heard anyone suggest this, but these days, it's close to nutritional dogma. An online search of the phrase "eat many small meals" returns tens of thousands of results

Maybe you've even passed this advice along yourself.

If so, consider yourself forgiven. Because "gems" like these are buried so deep in our psyches that we seldom think to question — much less reject — their basic premises.

<sup>1. &</sup>quot;Fast Facts: Data and Statistics about Diabetes." American Diabetes Association. Accessed 8 Dec. 2015.

But in this case, you might want to explore whether this whole "many small meals" thing is the real deal... or just common senselessness.

When people are told to "eat many small meals," what they hear is "eat all the time," an activity at which most Americans excel.

It's no coincidence that obesity and diabetes rates started ratcheting skyward in the 1980s, more or less in tandem with this widespread endorsement of more frequent meals. (The other major culprit was the government's nonsensical "low-fat, high-carb" dietary recommendation, which also leads to excessive hunger, chronic overeating, and out-of-control blood sugar levels.)

In my overseas travels, I rarely see people chowing down in their cars or in line for a movie or otherwise outside the traditional time and space boundaries of a meal. In the U.S., it seems that everyone continually eats everywhere.

Bad news: The theory of eating five or six meals per day for health and weight loss... is pure moonshine.

The good news (I like to end on a high note): A slight tweak to this theory could actually *be one of the best-kept secrets for fat burning.* More on that in a moment. First let's demolish the myth of noshing on nuggets of food throughout the day:

One study out of the Netherlands' Maastricht University Medical Center evaluated the differences in a low-frequency diet of three meals per day versus a high-frequency diet of 14 small meals per day.<sup>2</sup>

Although the low-frequency diet did result in more drastic fluctuations in insulin levels (higher highs and lower lows), there was no difference in energy expenditure between the diets. This means that there was no weight-loss benefit to eating smaller, more frequent meals.

The researchers believe that this might be because "the insulin levels did not increase high enough to inhibit fat oxidation in the [high-frequency diet]." In other words, since their insulin and glucose were continuously at the same level, there was no signal to switch on the body's fat-burning machinery.

Furthermore, they found that the low-frequency diet led to lower blood sugar levels, which led the researchers to suggest that "this can lead to a better body weight control on the long term."

A low-frequency diet of three meals per day led to greater feelings of satiety (in other words, fullness), meaning that the subjects were not hungry throughout the day and practiced better appetite control. These same results have been found in trials of young, healthy males as well as obese males when eating a high-protein diet.

And it gets worse for the whole "many meals" thing: A small study measured the blood glucose levels of subjects eating three high-carb meals in a day, six high-carb meals, or six high-protein meals.<sup>3</sup> Glucose remained elevated longer throughout the day for those eating six high-carb meals. Chronically high blood glucose could lead to insulin resistance, often a preliminary step toward Type 2 diabetes. If you get that, a few extra pounds around your belly will be the least of your worries.

Chronically high glucose levels will also help keep you addicted to Big Food's products, so don't expect a peep from these industrial carb pushers about decreasing how frequently you eat.<sup>4</sup>

### So What's the Answer?

The truth is we shouldn't take Daniel's advice literally. There is no reason that you should ever starve yourself for three weeks. Not even for three days.

<sup>2.</sup> Munsters, M.J.M. "Effects of meal frequency on metabolic profiles and substrate partitioning in lean healthy males." PLOS One. 13 Jun. 2012.

<sup>3.</sup> Holmstrup, M. et al. "Effect of meal frequency on glucose and insulin excursions over the course of a day." e-SPEN, The European e-Journal of Clinical Nutrition and Metabolism. Dec. 2010.

<sup>4.</sup> Daws, L et al. "Insulin signaling and addiction." Neuropharmacology. Dec. 2011.

The Department of Medicine at the University of Rochester School of Medicine and Dentistry looked at the differences between short and prolonged fasting.<sup>5</sup> They found that resting metabolic rates fell an average of 8 percent after three days of fasting. This included a drop in the percent of carbohydrates and protein being metabolized. That means that the body was less capable when it came to burning fat and carbohydrates.

But... this was after three days.

A long-term fast can have negative effects on your metabolism. Studies have shown that its fat-burning potential spikes in the early stages of fasting and then evens out. Prolonging your starvation won't continue to spike your metabolic rate.

Short-term fasting, on the other hand, optimizes this process, causing energy expenditure to increase.

One easy strategy is called "alternate-day modified fasting." That simply means you limit your caloric intake every other day of the week. Then on the days you're not fasting, eat as much as you please.

This method is also more effective than regular dieting. One study from the Shahid Beheshti University of Medical Sciences in Tehran, Iran, studied 74 people, comparing a "calorie-shifting diet" (intermittent fasting) with a classic calorie-restrictive diet.<sup>6</sup> They found that the calorie-shifting diet had greater improvement, resulting in a decrease in hunger and an increase in satisfaction after meals after the subjects dieted for four weeks.

The results of intermittent, or alternate-day, fasting can be incredible for anyone. But it has particular benefits for those suffering from Type 2 diabetes.

A scientific review in *The British Journal of Diabetes & Vascular Disease* suggests that intermittent fasting helps people with diabetes and cardiovascular disease, while also assisting weight loss.<sup>7</sup>

The review explains that "evidence from clinical trials shows that fasting can limit inflammation, improve levels of sugars and fats in circulation, and reduce blood pressure."

It goes on to say that "restricting calorie intake could possibly reverse Type 2 diabetes in some people." Results to this end include improved pancreatic function and less instance of insulin resistance.

You do need to keep in mind what you're eating, of course. Stick to a high-fat, moderate-protein, low-carb diet for the best results. Avoid sugars and carbs whenever possible. Otherwise, the sugars in the carbohydrates you consume will affect your insulin levels, negating the benefits of fasting.

# OK, So It's Good for Fat Loss... but What About Overall Health?

Many people who read about intermittent fasting bring up an important question:

"Even if I can drop fat rapidly, isn't it bad for my health to go without food for so many hours per day?"

If you're concerned about that, then here's a word that I humbly suggest you add to your healthy-living vocabulary.

It's autophagy, pronounced aw-TAW-fug-ee.

Coined by Belgian biochemist and Nobel Prize winner Christian de Duve in 1963, it combines the Greek *auto*, signifying "self," and *phagein*, which means "to eat."

Understanding what it is, and how to optimize it, is absolutely vital.

Autophagy happens continually within all multicelled creatures. That includes you and me, a couple of 37 trillion-cell arrangements popularly known as human beings.

- 6. Davoodi SH et al. "Calorie shifting diet versus calorie restriction diet: a comparative clinical trial study." International Journal of Preventative Medicine. Apr. 2014.
- 7. "Intermittent fasting may help those with diabetes and cardiovascular disease, study suggests." SAGE Publications. 26 Apr. 2013.

<sup>5.</sup> Nair KS. "Leucine, glucose, and energy metabolism after 3 days of fasting in healthy human subjects." American Journal of Clinical Nutrition. Oct. 1987.

As we create new cells by the millions hourly, we must also carry out autophagy — disposal of the dying and dead cells via "self-eating."

During this process, lysosomes — tiny sphere-shaped structures inside each cell — spew out about 40 kinds of enzymes to break apart decaying proteins and other big molecules into smaller, simpler ones that can be used to build new cells.

Lysosomes also help to destroy disease-causing bacteria and viruses.

As with any bodily process, autophagy can be vigorous, average, or seriously screwed up. This matters. The efficiency of your autophagous machinery is vastly important to your health.

Robust autophagy leads to long life. Indeed, while you'll hear millions of claims that this diet or that behavior can extend life, optimal autophagy is one of the few scientifically *confirmed* processes that can do this.

In animal studies, life spans have been extended up to 65 percent.

Ramped-up autophagy has also been shown in studies to lower risk of cancer, insulin resistance, infection, heart disease, neurodegenerative diseases (such as Parkinson's and Alzheimer's), and inflammation in general.

A 2006 study by Johnson, Laub, and John states:

Since May 2003, we have experimented with alternate-day calorie restriction, one day consuming 20–50 percent of estimated daily caloric requirement and the next day ad lib [the technical term for "unrestricted"] eating, and have observed health benefits starting in as little as two weeks, in insulin resistance; asthma; seasonal allergies; infectious diseases of viral, bacterial, and fungal origin (viral URI, recurrent bacterial tonsillitis, chronic sinusitis, periodontal disease); autoimmune disorder (rheumatoid arthritis); osteoarthritis; symptoms due to CNS inflammatory lesions (Tourette's, Meniere's); cardiac arrhythmias (PVCs, atrial fibrillation); [and] menopause-related hot flashes.<sup>8</sup>

So now you know that intermittent fasting is not only great for fat loss, but can also help you build robust health.

As pioneering natural-health physician John Tilden put it, "I must say in all seriousness that fasting, when combined with a properly selected diet, is the nearest approach to a 'cure-all' that is possible to conceive — profoundly simple and simply profound!"

# **Putting Intermittent Fasting Into Action**

**1. Get hungry now and then.** "One well-recognized way of inducing autophagy is by food restriction, which upregulates autophagy in many organs," concludes a 2010 study from the Scripps Research Institute in La Jolla, California.

In other words, practice intermittent fasting! Skip one meal a day or one day of solid food per week. Perhaps the simplest tactic is to eat only within a six-hour "window" from noon to 6 p.m. Do what works in your life. "Hungrying up" on a regular basis matters more than the precise form and timing.

Of the three steps I'm going to present here, this first step is the most effective. Yet mainstream health advice often advises just the opposite.

Now, I realize that disciplined eating is not easy. I like to chow down as much as, and perhaps more than, the next guy. But I've found it helps me to power through bouts of hunger to imagine leagues of industrious lyso-somes busily power-washing accumulated junk out of my tissues.

I urge you to ignore the many voices in modern culture urging you to eat. If you listen to mainstream medicine, you will hear frequent warnings that hunger is dangerous, or leads to weight gain, or is always a symptom of an eating disorder.

<sup>8.</sup> Johnson, J et al. "The effect on health of alternate day calorie restriction: Eating less and more than needed on alternate days prolongs life." Medical Hypotheses. 2006.

Don't listen. Make hunger your friend. Regularly embracing even mild hunger can ultimately bring not only physical health, but also mental focus and improved mood... and, of course, more effective fat loss. It's worth the effort.

**2.** Eat a high-fat, moderate-protein, low-carbohydrate diet. As I've written previously, carbohydrates will spike your glucose levels and lead to problems like chronic inflammation and insulin resistance... ves, even the darling so-called "heart-healthy whole grains" we've been duped into making the foundation of our diets.

Avoid them at all costs. Follow a diet high in healthy fats for the best results. I'll have much more to say about the health-promoting effects of such a diet in upcoming issues of *Natural Health Solutions*.

For now, make sure to adjust your diet to contain more healthy fats before you engage in any kind of intermittent fasting. If you try to skip meals first, you run the risk of carb addiction getting the better of you, which will make for an unpleasant experience. For this food timing trick to work, you need a satisfied appetite, and eating fat creates one.

3. Exercise. We all know exercise can make us healthy, but why? Its ability to boost autophagy appears to be the major reason. During exercise, virtually every kind of tissue experiences a boost in lysosome activity.

Combine regular exercise with this food timing trick and you just might experience the most rapid fat loss of your life.

Best,

Brail Lemby

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