



# Riordan Health Hunters

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MANAGING GLUCOSE FOR BETTER HEALTH: Practical Tips for Blood Sugar Balance

METABOLIC SCORING: Navigating Your Health Journey with Actionable Metrics

**UNDERSTADNING YOUR BLOOD SUGAR:** Empowering Health through the Pre-Diabetic Profile

**Keto Avocado Chocolate Mousse** Recipe From Food as Medicine



Riordan Clinic is a world-renowned, academic medical center that has led the world in integrative oncology and complex chronic illness care since 1975. The Riordan Clinic was established as a 501 (c)(3) non-profit organization with missions in research, provider education, and patient education. The Health Hunter Newsletter has been published since 1986 as an educational resource to providers and patients.



# **MANAGING GLUCOSE FOR BETTER HEALTH:**

Practical Tips for Blood Sugar Balance



# **Understanding Glucose Spikes**

While blood sugar (glucose) is an important energy source for every cell in the body, avoiding glucose spikes is critical for managing your overall health. Glucose spikes occur when blood sugar levels rise and fall sharply after eating, particularly after eating processed carbohydrates and simple sugars. Understanding the causes and consequences of these spikes is essential for anyone looking to maintain stable energy levels and reduce the risk of chronic illness.

# Why Glucose Spikes Matter

Glucose spikes are harmful. Short-term consequences include fatigue and hunger, while long term consequences include insulin resistance, type 2 diabetes, and heart disease. Each blood glucose spike leads to glycation, when sugar attaches to proteins to form advanced glycation end-products (AGEs). Excess AGEs cause collagen to become rigid, leading to accelerated skin aging and heart disease. Glucose spikes increase free radicals, increasing oxidative stress and damaging healthy cells, increasing the risk of chronic and degenerative diseases.

#### Short-term effects of glucose spikes include:

- Hunger
- Sugar cravings
- Fatigue
- Headaches
- Brain fog
- · Poor sleep
- Mood swings

#### Long-term effects of glucose spikes include:

- Skin aging/wrinkles
- · Increased cancer risk
- Depression
- Heart disease
- PCOS
- Insulin Resistance
- Type 2 Diabetes
- Fatty liver disease

Glucose spikes don't have to control your health. By making mindful dietary choices, staying active, and monitoring your glucose levels, you can stabilize your blood sugar and live a healthier, more energized life."

# **Preventing Glucose Spikes**

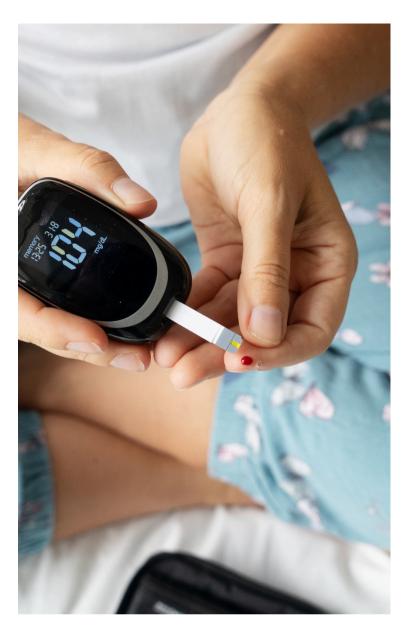
Now for the good news! You don't have to overhaul your life to make a significant impact on blood sugar control. By making simple dietary and lifestyle changes, you can stabilize your blood sugar levels and improve your overall health.

#### 1.GO LOW-CARB

Carbohydrates cause blood sugar levels to rise. Reducing your overall carbohydrate intake will lower your blood sugar.

#### 2. NO NAKED CARBS

Combining carbohydrates with proteins and healthy fats can slow the absorption of glucose into your bloodstream. This helps to prevent the sharp spikes that come from eating simple carbs on their own. For example, if you are eating fruit,



try pairing it with a handful of nuts or nut butter. Healthy fats such as olive oil, avocados, and nuts can also help stabilize blood sugar and prevent glucose spikes.

#### 3.AVOID REFINED CARBOHYDRATES

Refined or simple carbohydrates such as white bread, sugary beverages, cereals, and pastries are guaranteed to lead to a rapid glucose spike.

#### **4.EAT MORE FIBER**

Fiber helps slow the absorption of carbohydrates, allowing a steadier rise in blood sugar.

#### **5.REGULAR PHYSICAL ACTIVITY**

Exercise is a powerful tool for managing blood sugar. Even a short walk after a meal can help regulate glucose levels by stimulating muscle cells to take in glucose from the bloodstream. Regular physical activity also improves insulin sensitivity, meaning your body doesn't have to produce as much insulin to keep blood sugar levels in check

#### **6.TRY APPLE CIDER VINEGAR**

ACV has been shown to increase insulin response and help control blood sugar. Drink 1 Tablespoon in 12oz of water, before a meal to reduce glucose spikes.

# **Monitoring Glucose for Better Insights**

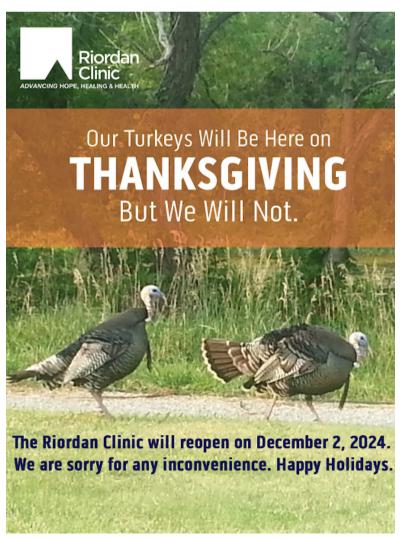
If you're concerned about glucose spikes, monitoring your blood sugar can provide valuable insights. Wearable devices,

such as continuous glucose monitors (CGMs), allow you to track your blood sugar levels in real-time, helping you identify how your body reacts to different foods and activities. Regular monitoring can help you make informed decisions about your diet and lifestyle, allowing you to take control of your health.

At Riordan Clinic, we offer comprehensive blood sugar testing that goes beyond the standard glucose test. Our unique lab profiles provide a detailed look at your blood sugar levels, insulin sensitivity, and other markers of metabolic health. With this information, we can help you create a personalized plan to manage your blood sugar and improve your overall well-being.

# You Have the Power to Manage Your Health

Glucose spikes don't have to control your health. By making mindful dietary choices, staying active, and monitoring your glucose levels, you can stabilize your blood sugar and live a healthier, more energized life. At Riordan Clinic, we're here to support you on your journey toward better health. Whether you're looking to prevent illness or manage a condition, taking control of your blood sugar is a key step in improving your long-term well-being.





# **METABOLIC SCORING:**

# Navigating Your Health Journey with Actionable Metrics

AUTHOR | Dr. Ron Hunninghake, MD

#### **FORWARD**

As someone who has been diagnosed with Metabolic Syndrome, I understand firsthand the frustration of grappling with an often misunderstood condition. So many individuals suffer in silence, unsure of where to turn for answers or how to take control of their health. The article you're about to read sheds light on an essential aspect of this condition—blood sugar regulation—and highlights the proactive steps we can take to regain balance in our lives. Through the Pre-Diabetic Profile, Riordan Clinic offers a powerful tool to not only understand your body's unique needs but also to empower you with the knowledge to make lasting, positive changes. Together, we can break the silence surrounding metabolic disorders and embrace a path to better health and well-being. - Jasmin Murphy, B.H.A., ACE-CPT

Dr. Ron Hunninghake, MD Chief Medical Officer

## My Quest for Better Health

I joined Dr. Hugh at Riordan Clinic in July 1989. Selfishly, my primary motive was to get healthier! I came from a long family history of diabetes. I was overweight, tired, and often depressed. Having been an extremely busy family doctor, I was thoroughly sleep-deprived and severely addicted to caffeinated diet pop. Like so many patients that I have seen over these years, I did not know how truly sick I was!

Fortunately, in my early days at Riordan, I became friends with Jack Challem, a medical nutrition reporter. Jack was a co-author

of Syndrome X, a book about the consequences of prediabetes, which is now more commonly referred to as Metabolic Syndrome. Jack and I went on to co-write a book: Stop Prediabetes Now. As we worked on this book together, it became eminently clear to me that, ironically, I was thoroughly prediabetic myself.

My fasting blood sugar was typically running in the 105-112 range at that time, which predicted that I was moving headlong into type 2 diabetes. Technically speaking, a type 2 diabetes diagnosis isn't given until one's fasting blood sugar hits 126 mg/dl or higher. By then, it is often too late to reverse the process. Once diagnosed with type 2 diabetes, a person is already entrenched in Metabolic Syndrome. At this time, terrible consequences of this treacherous illness begin to surface, and modern medicine has little to do but heavily medicate symptoms.

#### **Defining Metabolic Syndrome**

Metabolic Syndrome centers around five, early-warning risk factors:

 Increased blood pressure greater than 130/85 mm Hg or taking blood pressure medication.



- High blood sugar levels due to insulin resistance or taking diabetes medication.
- Excess fat around the waist measuring > 102 cm for men, and > 88 cm for women.
- A high triglyceride level measuring > 150 mg/dl.
- A low level of HDL measuring < 40 mg/dl in men, and < 50 mg/dl in women</li>

Keep in mind that even just one of these factors increases your risk of future chronic illness. Having three or more of these factors determines a diagnosis of Metabolic Syndrome, carrying with it an alarming rise in future complications.

#### The Complications of Metabolic Syndrome

As your metabolic system silently and progressively deteriorates, there is an ever-increasing likelihood of developing the following severe diseases: obesity, heart disease, diabetes, stroke, dementia, peripheral artery disease, cancer, autoimmune disorders, and nonalcoholic fatty liver disease. In time, eye damage (retinopathy), nerve damage (neuropathy), kidney disease (possibly requiring dialysis), and the amputation of limbs may result.

Strikingly, these disease states now constitute 75% of total U.S. health care cost expenditures! The American health care system is seriously floundering because of the dramatic growth of this many-headed dragon: Metabolic Syndrome.

#### A Lifestyle Illness

Doctors use the numerical thresholds of Metabolic Syndrome listed above to determine when to initiate pharmacologic interventions. Drugs can improve Metabolic Syndrome numbers and may serve to reduce the risk of future illness somewhat. Unfortunately, taking a drug often serves as a "medical excuse"

to perpetuate the very lifestyle behaviors that give rise to and exacerbate these risk factors.

I had to come to grips with my own adverse behavioral patterns. These did not make me a bad person, but they did compel me to be a more responsible person. Through the years of utilizing my own Metabolic Scoring system, I began to wake up and recognize my own "lifestyle illness."

## Treating the Symptom, Not the Cause

In a busy medical practice, it may be easier to treat Metabolic Syndrome risk factor numbers with medication alone. However, under the tutelage of Dr. Riordan, I learned that it is far wiser (although more challenging) to address the seven elements of a healthier lifestyle that I listed earlier.

Risk factor management is grossly undervalued in the actual practice of medicine. It often goes ignored because of two beliefs commonly held by medical providers:

Only drugs can change the numbers and reduce the risks. Patients are incapable of changing their cherished (but dangerous) lifestyle habits.

Granted, changing the medical drug paradigm will be a slow evolutionary process. Though difficult, changing your personal "health care paradigm" can take place much faster... IF you have the proper motivation.

## **Using Numbers to Motivate Change**

The real problem with lifestyle change is that it happens in such sloooooow motion! It is happening to you as you read this article right now, and you are probably not aware of it. As humans, we want to do something, and then expect to see a result immediately. Lifestyle change is more like gardening: patiently till the soil, plant the seed, water, hoe, weed, and wait – and wait – and wait. Finally, sprouts appear!

Our efforts to turn the Titanic-like ship of Metabolic Syndrome around also happens in the same slow way. We must grow our garden of new lifestyle habits gradually. It takes incredible patience and a strong will. Hence, the need for a tracking system. As humans, we like reliable information. It informs us and motivates us over the long haul. Metabolic Scoring is that tracking system.

Every 6-12 months, we will track a comprehensive profile of Metabolic Syndrome risk factors. We are tracking numerical changes to help you maintain motivation.

#### Track Your Numbers Regularly

Our medical care system is characterized by three modes of care:

- Acute: sudden illness, trauma, immediate need for medical attention
- Chronic: the illness has become chronic and requires recurrent visits to manage it
- *Episodic:* routine visits to our provider to prevent illness

Episodic care can also go by another, more familiar name: wellness! Wellness means staying well. Do not wait to get sick. Intervene daily to prevent illness.

Metabolic Syndrome is very sneaky: it comes on so slowly that its victim is almost always caught by surprise. Prevention relies on a metabolic-wellness tracking system involving episodic medical care that QUANTIFIES the nearly imperceptible progression of this disease syndrome.

# **Calculating your Metabolic Score**

Metabolic scoring is the method we have implemented to track and prevent the progression of Metabolic Syndrome and other complications. Calculation of the metabolic score is based on subjective data about symptoms and severity gathered from the patient, and a comprehensive record of objective measurements such as weight, blood pressure, waist circumference, and lab results, etc. (See below for all of the details) The goal is to continually maintain (if you are already in good health) or improve your score at each visit.

#### **Objective Measurements**

Resting Pulse Waist Circumference
Systolic Blood Pressure Diastolic Blood Pressure
Fasting Blood Sugar Fasting Triglycerides
Fasting HDL Fasting Triglycerides/HDL
Fasting Insulin Reverse T3
Ferritin Vitamin D3
C-Reactive Protein Fasting Glucose
HOMA Uric Acid
Alkaline Phosphate ALT + GGT
LDH (Hypoglycemia) Grip Strength
VO2 Max BMI (Body Mass Index)
% Body Fat (Impedance) Visceral Fat Rating
Metabolic Age Muscle Mass

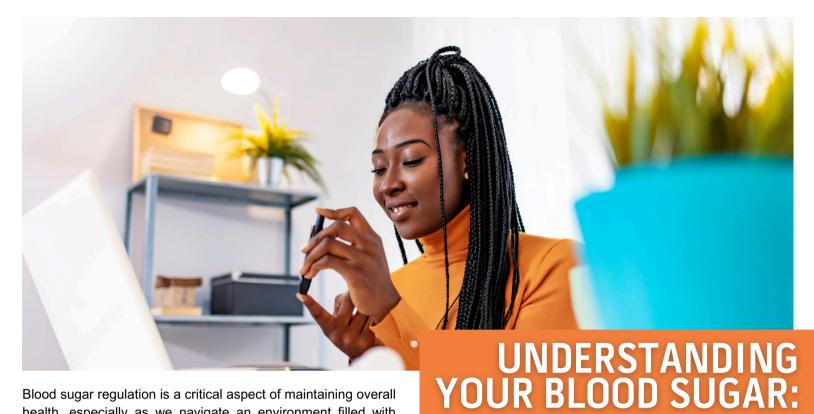
# **Subjective Symptoms**

Mid to late afternoon fatigue Headaches
Puffy ankles Trouble losing weight
Numbness in hands or feet Shaky when hungry
Snoring at night Heartburn (or on meds)
Sweets, carbs, snack cravings Meals tend to be starchy
Dieting Often feeling too warm
Often having cold hands Energy crashes

To effectively prevent Metabolic Syndrome, you must first become aware of your risk factors and then track their progression over time. Annual Metabolic Scoring and episodic medical care will increase your awareness, your motivation, and your ongoing success. By implementing better lifestyle choices and adopting a model of self care, you can successfully stave off the slow, but dire consequences of Metabolic Syndrome. Metabolic Scoring has made a huge difference in my life. Now I hope it can be the key difference in yours.

Learn More About The Metabolic Scoring Lab <a href="https://riordanclinic.org/lab-tests/metabolic-scoring-profile/">https://riordanclinic.org/lab-tests/metabolic-scoring-profile/</a>

If you're a current patient, consult your provider team before ordering this profile. Non-patients can order without a doctor's referral. Please note for non-patients, this cannot be billed to Medicare or insurance.



Blood sugar regulation is a critical aspect of maintaining overall health, especially as we navigate an environment filled with dietary temptations, stress, and increasingly sedentary lifestyles. At Riordan Clinic, we believe that you have the power to heal, and one of the ways we can support you in that journey is through a deeper understanding of your body's unique needs—particularly when it comes to managing blood sugar. That's where our Pre-Diabetic Profile comes in.

#### What is the Pre-Diabetic Profile?

The Pre-Diabetic Profile is a targeted set of laboratory tests designed to give you an early and thorough understanding of how your body is managing blood glucose. Rather than waiting for the signs of diabetes to appear, this test offers proactive insights, allowing you to take control of your health before more serious issues arise. By addressing imbalances early, you can prevent the onset of type 2 diabetes and protect yourself from its long-term effects.

At the core of this profile are tests that measure fasting glucose, insulin, and hemoglobin A1c (HbA1c)—markers that provide a window into your body's glucose regulation over time. Additionally, the profile includes assessments for insulin resistance, inflammation, and key metabolic functions. Together, these results offer a complete picture of your blood sugar "terrain," empowering you to make informed decisions for your health.

## **Why Early Detection Matters**

Many people are unaware they are on the path to diabetes until it's too late. Early detection through our Pre-Diabetic Profile can be a game-changer. You might not notice the subtle warning signs like fatigue, frequent urination, or slight weight gain, but these symptoms can point to underlying metabolic dysfunction. With our unique, integrative approach, you can be

proactive rather than reactive, preventing further complications by tackling blood sugar irregularities before they escalate.

More than just diagnosing diabetes, our approach focuses on empowering you. Armed with the knowledge gained from this profile, you can adopt dietary, lifestyle, and supplement strategies that will help keep your blood sugar in check.

# **Complications of Uncontrolled Blood Sugar: Beyond the Numbers**

While managing blood sugar is essential for immediate health, the long-term risks of uncontrolled blood sugar go far beyond what we see on a day-to-day basis. Prolonged high blood sugar levels, common in both diabetes and prediabetes, can lead to several severe complications that affect almost every system in the body.

#### Kidney Disease

One of the primary risks is diabetic nephropathy, where the kidneys are damaged over time, leading to chronic kidney disease or even kidney failure. This happens when the kidneys' tiny filtering units become damaged from high glucose levels, leading to improper waste removal from the blood. Kidney disease often progresses slowly, making early detection and intervention crucial.

### Peripheral Neuropathy and Nerve Damage

Another significant complication is peripheral neuropathy, where nerve damage—particularly in the extremities—occurs. This can lead to symptoms such as tingling, pain, or numbness, particularly in the feet and hands.

Left untreated, nerve damage can worsen, potentially leading to amputation in severe cases.

#### Diabetic Retinopathy

High blood sugar can also cause damage to the blood vessels in the retina, leading to a condition known as diabetic retinopathy. If left unmanaged, this condition can progress to vision loss or blindness.

#### Hypertension and Cardiovascular Risks

People with high blood sugar are at increased risk for developing hypertension (high blood pressure), which puts extra strain on the heart and arteries. Over time, this can lead to serious cardiovascular issues, including stroke and myocardial infarction (heart attack), which are among the leading causes of death in people with diabetes.

#### Non-Healing Wounds

Chronic high blood sugar also impairs the body's ability to heal wounds. This is due to a combination of reduced blood flow, nerve damage, and poor immune function, which can increase the risk of infections. Non-healing wounds, especially on the feet, can escalate into severe infections, leading to amputations.

By addressing blood sugar imbalances early with tools like the Pre-Diabetic Profile, you can help prevent these complications and maintain a higher quality of life. The sooner you identify potential risks, the quicker you can take action to mitigate them, empowering your journey toward sustained health.

Take control of your health today. By addressing blood sugar regulation early, you can prevent serious complications down

the road and unlock your body's full potential for healing. The journey toward better health starts with understanding your unique needs—and we're here to guide you every step of the way.

To learn more about becoming a Co-Learner, the Pre-Diabetic Profile or to schedule your test, visit us at Riordan Clinic and begin the journey toward empowered health today.

#### Why Choose the Riordan Clinic?

We take a holistic approach to wellness. At Riordan Clinic, we don't just look at lab results—we look at the entire person. Blood sugar management is not just about numbers; it's about how your lifestyle, diet, stress levels, and environmental factors all contribute to your health. We take the time to understand your unique health profile, empowering you to make decisions that are right for you.

Whether you're just beginning to address blood sugar imbalances or you've been managing them for some time, we're here to support you with personalized strategies, ongoing education, and a compassionate approach.

## **Taking Action: The Path Forward**

With the knowledge you gain from the Pre-Diabetic Profile, the next step is creating a health plan that works for you. Current co-learners can have their providers order the test for them and will receive actionable feedback based on their results. Non-co-learners have the option to order the test independently but will need to schedule an appointment and become a patient to receive provider feedback.

# KETO AVOCADO CHOCOLATE MOUSSE

Managing blood sugar levels doesn't mean sacrificing delicious flavors. This Keto Avocado Chocolate Mousse offers a rich, indulgent treat while keeping carbs low and supporting blood sugar regulation. The creamy avocado base, combined with high-quality unsweetened cocoa and a natural sweetener, makes this dessert both satisfying and diabetes-friendly.



#### Ingredients

2 ripe avocados

3 tbsp unsweetened cocoa powder

3-4 tbsp natural sweetener (like stevia or erythritol)

1/2 cup coconut cream

1 tsp vanilla extract

Pinch of sea salt

#### **Directions**

In a blender or food processor, combine the avocados, cocoa powder, sweetener, coconut cream, vanilla extract, and sea salt.

Blend until smooth and creamy. Adjust sweetness to taste.

Chill for at least 30 minutes before serving.

Serve in small bowls and top with fresh berries or a sprinkle of cocoa nibs for added texture.

# **Contact the Editor**

Please send any comments or suggestions to newseditor@riordanclinic.org
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# The Latest Information and Top Experts in Functional and Integrative Medicine



The Hidden Dangers Lurking in Your Mouth: Dental Biofilms Exposed with Dr. Tom Levy

In this episode of the Real Health Podcast, Chief Medical Officer Dr. Ron Hunninghake, MD, and Dr. Thomas Levy, MD, JD, discuss the the secret health saboteur you can't see, dental biofilms.



Conquering Cancer: Nutrition Secrets for Survivors with Jen Nolan

In this episode of the Real Health Podcast, Chief Medical Officer Dr. Ron Hunninghake, MD, welcomes back Jenn Nolan, the owner of Remission Nutrition as they discus the critical topic of cancer survivorship. Jenn shares insights on the importance of nutrition for those in remission, practical advice for rebuilding health post-therapy, and how to prevent recurrence.

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