The Best Way to Cure Diabetes, Boost Immunity, and Extend Life Span
It Costs Nothing... And Can Be Incorporated Into Your Lifestyle Starting Today

by Brad Lemley
Natural Health Solutions

There are many routes to a long, healthy life.

Regular exercise, optimal sleep, daily socializing, prudent sun exposure... the contributors make up a sizable list.

But as I spend my days pitchforking through nutrition and medical articles, I am amazed at how the consensus is clear: One specific lifestyle habit really does appear to be more important than others.

It is intermittent fasting, or IF. This is an umbrella term that takes in consuming only water, or drastically reducing caloric intake for periods longer than is typical on a three-meals daily regimen.

This surprises many people, because the incessant drumbeat of modern culture is to keep eating.

Fasting for health, which has a long, noble history, started to fall out of favor about 60 years ago — pretty much the same time that farming and grocery stores morphed into Big Food and medicine became an instrument of Big Pharma.

Big Food and Pharma lose if you eat less, even for a day or two.

But you win.

The Metabolic Secret Sauce

A study in the June 2015 issue of Cell Stem Cell suggests that fasting on water only for two–four days a month can “switch on” hematopoietic stem cells.1 These create the cells of both the blood and immune systems, ramping up immune response.

That matters because decreased immune system efficiency is a hallmark of the diseases of aging.

As Valter Longo, gerontologist at the University of Southern California, put it:

What we started noticing in both our human work and animal work is that the white blood cell count goes down with prolonged fasting. Then when you re-feed, the blood cells come back.

Shocker! The Diabetes Association Ignores the Best Therapy

We live in the Age of Outrage. From Seattle to Savannah and Bismarck to Brownsville, we poke our phones and pound our keyboards to denounce everything from gun control (or lack of it) to freedom-loving eastern Oregon ranchers (or terrorists) to The Donald’s idiot maunderings (or trenchant mots justes).

So here’s what outrages me.

According to the Centers for Disease Control, as many as 50 percent of Americans will have diabetes by the year 2050.

Fifty percent. In a mere 35 years, half the nation’s population may have a serious, debilitating, life-shortening disease that scarcely existed a century ago.

What’s especially outrageous is that it does not need to happen.

As we detail in this issue, the cure for Type 2 diabetes — the type that represents roughly 90 percent of cases in America — is absolutely safe and absolutely free. In fact, it’s cheaper than free, as it actually saves money.

The solution is a disciplined program of intermittent fasting, or even a less-disciplined program of periodic caloric restriction.

The research on this issue is crystal clear. Fasting interventions work.

So when you type the term “inter-continued on next page >>>
And the ones that come back work better than the damaged ones. Result: improved immune function.

While emphasizing that results are preliminary, a new review of studies on intermittent fasting that included Type 2 diabetes patients concluded that the research supports “the existence of a health benefit from fasting.”

But even more dramatic was a U.K. study that showed slashing caloric intake can, quite simply, cure Type 2 diabetes. After researchers at Newcastle University put 11 Type 2 diabetics on a 600 calorie per day diet, in just a week, the fat around their livers dropped 30 percent.

More to the point, their blood sugar levels were normal. At the end of the eight-week trial, they were producing insulin again.

They were then advised to return to their normal diets but eat just two-thirds as much as they typically had.

All were able to stop diabetes medications.

Meanwhile, a team of U.K. researchers recently concluded that intermittent fasting reduces inflammation and insulin resistance and lowers blood pressure, heart rate, and cholesterol.

As for life span, animal studies have recorded increases of 30–40 percent, including one that found that feeding rats every other day extended their lives an astonishing 83 percent.

The bad news, of course, is that water-only fasting, or consuming 600 calories daily for two months, is no fun. In fact, it can be dreadfully difficult, and even unsafe for some people (see Jasmine LeMaster’s article on page 5).

The good news? There is an alternative.

Easier Than Long-Term Starvation

Longo has pioneered what he calls the “fasting mimicking diet,” or FMD. It appears to offer most of the benefits of tougher fasting regimes while being within the grasp of any moderately motivated person.

His research indicates that a five-day FMD twice a month slashed risk factors and markers for aging, cardiovascular disease, and cancer, all with no major side effects.

Importantly, in his studies on mice and humans, both the control and fasting groups ate the same amount of calories over the course of the whole month. In other words, it appears that periodic fasting offers health benefits even if the rats, or humans, eat more calories than usual during nonfasting periods.

Longo believes that following this diet even just twice a year — which...
he does himself — will also offer significant health benefits.

So what does the FMD look like in practice?

You can see sample daily meal plans on the right.

Challenging, sure, but far from impossible. And Longo emphasizes that while the calorie counts are not flexible, the food that can be eaten is.

“We don’t want to change what people eat normally,” Longo says. “We are not advertising restriction.” Generally, he says, the key is eating for nutrient density, which means consuming more olive oil, nuts, fish, and especially vegetables.

“A glass of red wine or two is fine,” he adds.

Bless you, Valter Longo.

**Bottom line:** “If you follow the FMD twice a year, as I do, and combine it with general nutritional advice [such as eating for nutrient density]… it will make a tremendous difference to your longevity,” Longo says.

My friends, this really is the holy grail of a long, healthy life. My wife and I eat less whenever we take an extended road trip — something we do about four times a year. Distracted by the sights, we find it easy — almost effortless — to eat minimally.

If you are not in the at-risk populations listed in Jasmine’s article, I urge you to bring IF or FMD into your life in whatever fashion works for you. You’ll not only live longer, but those years will be far more likely to be filled with vibrant health.

Citations available [here](#).
It May Be a Good Idea to Get This Disease

Does Getting Vaccinated Come at the Cost of Robust Health Later in Life?

by Brad Lemley

Natural Health Solutions

It’s fascinating to watch the debate about childhood vaccinations playing out on social media.

Generally speaking, my liberal Facebook friends seem to think anyone who questions giving children the full complement of vaccinations is a right-wing nutjob — a backwoods, anti-science reactionary.

This always strikes me as odd, because the issue here is scientific, not political.

Just as the Earth remains spherical even if a given political ideology holds that it’s a celestial pancake, the truth about vaccines should be immune from partisan wrangling.

So… what’s the truth?

Well, it’s complicated, but I will say that the “anti-science reactionaries” recently scored a major point.

In August, a major study published in the journal *Atherosclerosis* looked at the association of measles and mumps with cardiovascular disease.1

Its groundbreaking conclusion: “Measles and mumps, especially in case of both infections, were associated with lower risks of mortality from atherosclerotic CVD.”

In other words, infection with measles or mumps — or, especially, people who contracted *both* measles and mumps — was associated with a *significantly lower* risk of cardiovascular disease later in life.

This was a big, authoritative study. A total of 43,689 men and 60,147 women, from ages 40–79 when the study began between 1988–1990, were followed until 2009.

Conversely, mere immunization against these diseases did not confer that benefit.

So why would infection with these childhood ills lead to cardiovascular benefits later?

The authors suggest that “the ‘hygiene hypothesis’ is a possible mechanism underlying this effect.”

In particular: “Improved hygiene decreases the opportunities for infections [such as measles and mumps], which are necessary for normal development of the immune system.”

That matters because regulatory T cells are the first line of defense against inflammation of all kinds — such as the kind within arteries that leads to heart disease.

“Therefore, people with a history of infections may have a lower risk of CVD, especially atherosclerotic diseases such as stroke and myocardial infarction, compared to those without previous infections.”

Vaccinate at Your Risk…

The fact is that sailing through childhood disease-free has some clear downsides. A million years of hominid co-evolution with infectious agents made infection with at least some of those agents necessary for robust health.

An immune system that has never battled infection is similar to a muscle that’s never lifted a heavy load. When the load comes — and they inevitably do — the muscle is unprepared to meet its obligations and can collapse — with catastrophic consequences.

Now, I am not prepared to say that avoiding vaccination is risk-free. For example, encephalitis is a rare but potentially fatal complication of childhood measles.

Parsing the various risks and benefits is crucial.

On the other hand, there’s growing evidence that vaccines — including the measles vaccines — don’t work especially well anyway. For example, during the 1989–1991
measles outbreak, researchers reported that up to 40 percent of the people who got the disease had been previously immunized.²

And…

The National Academy of Medicine — a division of the National Academies of Science, Engineering, and Medicine and far from a radical organization — made it quite clear in a 2013 report that nobody really knows the cumulative effect that dozens of vaccinations have on kids:

Most vaccine-related research focuses on the outcomes of single immunizations or combinations of vaccines administered at a single visit… Thus, key elements of the entire schedule — the number, frequency, timing, order, and age at administration of vaccines — have not been systematically examined in research studies.

Bottom line: The “organizing principle” that all childhood disease is always bad has led to the astounding recommendation from the Centers for Disease Control that by age 18, a child should have received 69 doses of 16 vaccines. But it is far from clear that this plan leads to optimal health.

I will not tell you to avoid vaccinating your kids, or yourself. Only you can make that call.

I will say, however, that skepticism about whether a given vaccine 1) actually works, 2) is safe on its own, and 3) is safe in combination with dozens of other vaccines given out over a lifetime — though this has never been tested — is not a “nutty” concern.

I will also say that I see no particular reason why the benefits of getting and recovering from minor illness should be confined to children. While there are few studies on adults, it would make sense that infections can “tune up” immune systems at any age.

My Facebook friends notwithstanding, it’s appropriate to be skeptical about the value and long-term effects of vaccination. That’s not a political conclusion. It’s a scientific one. ☹

Citations available here.

Is Fasting Right for You?

Though intermittent fasting has been shown to have innumerable health benefits — including stopping the progression of, and even curing, Type 2 diabetes — it may have negative side effects for some people.

It is even possible that the fasting mimicking diet, or FMT, discussed in this month’s cover story, could be problematic for some.

So before you launch yourself into IF, you first need to make sure it’s right for you.

Diabetics or those with hypoglycemia must make sure they monitor their blood sugar levels carefully and eat enough fat and protein to keep their blood sugar from getting too low.

Women also need to be cautious with fasting, as it may have a negative effect on hormones and reproductive health.

In the IF and Paleo communities, many women have reported that upon trying IF for a few weeks, they began to experience negative effects, including poor sleep, loss of libido, and even dysregulation of the menstrual cycle.

The only studies to examine the effects of alternate-day intermittent fasting on reproductive hormones between the sexes are in rats. One study found that within 15 days of starting the IF experiment, the female rats had disrupted reproductive cycles and hormone dysregulation.¹ In all of the studies, IF negatively affected female hormones and stress response.

There’s a lack of human studies on IF for women, so we really don’t know if these effects are applicable to humans. But from an evolutionary perspective, it makes sense that a woman’s body will halt her reproductive capability if it is getting a signal that food is scarce.

These are all signs IF is not working for you:

• You start having mood swings or lose your libido
• You notice problems with your digestion.

And some people should avoid fasting altogether, or at least be sure to be under the supervision of a competent doctor. Don’t try IF if:

• You’re pregnant
• You have a history of disordered eating
• You are chronically stressed or have trouble sleeping
• You have Type 1 diabetes.

The most important things for both men and women are to listen to your body and to consult your doctor! Ultimately, IF should be a positive rather than a negative experience. ☹

Jasmine LeMaster is head of quality assurance for Laissez Faire’s Living Well brand and is an integral part of their product research and development team.

Citations available here.
The Lazy Person’s Guide to Exercise
Spend Less Time Working Out by Increasing the Intensity

by Dave Asprey
Biohacker

Resistance and aerobic training are both powerful ways to improve your biology, and each gives a unique set of benefits. Why not combine them?

High-intensity interval training (HIIT) alternates between brief, strenuous exercise and active rest. You might sprint for 60 seconds, walk for 30, do pushups for 60, walk for 30, and so on.

HIIT intensely stresses your muscles and then lets them recover during active rest. Stringing exercises together and maintaining active rest keeps your heart and breathing rates up, so you also get the benefits of aerobic exercise. It’s the happy marriage of two schools of fitness thought. In fact, it may be more effective than either resistance or aerobic exercise alone.

The icing on the cake is that HIIT is efficient. There’s no need for an hour in the weight room and another hour running.

When you’re designing an HIIT workout, there are some things to keep in mind:

• Alternate between an exercise and active rest
• Don’t string together exercises that target the same muscle group. For example, don’t follow squats with lunges. Both target your quads, and you don’t want to tire your quads out and then tax them again immediately afterward. A good method is to alternate between upper- and lower-body exercises
• Set a timer instead of counting reps. Keep your phone at your side or an eye on the clock
• Keep good form! HIIT gets exhausting quickly. Exhaustion brings poor form, and poor form brings injury. If your form starts to slip, slow down or skip an exercise and do active rest instead. Listen to your body to avoid hurting yourself.

Here’s a model HIIT workout to get you started. It doesn’t require equipment, and you can do it just about anywhere. If you’re unsure what any of these exercises involves, go to this site to see what good form looks like. Alternatively, just type the exercise into the search bar on YouTube. There will be plenty of video tutorials.

Do each exercise for 60 seconds, and in between do active rest (walk in place) for 30 seconds:

• Jog in place
• Walk in place
• Bodyweight squats
• Walk in place
• Pushups
• Walk in place
• Jumping jacks
• Walk in place
• Situps
• Walk in place
• Burpees
• Walk in place.

If once through isn’t enough, repeat the workout until you’re spent.

You can also try a Tabata-style workout. Tabata workouts (named after their creator, Dr. Izumi Tabata, who used them in his research to great effect) follow a basic structure: Choose an exercise and do eight rounds of going all out for 20 seconds and resting for 10. For example:

• Burpees (20 seconds)
• Rest (10 seconds)
• Repeat 7 more times.

Each exercise in a Tabata workout takes only four minutes. It’s harder than it sounds. Happy HIIT-ing!

Dave Asprey, founder of Bulletproof and creator of Bulletproof Coffee, is a Silicon Valley tech entrepreneur who spent 15 years and $300,000 to hack his own biology, lose 100 pounds, upgrade his IQ, and lower his biological age.
Science Reveals the Secret to Happiness
Want to Be Happier? Here’s the One Thing That Matters Most

by Brad Lemley
Natural Health Solutions

I’ve spent years researching happiness. I’ve spoken with many of the leaders of the positive psychology movement — a discipline that uses science to maximize “subjective well-being.”

I’ve talked with endocrinologists, who are experts on the hormonal basis of moods. I’ve chatted with sleep experts, exercise mavens, meditation authorities, you name it.

It’s all fascinating, because while one might feel that happiness is the realm of poets and philosophers, science really can reveal some quite specific answers to the ancient human question “How can I be happier?”

Pursuing this question scientifically is important, because we are incredibly bad at predicting what might make us happy — and consequently, often waste our lives pursuing the wrong things.

For example, many people spend a good chunk of their lives working, and when they are not working, they are making plans to work in a new or better way. The motivating factor here is money.

We imagine that having more money will make us happier. In fact, we take this as a given. “More money equals more happiness” could be called the equation that propels America.

But it’s not true.

What the Science Says

The seminal paper exploring this phenomenon was published in June 2006 in the prestigious journal Science.

Titled “Would You Be Happier if You Were Richer?” the paper, written by a team of notable researchers — including Daniel Kahneman, winner of the 2002 Nobel Prize in Economics — concludes:

The belief that high income is associated with good mood is widespread but mostly illusory. People with above-average income are relatively satisfied with their lives but are barely happier than others in moment-to-moment experience.

Why?

The answer, said the research team, is what they called “the focusing illusion.”

Briefly, the focusing illusion is the misconception that arises when social scientists ask people questions about some specific part of their lives — for example, how much money they make — and then ask them how happy they are.

By focusing the respondents’ attention on money and then asking them about their level of happiness, survey takers tend to tie the two together — even if in day-to-day life, almost nobody actually focuses on the connection between their incomes and their happiness.

The result is that almost everything that’s written about income and happiness is skewed by the fact that researchers’ questions create a “focusing illusion” that suggests high income equals happiness — even if that’s not the everyday experience.

It turns out that what really makes people happy is not more income.

This is because the time spent to earn the extra income is often devoted to activities that don’t raise happiness, such as extra hours in the office or commuting. As the researchers put it:

As income rises, people’s time use does not appear to shift toward activities that are associated with improved [happiness].

So What Really Makes Us Happy?

So — if you ask the question carefully, isolating it from the treacheries of the focusing illusion — what really makes people happy?

As it turns out, having people list “the best moment of the day” for several days is an incisive way to get a good, useful, scientific answer to the source of human happiness because it doesn’t “lead the witness” via the focusing illusion.

When the question is asked this way, the answer is unequivocal.

The researchers found that “time spent socializing” is consistently ranked as among “the best moments of the day.”

To be even more specific, more than any other single activity, overall happiness ties most closely with the number of meals eaten with friends and family.

So if you want to be happy — and who doesn’t? — your path is clear.

If the choice is between working longer hours and a more distant commute, or shorter hours and more chances to break bread with friends, the latter choice is — hands down — the one to take.

Citations available here.
Corn Flakes Have Nothing on This Nutrient-Dense Breakfast

A High-Fat, Low Carb Breakfast That’s Fast, Easy to Make, and Will Keep You Going

by Brad Lemley
Natural Health Solutions

Grain-intensive American breakfast foods — pancakes, waffles, cereal, biscuits, and toast — are undeniably tasty.

Unfortunately, they are also the kind of foods that optimize fat formation.¹ They do this by spiking insulin, the hormone that transports fat into the cells for long-term storage.

These foods are endlessly promoted not because they are healthy, but because they are cheap, allowing enormous profit margins for their purveyors.

Consider that a single pancake from the International House of Pancakes costs $1.32. By my estimate, that pancake’s raw ingredients cost about 4 cents.

So forget “tradition” — which isn’t all that traditional anyway, as carb-intensive breakfast choices in the U.S. date back roughly to W.K. Kellogg’s invention of corn flakes in 1894.

Instead, consider the fact that breakfast presents a wonderful opportunity to get a head start on the day’s requisite five–nine servings of fruits and vegetables. And among veggies, dark leafy greens are both the quickest cooking and most nutrient dense. The amount of cooked kale in this recipe, for example, provides more than the entire Daily Value for vitamins A, C, and K.

**Bodacious Breakfast Greens**

You could call this a deconstructed omelet, morning stir-fry, or veggie scramble. But “Bodacious Breakfast Greens” captures its energizing spirit.

This is what I’ve eaten for breakfast most days for the last four years, ever since I finally made a full commitment to high-fat, low-carb, nutrient-dense eating.

Here’s what you need:

- 2 tablespoons organic coconut oil
- 1 standard bunch (roughly 8 ounces) of leafy greens such as Tuscan kale, broccolini, rapini, or Swiss chard
- 4 ounces of animal protein. This is usually pastured eggs, but I sometimes use leftover cooked chicken, steak, or salmon
- Optional: 3 ounces of cheese
- Optional: 2 ounces of nuts such as walnuts
- Optional: a few shakes of some serious hot sauce — I’m partial to Trader Joe’s Habanero Hot Sauce.

Melt coconut oil in a heavy 6-quart stockpot. I prefer this vessel for sautéing because the high sides keep it from making a mess on the stovetop. Sauté greens for about four minutes on high heat until they are reduced to roughly one-third their original volume.

Add eggs or other protein and optional cheese, nuts, and/or hot sauce and stir for another three–four minutes.

Serve hot.

If you are accustomed to carb-intensive breakfast fare, greens for breakfast may seem unappealing at first. But I assure you, try it for a week and you’ll come to crave the nutrient-dense boost that you receive from this delicious, low-carb dish.

*Citations available here.*

Brad Lemley is a science and health writer and former senior correspondent for *The Washington Post* and *Discover* magazine.

Citations available [here](#).