Dr. Marlene's
NATURAL HEALTH CONNECTIONS

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Movement Matters More Than You Think — Part Two

Change Your Metabolism for Hours

Why Timing Matters More Than You Think

Last week, we looked at what happens when exercise becomes predictable. When you repeat the same movement at the same pace, your body becomes efficient. You burn fewer calories at that pace, recruit fewer muscle fibers, and eventually maintain instead of improve. That's not a problem — it's how physiology works. But it does raise an important question: if adding variation matters, what actually changes inside the body when you do?

This week, I want to shift the focus slightly. Not to how long you move, and not even primarily to how hard you move, but to when you move and how often your muscles contract throughout the day.

Over the years, I've had many patients tell me they were exercising consistently, yet their blood sugar numbers stayed the same, for the most part. They would walk for thirty minutes in the morning and feel confident they had "done their exercise." And then something interesting would happen. When they began adding short bouts of more intense movement later in the day — sometimes just a few minutes at a time — their readings began to improve.

I've had many patients report that within days of adding short "speed walks" or a little resistance work, their glucose readings begin to shift. In some cases, the change was visible the same day. I had one patient who did three tiny workouts in a day, literally a few minutes each time, and his blood sugar was normal the next day, for the first time in **YEARS!**

That kind of response feels dramatic. But once you understand what muscle contraction actually does at the cellular level, it becomes much less mysterious.

The "Miraculous" Override

This dramatic and somewhat instantaneous change occurs on the cellular level. Your exercise — those muscle contractions — change how glucose enters cells, and it does so through a pathway that does not rely on insulin.

Under normal circumstances, glucose enters muscle cells largely through insulin signaling. Insulin binds to receptors on the cell surface and helps move transporters — called GLUT4 — to the membrane so glucose can enter.

When insulin resistance develops, that signaling pathway doesn't work as well.

The GLUT4 transporters don't move to the cell surface as effectively. Glucose remains in the bloodstream longer than it should. Cells struggle to access fuel efficiently.

Here is the part most people never hear: no matter how insulin-resistant you are, working muscles can still pull glucose out of the bloodstream. I want you to really hear what I'm saying here — **NO MATTER HOW INSULIN-RESISTANT OR DIABETIC YOU ARE**, movement will "force" your cells to take up glucose, removing it from your blood.

And results happen quickly — shortly after exercise, and if you do it often enough, you'll see results in your fasting morning glucose, just like my patient experienced.

When a muscle contracts, it activates GLUT4 transporters through a separate mechanism that bypasses insulin entirely. That contraction itself signals the cell to allow glucose in. After contraction-mediated GLUT4 activation, muscle tissue remains more sensitive to insulin for hours. **HOURS.** In many studies, improved insulin sensitivity persists for up to twenty-four hours, depending on the intensity and duration of the activity.

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The body is not simply "burning off sugar." What is happening is more interesting than that (at least, for me, a science dork!). For a period of time, your muscles improve their ability to move glucose into cells efficiently. That improvement gradually fades if movement stops completely, but it can be renewed every time muscles contract in a meaningful way.

This is where timing becomes powerful.

Frequency Can Matter More Than Duration

Many people assume that one longer workout will carry them through the entire day. But glucose levels rise after meals, during stress, and during long periods of sitting. If you exercise once in the morning and then remain mostly sedentary, your muscles are no longer taking up much glucose from the bloodstream.

When you spread movement throughout the day, you repeatedly activate muscle-based glucose uptake. Instead of one window of improved insulin sensitivity (if you exercise once a day), you create several. Three short sessions can sometimes outperform one longer, steady session because they create three separate opportunities for glucose transport and improved cellular access to fuel.

This principle extends beyond blood sugar. Regular muscle contraction improves circulation, increases nitric oxide production, enhances mitochondrial function, and stimulates enzymes involved in energy production. Muscle tissue is metabolically active, meaning it influences far more than just movement alone. When you activate muscles multiple times a day, you influence metabolism all over the body.

The key is that the activity **MUST** exceed the body's adaptation. You don't have to go to extremes, but you do have to make it count — be a little out of breath, break a light sweat, and work slightly outside your comfort zone. If the activity is too easy, the physiological response won't be much.

When the effort increases, the response increases with it. Meaning, in plain English, you become less insulin-resistant each time. And if you don't have blood sugar issues? You're getting fitter each time. And this effect can be cumulative.

Putting This Into Practice: Creating Movement Windows Throughout the Day

Rather than asking, "Did I exercise today?" consider asking, "How many times did my muscles do something challenging today?" That shift in thinking may seem small, but it changes how you view the entire day. When exercise becomes a single daily event — something you check off in the morning — it can feel complete. But metabolically, the day is long. Blood sugar rises after meals, during stress, and even during long stretches of sitting. If your only meaningful muscle contraction happened early in the morning, the rest of the day may pass without much support from muscle tissue.

If you already exercise once daily, keep that session. The adjustment this week is not to replace it, but to add one or two short movement windows at different times of the day. These are not full workouts, and they are not meant to be. They are brief periods of intentional muscle contraction that reactivate glucose transport and improve insulin sensitivity again. Each time muscle fibers contract meaningfully, GLUT4 transporters move to the cell surface and allow glucose to enter the cell through a pathway that does not rely entirely on insulin. That effect does not remain maximally active all day. It gradually fades if muscles remain inactive, but it can be renewed each time you contract them again with purpose.

This is why frequency can sometimes matter more than duration. A single thirty-minute walk in the morning is helpful, but three shorter sessions spread throughout the day create three separate opportunities to improve glucose handling. Instead of one window of improved insulin sensitivity, you create several. Over time, those repeated activations can accumulate in a way that feels disproportionate to the amount of time invested.

For example, a brisk eight-to-ten-minute walk after a meal can significantly influence how glucose is handled. Climbing stairs for two minutes, performing a set of bodyweight squats between tasks, or using resistance bands before dinner can all serve the same purpose. Carrying something moderately heavy across the room instead of pushing it on a cart can create enough additional force production to matter. These actions may seem small, but they are physiologically meaningful when done with intent.

What makes these effective is not their length but their placement and intensity. The effort should exceed what your body considers routine. That does not mean exhaustion, and it does not require extreme effort. It simply means your breathing increases slightly, your muscles feel engaged, and the movement demands more than casual activity. If it feels exactly like walking around the house or completing ordinary chores, it may not be enough to activate the response we're looking for.

When you begin to think of these as "movement windows," you shift from viewing exercise as a single daily event to seeing it as a series of metabolic opportunities throughout the day. That perspective changes the rhythm of how your body handles fuel. Instead of allowing glucose to circulate for extended periods, you repeatedly give your muscles the chance to pull it in and use it.

If you monitor blood sugar, you may notice changes within hours. Fasting numbers may begin to shift after several days of consistent frequency. If you do not monitor glucose, you may notice steadier energy between meals, clearer thinking in the afternoon, or less heaviness after eating. Those changes are not simply the result of burning calories. They reflect improved glucose transport and improved insulin sensitivity at the cellular level.

You are not "working off" food. You are improving how your muscles handle it. And when that happens multiple times a day, the effect can build in a way that feels surprisingly powerful for something that only takes a few minutes at a time.

Try This Today: *Three Ways to Use Timing to Your Advantage*

1. Move After Your Largest Meal

Within thirty minutes of finishing your largest meal of the day, take a brisk ten-minute walk. Walk fast enough that your breathing increases slightly but remains controlled. This timing matters because glucose is actively entering your bloodstream from digestion. Contracting muscles at that moment helps pull it into cells more efficiently. If you track glucose, observe what happens over the next few hours.

2. Interrupt Long Sitting Periods

If you spend extended periods seated, set a timer every sixty minutes. When it goes off, stand up and perform two minutes of muscle engagement — bodyweight squats, wall push-ups, marching in place, or carrying something moderately heavy (like dumbbells, as an example). These brief contractions reactivate GLUT4 transporters and improve glucose handling again. Over the course of a day, these small interruptions can accumulate into significant metabolic changes.

3. Add Brief Intensity Bursts

The next time you take a walk, increase your pace for twenty to thirty seconds, then slow down until your breathing returns to normal. Repeat this three to five times. These short bursts, often referred to as high-intensity intervals, are one of the fastest ways to increase GLUT4 activation, calorie expenditure, cardiovascular demand, and metabolic responsiveness. In this case, pay attention to how you feel later in the day, or monitor your glucose if you track it.

What's Next?

Part Three of Movement Matters More Than You Think

In Part Three, we'll build on this idea by looking at muscle tissue itself, how it changes over time, why it naturally declines if it isn't challenged, and why preserving muscle may be one of the most important factors in long-term stability and independence.

About Dr. Marlene

Dr. Marlene Merritt's passion for natural medicine is fueled by her drive to help others, and her own experience of overcoming a debilitating heart condition, diagnosed at the age of 20. A competitive cross-country cyclist at the time, she suddenly began experiencing severe chest pains. Forced to quit the sport, she suffered from extreme fatigue and constant pain for another 15 years, despite doing everything that conventional, Western medical doctors told her to do.

And then, the tide turned. A physician trained in naturopathic healing recommended a whole-food vitamin E supplement. A week after starting the supplement regimen, her energy began to return, and the pain began to disappear.

Dr. Marlene is a Doctor of Oriental Medicine, has a Master's in Nutrition, and is an Applied Clinical Nutritionist. She is Board Certified in Bariatric Counseling, and certified in the Bredesen MEND Protocol,™ a groundbreaking method of reversing Alzheimer's disease. She sees patients at the Merritt Wellness Centers in Austin, Texas, and Santa Fe, New Mexico, trains health practitioners nationwide, and is the author of Smart Blood Sugar and The Blood Pressure Solution.

HOW TO STOP NERVE DISCOMFORT

and Get Normal Feeling in Your Hands and Feet Again

Are you annoyed by occasional nerve discomfort? That's putting it mildly. It's probably driving you crazy – making simple tasks difficult and preventing you from enjoying life.

Well, here's good news, even if you've tried everything and are ready to give up…

The only way to silence nerve discomfort is to actually nourish and repair your nerve network. How? By giving your nerves the exact nutrients they need to thrive.

If you're a gardener, you're no doubt familiar with a product called *Miracle-Gro*®. It provides the precise nutrients that plants need to thrive. And to gardeners who see their plants come alive and stay healthy, it does seem like a miracle.

It's the same for your nerves. If you're suffering occasional nerve discomfort, you need specific nutrients that can bring your network back to good health. Restore that normal feeling. And make life enjoyable again.

How? That's easy. Use Primal Labs' ***Advanced Nerve Support***.

Advanced Nerve Support contains a special form of vitamin B1 called Benfotiamine. Studies show **Benfotiamine helped patients feel greater "touch" sensory perception, and a lower level of nerve discomfort.**

Advanced Nerve Support also contains vitamins B6 and B12. **Vitamin B6** ensures the messengers along your nerve network – your neurotransmitters – can communicate properly. Here's how…

Vitamin B6 helps sooth tender nerves by helping them maintain healthy coverings. You see, your nerves are covered by a special material called the myelin sheath. It's like the insulation on electrical wires. If this insulation gets frayed or broken, the signals to the brain will be garbled.

That's when normal sensation is compromised and the feeling can be off, or even the opposite of what it should be. The result is discomfort.

Vitamin B12 aids in the normal repair of the myelin sheath. And it also nourishes the precious nerve fibers inside the sheath. Studies show B12 increases nerve regeneration, while reducing ectopic nerve firings – those acute, random sensations that seem to have no source.

When you combine B-12 with Benfotiamine and vitamin B6, *it's like Miracle-Gro® for your nerves*, helping to bring about rejuvenation and soothing relief. ***Advanced Nerve Support*** also contains **Acetyl-L-carnitine and Alpha Lipoic Acid** – two more nutrients that nerves need for healthy function.

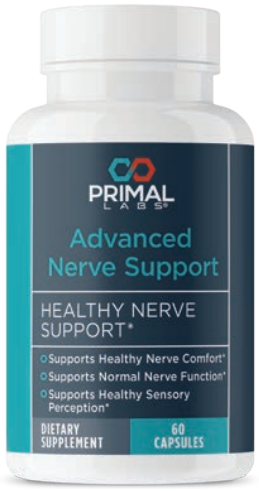
Studies show that Acetyl-L-Carnitine "promotes a healthy nervous system and normal nerve response." And Alpha Lipoic Acid, taken daily, may significantly reduce nerve discomfort in as little as 3 weeks.

As you can see, ***Advanced Nerve Support*** has everything you need to soothe your nerves and restore normal feeling.

Advanced Nerve Support contains no egg, milk, peanuts, tree nuts, shellfish, fish, soy, wheat, gluten, sugar or preservatives.

Ready for relief? Good, because right now you can get 15% off any size order of ***Advanced Nerve Support***. Simply visit the URL below to lock in your special savings.

Don't wait. Order now.
Your nerves will be glad you did!



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to Save 15% on your order

Q&A

Q: **Does everyone benefit from cutting out gluten? — Jenny K.**

A: Not necessarily — and this is where individual response really matters.

Some people tolerate gluten without obvious symptoms. Others experience more subtle reactions like bloating, irregular digestion, fatigue, brain fog, joint discomfort, or skin changes that they may not immediately connect to wheat-based foods. Because those symptoms can be delayed or mild, the connection isn't always clear.

For someone with celiac disease, strict avoidance is essential. Even small amounts can trigger intestinal damage. But outside of celiac disease, there's a spectrum. People with autoimmune conditions, chronic digestive symptoms, or persistent inflammation sometimes notice meaningful improvement when gluten is removed.

It's also important to remember that many gluten-containing foods are refined carbohydrates. When those foods are reduced, insulin levels often stabilize, blood sugar swings decrease, and overall inflammation may improve. In some cases, the benefit comes not just from removing gluten — but from removing highly processed starches.

Rather than assuming everyone must eliminate gluten long-term, I usually recommend a structured trial. Remove it completely for several weeks, then reintroduce it in one meal like a pasta dish and observe how you feel.

Q: **My cholesterol is high. Does that automatically mean heart disease? — David L.**

A: Not automatically — and this is where the details really matter. Cholesterol is often reduced to a single number, but it's more complex than that. LDL cholesterol, commonly labeled "bad," comes in different particle sizes. Larger, buoyant LDL particles are generally considered less likely to contribute to plaque buildup, while smaller, dense LDL particles are more strongly associated with cardiovascular risk.

Those smaller particles are influenced by insulin resistance and inflammation — not just dietary fat. When blood sugar is unstable and insulin remains elevated, cholesterol patterns tend to shift in a less favorable direction.

Triglycerides and HDL cholesterol also provide important clues. Elevated triglycerides and low HDL frequently reflect metabolic stress, particularly from excess refined carbohydrates and poor insulin sensitivity.

Instead of focusing on total cholesterol alone, it's more helpful to look at the full lipid profile in the context of overall metabolic health. Cholesterol is part of the picture — but context is what gives it meaning.

Q: **Is it true that eating too little can slow metabolism? — Rachel S.**

A: Yes, it can — particularly when calorie restriction is significant and prolonged.

When you consistently eat too little, the body adapts by conserving energy. Resting metabolic rate can decline, and muscle mass may decrease if protein intake and resistance training aren't adequate. Because muscle is metabolically active tissue, losing it further lowers the number of calories your body burns at rest.

Over time, the body becomes more efficient at doing more with less — which may sound helpful, but it makes continued weight loss and long-term maintenance much harder. This is one reason extreme dieting often leads to plateaus or rebound weight gain once normal eating resumes.

A more sustainable approach focuses on preserving muscle, stabilizing insulin levels, and nourishing the body appropriately — rather than simply cutting calories.

Do you have a question for Dr. Marlene?

Send your health-related questions to drmarlene@naturalhealthconnections.com. Please include your first name and the initial of your last name. Although she cannot answer each question directly, Dr. Marlene will select a few in each newsletter and will address other questions and concerns in articles in future issues. Answers are intended for educational purposes only and should not be viewed as medical advice. If you need help with your subscription or have questions about Primal Health supplements, email support@primalhealthlp.com or call 877-300-7849.