



Riordan
Clinic

Health Hunters

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Intermittent Fasting

Improve Energy, Lose
Weight, and Reduce Your
Risk of Chronic Diseases



AUTHOR

Dr. Anne Zauderer

I spent the majority of my 20s in an insulin-resistant state. Sound hard to believe? Especially since I was a distance runner who ran an average of 6-8 miles per day, and 2 marathons per year? It's true. I did everything "correctly," according to conventional wisdom at the time. I was a vegetarian (technically a pescitarian because I ate fish), I ate low fat everything, and I made sure I got lots of whole grains. I did everything I could to stay healthy and yet I was miserable. I was 10 pounds heavier than I am now, I had poor quality sleep, I was in a state of adrenal fatigue, I wasn't having a menstrual cycle, I had constant anxiety and I was hungry all the time. At that point, I had no idea what was going on in my body. It seemed that the harder I "worked" and the more I worried about my health, the worse it got.

What I have learned over the years is that I have a strong family history of diabetes. This doesn't mean that it is inevitable that I will develop diabetes, but what it does mean is that I am always going to have to work harder than some people to prevent it. My body doesn't know how to utilize sugar efficiently as a long-term energy source. Current research is showing that I am not alone.

Metabolism

Before I can explain why intermittent fasting is such a great tool for long-term health, one has to understand how the body uses food for energy, otherwise known as metabolism. Metabolism can be compared to the function of a car engine. You put fuel in and the engine burns it to make the car move. Our metabolism works the same way. However, what most people don't realize is that we actually have two engines for burning fuel.

One engine burns sugar (or carbohydrates that get broken down into sugar molecules) and the other burns fat. This is a brilliant design because our ancestors had limited access



Riordan Clinic is a not-for-profit 501(c)(3), nutrition-based health facility in Wichita, Kansas cofounded in 1975 by Olive W. Garvey and Hugh D. Riordan. We have integrated lifestyle and nutrition to help you find the underlying causes of your illness. Since our inception in 1975, the mission has been clear and unwavering to "...stimulate an epidemic of health."

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to sugar. Their primary source of sugar was fruit, and it was only available during certain times of the year. Therefore, our ancestors' diet was primarily made up of fat and protein.

The way our two engines work is that if you give the body sugar, it will burn that first because it gives us a quick source of energy. However, if you deprive the body of sugar, you will naturally shift over to burning fat. The advantage of burning fat is we store energy in our bodies in that form (as adipose tissue, or body fat). If we are using our fat-burning engine and run out of fat in our diet, we will naturally shift to burning stored fat without a significant drop in our blood sugar.

If we are primarily using our "sugar-burning" engine, when we run out of fuel our blood sugar will drop. When our blood sugar drops, we feel really hungry. It also causes us to be shaky, have foggy thinking, get irritable, and even triggers the release of cortisol, which is one of our stress hormones. Do you know anybody like that? Think about that person who gets "hangry" when they don't have food (i.e. they are so hungry that they get angry!). What is happening is they are most likely eating a diet high in carbohydrates. As soon as their body has burned those carbohydrates with their "sugar-burning" engine, their blood sugar drops and they crave more. This leads to a pattern of not burning stored fat, always feeling hungry, overeating carbohydrates, and eventually adding more stored fat. Long-term, all of this contributes to weight gain, low energy, elevated cholesterol (especially the bad type), insulin resistance and adrenal fatigue. Sound familiar?

Training your body to burn fat as fuel is like working out a muscle. Someone who doesn't work out at all isn't going to be able to go out and run 10 miles. You have to gradually build up your endurance. It is the same thing with your metabolism. If you have been a "carboholic" for the past 10 years, it's going to take some time and effort to get you to the point of burning fat as a fuel. One tool to help you get there is fasting.

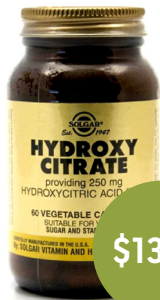
Fasting

The idea of fasting dates back to our ancestors who were hunter-gatherers. With this lifestyle, food was not always readily available. Most of the time, eating came in a "feast or famine" sort of pattern. The biochemistry of our bodies adapted to that way of living. When you abstain from food for a period, it creates a biological stressor to the body. This hormetic effect induces pathways in the body that can have healing effects.



In our modern world, we have a negative perception around skipping meals. Very often, we associate skipping meals with a sharp decrease in blood sugar, decrease in focus and an increase in irritability. We've been taught that breakfast is the most important meal of the day! Unfortunately, those touting that outdated axiom are also the ones pushing sugar-filled breakfast cereals, pop tarts and pastries as respectable breakfast choices. We also snack more than we ever did in the past. Compared to 30 years ago, we daily eat around 180 calories more in snacks and beverages (including milky drinks, smoothies, carbonated beverages). We also eat an average of 120 calories more during our regular meals₂. Over time, this can add up and contribute to the soaring rates of obesity we are seeing in our country.

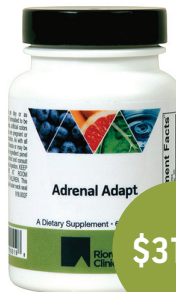
Supplements to Curb Appetite and Improve Weight Loss



\$13.95

Hydroxy-citrate

- Derived from Garcinia cambogia fruit.
- Hydroxycitric acid might improve weight loss by preventing fat storage and controlling appetite.
- It might improve exercise performance by limiting the use of stored energy in the muscles, which seems to prevent fatigue.



\$31.95

Adrenal Adapt

- Regulates metabolism (cortisol) by mobilizing fats, proteins and carbohydrates.
- Controls energy levels in response to stress (cortisol and adrenaline).
- Maintains appropriate blood pressure by adjusting the balance of water and salt, and enhances the activity of other hormones

How to Fast

There is a substantial amount of research that supports the idea that the less you eat over time, the longer you will live. However, severe calorie-restrictive diets are difficult and therefore compliance can be low. According to Dr. Joseph Mercola, "Instead of regulating how much food you eat, as with long-term calorie restriction, you only need to modify when you eat – and of course wisely choose the foods you do eat." One way to do this is called **intermittent fasting**.

MAKE SURE YOU ARE ENDING YOUR FAST WITH A WHOLE FOODS MEAL THAT HAS A LOT OF GOOD FATS, PROTEIN, AND VEGETABLES.



protein, and fiber (such as green, leafy vegetables and cruciferous vegetables). What you will notice with this pattern of eating is that you will be less hungry in between meals and have more energy.

After your blood sugar is more stable and excess carbohydrates are removed from your diet, that

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Intermittent fasting* is restricting your eating each day to a 6- to 11-hour period. As a result of this, you will be abstaining from food for 13 to 18 hours each day you are on the fast. This means you are not severely restricting the number of calories you eat, but rather the time frame in which you eat them. For example, under this plan if your last meal was finished at 7:00pm, you would not eat until around noon the next day. This would give your body a 17-hour window of fasting. This is enough time to acquire the benefits (see text box entitled "Health Benefits of Fasting").

As I mentioned, you will have to train your body to burn fat as your primary fuel source of energy. It can take up to 2 months for your body to adapt to this way of eating. The first step, even before you begin experimenting with fasting, is to cut the excess carbohydrates from your diet, especially those consumed at breakfast and lunch. The body is naturally more insulin-sensitive after 3:00pm. Therefore, if you are going to have good, complex carbohydrates (such as root vegetables, fruits, quinoa, and grains such as rice) the best time to have them is later in the day. Try to limit breakfast and lunch to foods that are high in good fats,



Health Benefits of Fasting¹:

- 1 **Blood sugar** stabilizes
- 2 **Insulin levels** lower and insulin resistance is improved
- 3 The **gut and immune system** get a chance to rest
- 4 **Ketones** are produced
- 5 **Metabolic rate** increases
- 6 **Damaged cells** are cleared out
- 7 **Hunger** lessens
- 8 Excess **body fat** is shed
- 9 Levels of the **hormone insulin-like growth factor 1 (IGF-1)** are reduced (associated with many cancers such as breast and prostate cancers)
- 10 The rate of **aging** slows
- 11 **Fat burning** is boosted
- 12 **Brain function** is protected



\$36.95

UltraLean Body Composition Formula

- UltraLean Body Composition is a powdered nutritional beverage that provides both macro and micronutrients for individuals who want to improve body composition and lose or maintain weight. Features specialty nutrients to help promote blood sugar control and efficient fat metabolism.
- High-quality whey protein base, 100% casein free.

is a good time to try intermittent fasting. The first step is to stop eating 3 hours before bedtime. This will allow your body to use the time you are asleep to detox and repair, rather than digesting food you have eaten.

Once you are comfortable with a 3-hour fast before bedtime, try pushing back when you eat breakfast. If your normal breakfast is at 8:00am, try eating it at 9:00am. As you gradually ease into longer fasting periods, you might find yourself hungry. Work through the hunger and it will pass. Over time you will find yourself being less and less hungry. Eventually you will notice an overall stabilization of your blood sugar and the effects of the fast will be felt all day long.

One critical point to note is that the meal you use to break your fast is one of the most important aspects of fasting. If you choose to go 18 hours without food, but you break the fast by gorging on a fast food hamburger meal with a soda, you will have completely negated any positive benefits of fasting (in fact, you might even be making things worse!). Make sure you are ending your fast with a whole foods meal that has a lot of good fats, protein, and vegetables.

Intermittent fasting is one tool that might be helpful for you. As with any new program, listen to your body first and foremost. If you are not able to adapt to this type of eating, perhaps this might not be the best program for you. Or you might need to start under the guidance of someone who can help you through it. For many, though, fasting can be a powerful tool in their quest for maintaining a healthy weight and lifestyle.

MAR
14

FREE LUNCHTIME LECTURE

How to Lose Fat and Keep it Off

Noon - 1pm @ Wichita Campus

Join Dr. Ron and Dr. Anne as they discuss the mechanisms of why the body stores excess fat and what you can do to reverse those trends and lose fat for good. Intermittent fasting along with other strategies for maintaining a healthy weight will be part of the conversation.

RSVP at riordanclinic.org/events

**Beginning a fasting program like this is best done under the care of a physician. Some of the contraindications for going on a fast are: uncontrolled blood sugar (diabetes), pregnant women or women who are nursing, people who have serious adrenal issues, and use of certain medications (consult your doctor). Please consult your physician before beginning a program like this.*

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1. Mercola, J. (2017) Fat for Fuel. Carlsbad, California: Hay House Inc.
2. B.M. Popkin and K.J. Duffey. "Does hunger and satiety drive eating anymore? Increasing eating occasions and decreasing time between eating occasions in the United States." American Journal of Clinical Nutrition, 91. (May 2010): 1342-47

Save the Date!

CHECK YOUR HEALTH

March 26 - 30

Some of our most popular lab panels will be deeply discounted and all supplements will be on sale.





Epsom Salt Bath

Epsom salt baths are a great way to wind down after a busy day. Epsom salts contain magnesium, which is a necessary mineral for so many different processes in the body. Soaking in them can help with relaxing tight muscles, reducing stress, and improving quality of sleep.

INGREDIENTS

1 cup Epsom salt
10 drops essential oils (optional) – see recipe blend options.

INSTRUCTIONS

1. Add essential oil to Epsom salt and stir together
2. Draw a warm bath and add ¼–½ cup of Epsom salt to bath

BLEND OPTIONS:

Stress Blend: 10 drops lavender

Sore Muscles & Sinus Relief: 5 drops peppermint, 5 drops lavender

Energizing: 4 drops lavender, 3 drops lemon, 3 drops grapefruit

Rejuvenating: 10 drops wild orange

UBI: Your Best Defense Against the Flu This Winter

Ultraviolet Blood Irradiation (UBI) is a procedure done at the Riordan Clinic that is used to effectively treat both acute and chronic infections, which makes in an ideal option for wintertime colds and flu.

UBI exposes a patient's blood to light to heighten the body's immune response and to kill infections. With exposure to UV light, bacteria and viruses in your bloodstream absorb five times as much photonic energy as do your red and white blood cells.

This means the fragments of the killed infecting agents create a safe, autogenous vaccination-like response. This further activates and directs your immune system to the specific infections your body is attempting to overcome. The net result is the induction of a secondary kill of these infecting agents throughout the entire body. Treating only 35 cc of blood with UBI induces a beneficial systemic immune response.

▶ For more information, please call the Riordan Clinic at 316-682-3100.

Contact the Editor

Please send any comments or suggestions to
newseditor@riordanclinic.org.
Thank you for reading,



**Dr. Anne
Zauderer**
Editor

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Health Hunters Newsletter

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Addressing the Root of Low Back Pain



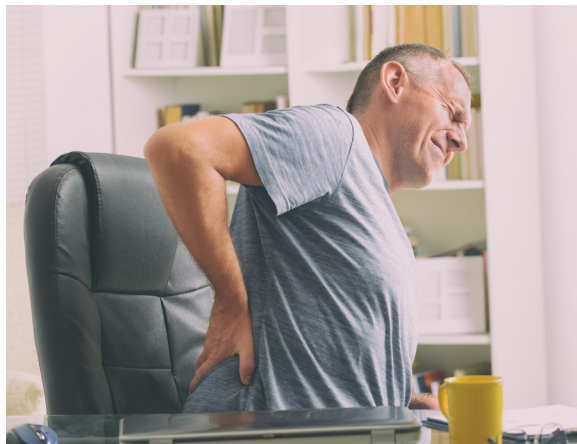
AUTHOR

Dr. Anne Zauderer

Approximately 60-80% of the population will experience an episode of low back pain during their lifetime. Of that group, 60-86% will have more than one episode of low back pain^{1,2}. In addition to this, the cost associated with low back pain in the United States could exceed \$100 billion per year; two-thirds of this cost is a result of lost wages and reduced productivity³. What is concerning about these statistics is not only the cost but also the recurrence of this condition. Pain medication blocks the signals of pain, but it does not address the root cause of why the pain is there.

So what is the root cause of low back pain? There are many theories, which may touch on the root cause, but don't address it exactly. In my experience, most of the people who have insidious, recurring low back pain also have a weakness in their core stabilizing muscles. These muscles are not the abdominal muscles that give you a "six pack." Typically, when we think of muscles we think of movement. However, these muscles do not move the body, they stabilize the body. This is a critically important task because if the pelvis and spine are not stabilized before movement, you leave the body more prone to injury. The three main muscles that stabilize the low back and pelvis prior to movement are: transverse abdominis, multifidi, and pelvic floor muscles. A number of MRI studies have shown that people with chronic

low back pain have fat infiltration of their multifidi muscles, which is a sign of atrophy or weakening of these muscles. These small muscles are deep in the spine and provide stabilization of vertebrae and curvatures. A study by Kjaer and colleagues⁴ observed the degree of fat infiltration of the lumbar multifidi muscles, and categorized it as none, slight and severe. The degree of atrophy of these muscles was strongly associated with low back pain in adults.



APART FROM A MAJOR INJURY, WHAT ELSE CAN WEAKEN THESE CORE, STABILIZING MUSCLES? FOR MOST PEOPLE, IT IS A LACK OF MOVEMENT.

Apart from a major injury, what else can weaken these core, stabilizing muscles? For most people, it is a lack of movement. When we sit for long periods during the day, we "turn off" or inhibit these muscles. It goes back to the old adage, "if you don't use it, you're going to lose it!" These stabilization muscles get turned off because we are not using them when we sit for long periods (more than 30 minutes) and lounge in our chairs. However, when we go to stand up without the stabilization of these

muscles, we leave ourselves more prone to injury.

Over time, this creates more wear and tear on the vertebrae and discs, creates more inflammation, and eventually low back pain. This is why, for most people, an episode of low back pain starts with either a trivial injury or no injury at all. The low back has been weakening for years and so it doesn't take much to trigger an injury or pain.



Upcoming Events

For more information or to register for any of these events, please visit riordanclinic.org/events

Food as Medicine

Wednesday, March 7th

11:30am – 1:30pm

Cost: FREE

This in-depth course will connect the dots and address some fundamental questions behind how our diet impacts our health and well-being and how it contributes to the progression of chronic disease. **PLEASE NOTE:** This course is available in-person at the Wichita campus, and online. For more information please visit: riordanclinic.org/food-as-medicine

How to Lose Fat and Keep it Off

Wednesday, March 14th

Noon -1:00pm @ Wichita Campus

Dr. Ron Hunninghake and Dr. Anne Zauderer

Cost: FREE

Everyone is looking for the "magic bullet" when it comes to losing weight (this is why the majority of people who lose weight on a diet gain it back ... plus more!). Come hear Dr. Ron and Dr. Anne discuss the mechanisms of why the body stores excess fat and what you can do to reverse them and lose fat for good.

If these muscles are the key to preventing the recurrence of low back pain, then we should exercise them, correct? Activation of these muscles is vitally important to resolving the pain. However, because these muscles don't move the body, they are sometimes

difficult to find and strengthen without some guidance. A great resource to help with this is a program by Dr. Eric Goodman called Foundation Training⁵. He has a series of videos that can help walk you through how to activate your core muscles.



If you want a more hands-on approach to learning, you can join Dr. Anne Zauderer, and certified yoga therapist, Susan Levine, for a morning workshop on Saturday, March 24 from 10:00am – 12:00pm. We will demonstrate how to isolate and strengthen all three of the stabilization muscle groups. You can register for this class at: riordanclinic.org/events. For more information please call 316-682-3100.

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1. Aure O, Nilsen J, Vasseljen O. Manual therapy and exercise therapy in patients with chronic low back pain: A randomized, controlled trial with 1-year follow-up. *Spine* 2003;28:525-532.
2. Suni J, Rinne M, Natri A, Pasanen M, Parkkari J, Alaranta H. Control of the lumbar neutral zone decreases low back pain and improves self-evaluated work ability. *Spine* 2006;31:E611-E620.
3. Katz JN. Lumbar disc disorders and low-back pain: socioeconomic factors and consequences [review]. *J Bone Joint Surg Am.* 2006;88(suppl 2): 21-24.
4. Kjaer P, Bendix T, Sorensen J, Korsholm L, Leboeuf-Yde C. Are MRI-defined fat infiltrations in the multifidus muscles associated with low back pain? *BMC Medicine* 2007;5:2.
5. www.foundationtraining.com

SATURDAY, MARCH 24TH

Addressing the Root of Low Back Pain

Dr. Anne Zauderer and Susan Levine

Join us for a workshop on how to isolate and strengthen the core stabilization muscles of the low back and pelvis.

These muscles play a vitally important role in many functions in the body, and a weakness in them can contribute to a number of conditions, including:

- Low back pain
- Pelvic pain
- Urinary incontinence
- Balance issues
- Distention of the abdominal muscles ("mummy tummy")
- Post-pregnancy physical complications
- Loss of function or stiff movement

In this class we will teach you functional exercises to strengthen your stabilization muscles. Because of this, participants must be able to get up and down off the floor. Please bring a yoga mat, if you have one.

Class is limited to 15 participants

\$20

For more information or to register for any of these events, please visit RiordanClinic.org/events

Upcoming Events

Essential Oils for Spring Cleaning

Friday, March 16th

Noon - 1:00pm @ Wichita Campus

Katie Madill

Cost: \$5

Are you ready to make the transition away from toxic chemical cleaners in your home? Does it seem daunting to make your own cleaners? Come learn which essential oils you can use to make your own cleaning products. You will be saving money and doing your body a favor! We will be making a foaming hand soap for you to take home with you.

Essential Vitamins and Nutrients: How do I Know What to Take?

Wednesday, March 21st @ Wichita Campus

Noon - 1pm

Dr. Ron Hunninghake and Dr. Anne Zauderer

Are supplements worth the money? How do I know what and how much to take? These are common questions we regularly get. Navigating nutritional medicine can be difficult! Join Dr. Ron Hunninghake and Dr. Anne Zauderer as they discuss what some of the most important nutrients are for you to be checking and taking on a regular basis.



RIORDANCLINIC.ORG/REAL-HEALTH

STUDENT ESSAY: **1st Place** 2015 “Health Is” essay contest

A year ago I decided that I would start being “healthy. At the time, I decided that being healthy meant losing a few pounds and eating strictly “healthy” foods, as well as working out to exhaustion. After a week of my new, “healthy” lifestyle, I stepped on the scale and saw that I had lost a pound! I was exhilarated. However, I didn’t know how distorted this view of health really was, or how it would turn around and hurt me.

As time went on I ate less and less. The number on the scale decided how much I was worth, and counting calories became my life. I exercised at minimum an hour a day, and started making up strict rules for myself, like 30 chews per bite and absolutely no dessert. All of these seemingly healthy habits had turned into a full-fledged case of Anorexia Nervosa, an eating disorder.

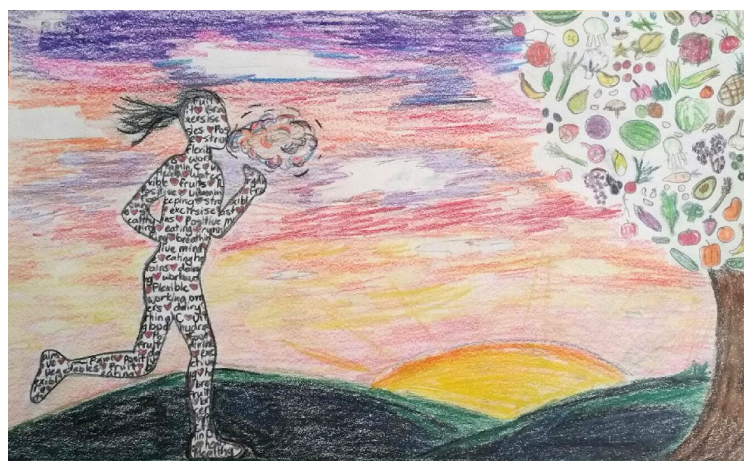
I didn’t accept that I was seriously ill at first. Losing 15 pounds seemed perfectly healthy because that’s what most of the influential females in my life were doing. Eventually though, a nutritionist and a counselor worked with me to help me turn my life around.

After months of re-feeding and counseling, I began to finally accept my body and not obsess over the calories in different foods. As I thought about how far I had come, I remembered that this whole ordeal had started because I wanted to be “healthy”. This led me to come up with better, real values of what health is, and how to become healthy.

Becoming aware of what you are really eating is the first step, which can be done by taking an inventory of the food in your house. If you have a lot of processed, packaged foods, and little fresh produce or protein, you may need to work on eating more “real” foods. What are real foods? They are simply the items that God has given us to nourish our bodies with, like fruits, vegetables, grass-fed beef, nuts, fish, and so on. Homemade soups, breads, and snacks are all much more wholesome than a pre-packaged cookie or milkshake, and

have so many health benefits including essential nutrients, vitamins, and minerals.

You’ll also want to find an activity that you enjoy doing, whether it be swimming, running, jumping on a trampoline, or playing a sport. Your body needs to be worked out so that you are fit and strong. Every day you have an opportunity to make small choices that can result in positive changes. For example, you could choose to get up from watching TV to go be active, or choosing to eat a banana instead of a cookie. Choosing to turn off your phone and go to bed at a reasonable time also helps your body recover from the day. Having a good body image can be a choice too, choosing to accept who you are now, but still striving for your own health and fitness goals for the future.



1st place winner of “Health Is” artwork competition

In conclusion, Health is when your body functions properly, because of being well nourished and cared for. It is also loving your body, and accepting that it is what God gave you. It is not striving to be perfect and using that image of perfection to define you. It is also not defined by what or how much you eat and work out. Health is being happy with yourself and giving yourself the whole, natural foods, that God made for our bodies.