The 15-Minute Daily Habit That Drops A1c Transcript

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Introduction

What if the best What if the best exercise for exercise for blood sugar levels isn't blood sugar levels isn't running? And not a running? And not a gym? And you gym? And you don't even need to don't even need to change clothes for it? Some change clothes for it? Some of the most effective of the most effective movements against movements against insulin resistance insulin resistance insulin resistance take between two and take between two and ten minutes. You ten minutes. You can do them in can do them in the kitchen, at your the kitchen, at your desk, or even while desk, or even while sitting in front of sitting in front of the TV. And the TV. And the research behind it is the research behind it is very very very real. I am Dr.

real. I am Dr. Ahmet Ergin. I am Ahmet Ergin. I am an endocrinologist in Port St. Lucie, St. Lucie, Florida. Today I'll Florida. Today I'll show you exactly which show you exactly which movements are best for movements are best for lowering lowering lowering glycated glycated glycated hemoglobin levels, why it hemoglobin levels, why it works at the level of your works at the level of your muscles and mitochondria, and a simple and a simple daily plan that daily plan that takes about 15 takes about 15 minutes, even if minutes, even if you're 70, you're 70, overweight, have sore knees, overweight, have sore knees, or haven't exercised in or haven't exercised in years. Stay until years. Stay until the end, because I'll also the end, because I'll also cover aspects of cover aspects of functional functional functional medicine that medicine that most doctors most doctors miss: how sleep, miss: how sleep, stress, magnesium, protein, and stress, magnesium, protein, and meal timing meal timing can double the can double the effectiveness of your effectiveness of your workouts.

workouts.

Why Movement Works Like Medicine

Why movement works like medicine. Let me explain Let me explain what what what insulin resistance insulin resistance insulin resistance actually is. Because once you actually is. Because once you understand that, everything understand that, everything else will become logical.

else will become logical. Your muscles are the Your muscles are the biggest “sponge” biggest “sponge” for sugar in your for sugar in your body. After a meal, body. After a meal, most of the most of the glucose, which is glucose, which is removed from the blood removed from the blood by insulin, by insulin, enters the muscles.

enters the muscles. Normally, insulin knocks on the door of a knocks on the door of a muscle cell, and muscle cell, and the cell opens a the cell opens a tiny glucose tiny glucose gate gate gate called GLUT4.

called GLUT4. Sugar gets Sugar gets inside, and inside, and blood sugar levels blood sugar levels drop. With drop. With insulin resistance, insulin resistance, insulin resistance, insulin is knocking, but insulin is knocking, but the door hardly the door hardly opens. So the opens. So the pancreas pancreas pancreas produces more and more produces more and more insulin to force insulin to force them to open.

them to open. High High High insulin levels stimulate insulin levels stimulate fat storage, fat storage, especially in the especially in the abdomen and liver, which abdomen and liver, which increases increases increases resistance. It's a resistance. It's a vicious circle. But vicious circle. But here's the best part.

here's the best part. When a muscle When a muscle contracts, it contracts, it opens the same opens the same glucose gates without glucose gates without the help of insulin. This is a the help of insulin. This is a completely independent completely independent mechanism. The contraction mechanism. The contraction activates an energy activates an energy sensor in the cell sensor in the cell called AMPK, and GLUT4 called AMPK, and GLUT4 moves to the moves to the surface on its own.

surface on its own. So, even if your So, even if your insulin isn't working insulin isn't working well, your muscles well, your muscles can still pull can still pull sugar out of your blood when you sugar out of your blood when you exercise.

exercise. exercise. Exercise is the Exercise is the tool that tool that bypasses bypasses bypasses insulin resistance insulin resistance insulin resistance and at the same time corrects and at the same time corrects it. And the effect lasts.

it. And the effect lasts. One session One session improves improves improves insulin sensitivity for insulin sensitivity for 24 to 48 hours. This is 24 to 48 hours.

What the Research Shows About A1C

This is why daily movements are why daily movements are better than one better than one big workout big workout once a week. What do once a week. What do studies say studies say about about about glycated glycated glycated hemoglobin levels?

hemoglobin levels? Let's talk about numbers. Let's talk about numbers. Because I don't want you to take my Because I don't want you to take my word for it. A word for it. A large meta-analysis in the large meta-analysis in the journal JAMA included 47 journal JAMA included 47 trials trials trials involving people with involving people with type 2 diabetes.

type 2 diabetes. Structured exercise Structured exercise reduced reduced reduced glycated glycated glycated hemoglobin levels by hemoglobin levels by hemoglobin levels by approximately 0.67%. In approximately 0.67%. In people who people who exercised for more than 150 exercised for more than 150 minutes per week, minutes per week, this figure this figure decreased decreased decreased by about 0.89%. Here's something for you by about 0.89%. Here's something for you to think about. Many to think about. Many diabetes medications diabetes medications lower lower lower glycated glycated glycated hemoglobin (A1C) levels by hemoglobin (A1C) levels by 0.5 to 1%.

0.5 to 1%. Physical exercise Physical exercise is in the same is in the same league. And the side league. And the side effects are better sleep, a good mood, a, a good mood, a stronger heart, and a stronger heart, and a longer life. So, longer life. So, what kind of exercise is what kind of exercise is best?

best? best? The researchers compared The researchers compared them directly. In the them directly. In the Heart D study, people Heart D study, people with type 2 diabetes with type 2 diabetes did only did only aerobic exercise, aerobic exercise, only strength only strength training, or training, or both. Only both. Only the combination significantly the combination significantly reduced A1C compared reduced A1C compared to the control group.

to the control group. Another large Another large study, DARE, study, DARE, showed the same thing. showed the same thing. Combined Combined Combined training turned out to be training turned out to be better than each type better than each type separately. So the honest separately. So the honest answer to the question answer to the question of the best exercise is muscle plus movement.

is muscle plus movement. Strength training to Strength training to create a larger " sugar sponge," and sugar sponge," and walking or other movement walking or other movement to keep that sponge to keep that sponge working. But here's what working. But here's what I really want you to I really want you to hear. It doesn't have to hear. It doesn't have to be a be a gym workout.

gym workout.

Switch #1: The After-Meal Walk

Some of the most interesting Some of the most interesting research from the research from the last 10 years last 10 years shows that short, small bursts of, small bursts of activity, done activity, done at the right time, can be at

the right time, can be incredibly incredibly incredibly effective. First effective. First change: a walk change: a walk after eating. If you after eating. If you only do one thing only do one thing from this video, from this video, do this one.

do this one. After you After you eat, your blood sugar levels eat, your blood sugar levels rise rise rise over the next 30–90 minutes. If you 30–90 minutes. If you sit, your muscles are sit, your muscles are actually asleep. So, all this sugar is, all this sugar is just floating around in your just floating around in your blood. If you blood. If you move, your muscles move, your muscles grab it grab it as soon as it arrives. A as soon as it arrives. A study in the study in the journal Diabetologia journal Diabetologia compared the two compared the two approaches in people with approaches in people with type 2 diabetes. One type 2 diabetes. One group walked for 30 minutes group walked for 30 minutes a day whenever they felt like it a day whenever they felt like it. Another. Another walked for only 10 minutes walked for only 10 minutes after each after each meal.

meal. meal. The total time is The total time is the same. Those who the same. Those who walked after eating had walked after eating had blood sugar levels that blood sugar levels that were about 12% lower overall. And lower overall. And after dinner, the after dinner, the largest and most largest and most sedentary sedentary sedentary meal for most meal for most people, it was people, it was about 22% lower. The same about 22% lower. The same amount of exercises, amount of exercises, but better results.

but better results. The only difference was in The only difference was in time. And you don't even time. And you don't even need 10 minutes. A need 10 minutes. A 2022 analysis in Sports 2022 analysis in Sports Medicine found that Medicine found that walking for just 2–5 walking for just 2–5 minutes after eating minutes after eating significantly reduced the significantly reduced the glucose spike.

glucose spike. Even standing Even standing helps a little, but helps a little, but walking helps walking helps more. How to more. How to simplify it. Walk simplify it. Walk for 15–30 minutes for 15–30 minutes after eating.

after eating. Start before your Start before your sugar levels sugar levels peak. Dinner is of the peak. Dinner is of the utmost importance. utmost importance.

If you can If you can only take one only take one walk, make it walk, make it after dinner. after dinner. No sidewalk? No sidewalk? Walk around your Walk around your house. Walk down house. Walk down the corridor.

the corridor. March in place March in place while watching TV. while watching TV. Wash dishes standing up. Wash dishes standing up. Then take out Then take out the trash on foot. Make the trash on foot. Make it a social it a social thing. Walk with your thing. Walk with your wife, grandchildren, and wife, grandchildren, and dog. Here on dog. Here on the coast, a 10-minute the coast, a 10-minute evening walk evening walk in the cool in the cool air is one of the air is one of the best things best things you can do for you can do for your sugar. That's all. This is the first switch.

Switch #2: Muscle Snacks

The second switch is muscle snacks. muscle snacks. Now let's create a Now let's create a sugar sponge. When sugar sponge. When people hear about strength people hear about strength training, they training, they imagine heavy imagine heavy bars. Forget about bars. Forget about it. To combat it. To combat insulin resistance, insulin resistance, insulin resistance, it is important to regularly it is important to regularly exercise your muscles, exercise your muscles, especially the largest ones: your especially the largest ones: your thighs, buttocks, and thighs, buttocks, and back. Your feet are the back. Your feet are the organ for organ for regulating regulating regulating blood sugar. The quadriceps and blood sugar. The quadriceps and glutes are your glutes are your largest muscles, and largest muscles, and therefore your most powerful therefore your most powerful glucose absorbers.

glucose absorbers. There are studies There are studies devoted to so- devoted to so- called "physical called "physical snacks." One snacks." One study in the journal study in the journal Diabetologia in Diabetologia in people with people with insulin resistance insulin resistance insulin resistance found that short found that short bursts of activity bursts of activity before meals—about before meals—about six one-minute six one-minute bouts— bouts—

bouts— controlled controlled controlled blood sugar levels better than a single 30- minute workout.

minute workout. You don't have to You don't have to go all out go all out like they do. Here's my like they do. Here's my muscle-building snack for muscle-building snack for beginners. It beginners. It takes about 5 takes about 5 minutes and you can minutes and you can do it before do it before dinner. First exercise : getting up from a : getting up from a chair. Sit on a chair. Sit on a sturdy chair.

sturdy chair. Stand up without Stand up without using your using your hands if you can, and hands if you can, and then slowly then slowly sit back down. Do it sit back down. Do it 10 times. If it's difficult, 10 times. If it's difficult, lean on your hands lean on your hands or grab a higher or grab a higher chair. This is the chair. This is the most important exercise most important exercise for anyone over 60, as it is a movement, as it is a movement necessary to necessary to maintain maintain maintain independence. Second independence. Second exercise: exercise: exercise: wall push-ups. Place wall push-ups. Place your hands on the wall at your hands on the wall at shoulder level.

shoulder level. Step your feet Step your feet back and bring your back and bring your chest closer to the wall. chest closer to the wall. Do it 10 times.

Do it 10 times. Too easy? Too easy? Move to the Move to the kitchen countertop, and kitchen countertop, and then to the floor. then to the floor. Third exercise: Third exercise: straight leg bends or " good morning". Hands good morning". Hands on hips, knees on hips, knees slightly bent, slightly bent, move your pelvis back move your pelvis back as if you were closing a as if you were closing a car door with your car door with your buttocks. Then buttocks. Then straighten up and straighten up and tighten your muscles.

tighten your muscles. Do it 10 times. This Do it 10 times. This activates the buttocks and the activates the buttocks and the back of the back of the thigh. Fourth thigh. Fourth exercise: pull-up of an exercise: pull-up of an expander or expander or backpack. Attach the backpack. Attach the available expander available expander to the door handle and to the door handle and pull towards you. Or pull towards you. Or take a backpack with take a backpack with a few books and a few books and pull it to your pull it to your hip. Do 10 hip. Do 10 times on each times on each side. Do this side. Do this circuit once or twice circuit once or twice. This will take 5 to. This will take 5 to 10 minutes. Do it 10 minutes. Do it at least two to three at least two to three times a week, and times a week, and ideally almost every day.

ideally almost every day. The rule of progress. The rule of progress. When 10 reps When 10 reps come easy, come easy, do 12, then 15, and do 12, then 15, and then slow down then slow down. 3 seconds to. 3 seconds to lower, 1 second lower, 1 second to raise. Then to raise. Then add some weight.

add some weight. Muscles respond to Muscles respond to challenge, not to challenge, not to suffering. Why it's more suffering. Why it's more important than many important than many people think. After people think. After age 40, we lose age 40, we lose muscle every decade muscle every decade if we don't if we don't use it.

use it. Less muscle means a Less muscle means a smaller “sugar sponge, ” which leads to ” which leads to increased levels of increased levels of glycated glycated glycated hemoglobin, even hemoglobin, even if your diet doesn’t if your diet doesn’t change. Building change. Building muscle is like muscle is like increasing the volume of increasing the volume of your fuel your fuel tank. This is especially tank. This is especially important if you important if you are taking Ozempic, Mounjaro, are taking Ozempic, Mounjaro, or Zepbound, as or Zepbound, as rapid weight loss rapid weight loss can lead to can lead to muscle loss. Strength muscle loss. Strength training protects them.

Switch #3: The Sitting Fix

The third change is seat adjustment. This is a change for people This is a change for people who say, "Doctor, I who say, "Doctor, I can't walk much. My knees, my back, my feet hurt." I hear you. Here's, my feet hurt." I hear you. Here's what you can do while what you can do while sitting. Researchers at sitting. Researchers at the University of the University of the University of Houston studied a movement Houston studied a movement they called the they

called the soleus push-up soleus push-up. This is a deep. This is a deep muscle of the lower leg, and it is muscle of the lower leg, and it is unusual. It is unusual. It is built for built for endurance and can endurance and can run for hours run for hours without fatigue, burning without fatigue, burning mostly mostly mostly blood sugar and fat. How to blood sugar and fat. How to do it? Sit on do it? Sit on a chair with your a chair with your feet flat on the feet flat on the floor. Raise your floor. Raise your heels as high as possible, heels as high as possible, keeping your toes keeping your toes on the floor. Then on the floor. Then lower your heels down.

lower your heels down. Repeat at a Repeat at a steady pace. That's steady pace. That's all. This is continuous all. This is continuous rising on toes in a rising on toes in a sitting position. In sitting position. In their their their laboratory laboratory laboratory study with a study with a small group of small group of people, performing this people, performing this exercise while exercise while sitting lowered sitting lowered blood sugar levels blood sugar levels after a glucose after a glucose drink by 52% and reduced drink by 52% and reduced insulin requirements by insulin requirements by 60%. I will be frank. It 60%. I will be frank. It was a small was a small study, and people study, and people did it for hours.

did it for hours. Not everyone will get these Not everyone will get these results, but the results, but the principle works. principle works. Muscle contraction Muscle contraction absorbs sugar, and this absorbs sugar, and this muscle is particularly muscle is particularly efficient at this.

efficient at this. So if you're still So if you're still sitting, let your sitting, let your calves work. How calves work. How to use it? to use it? Do this while Do this while watching TV, talking watching TV, talking on the phone, at the on the phone, at the table, or in the car as a table, or in the car as a passenger. After eating, passenger. After eating, if you can't if you can't walk, do walk, do soleus push-ups for soleus push-ups for 10-15 minutes. And this 10-15 minutes. And this raises a more raises a more important question.

important question. Prolonged sitting is a Prolonged sitting is a separate separate separate risk factor. The American risk factor. The American Diabetes Association Diabetes Association recommends taking recommends taking breaks every 30 breaks every 30 minutes. Stand up, minutes. Stand up, walk to the kitchen, walk to the kitchen, do 10 do 10 toe raises, touch your toes toe raises, touch your toes. These.

Your 15-Minute Daily Plan

These tiny breaks tiny breaks provide many muscle provide many muscle contractions per day. 15- minute daily minute daily plan. Let me plan. Let me summarize. This is what a summarize. This is what a realistic day looks like.

realistic day looks like. Morning. 2-5 minute Morning. 2-5 minute walk after walk after breakfast. Preferably breakfast. Preferably outside in daylight outside in daylight. I'll explain why in a. I'll explain why in a minute. Before or minute. Before or after lunch—5 minutes of after lunch—5 minutes of "muscle snacks" "muscle snacks" or 10 sit-ups.

After dinner, the After dinner, the most important thing is a 10- minute walk. minute walk. During the day, During the day, break your sitting break your sitting every 30 minutes.

every 30 minutes. While watching TV— doing push-ups on the doing push-ups on the doing push-ups on the soleus soleus soleus muscle. Total—about muscle. Total—about 15-20 minutes of 15-20 minutes of allocated time.

allocated time. No gyms, No gyms, special clothing, special clothing, or equipment other than or equipment other than a chair, a wall, and a chair, a wall, and maybe an expander. What maybe an expander. What if you want if you want more? Perfectly!

more? Perfectly! Aim for 150 minutes of Aim for 150 minutes of moderate activity moderate activity per week—one that allows you to talk but allows you to talk but not sing. Plus two or three days of strength three days of strength training. Swimming, training. Swimming, cycling, cycling, cycling, pickleball, dancing, pickleball, dancing, gardening, and tai chi all count count. The best exercise is the one. The best exercise is the one you you you will actually do.

will actually do. One piece of advice about time One piece of advice about time from scientific from scientific research. In research. In a study of a study of men with men with type 2 diabetes, type 2 diabetes, high-intensity high-intensity high-intensity exercise in the afternoon improved improved blood sugar levels better than the blood sugar levels better than the same exercise same exercise in the morning. This is not a hard and fast in the morning.

The Functional Medicine Approach

This is not a hard and fast rule, but if rule, but if you have a choice, exercising in the you have a choice, exercising in the afternoon afternoon afternoon or evening may or evening may provide a little provide a little more benefit, more benefit, especially for those who have especially for those who have high blood sugar levels high blood sugar levels in the morning. From a in the morning. From a functional functional functional medicine perspective: make your medicine perspective: make your exercises work exercises work twice as effectively.

twice as effectively. Here I want to Here I want to go deeper go deeper than the standard than the standard advice gives. Exercises do not advice gives. Exercises do not occur in a occur in a vacuum. If the rest of vacuum. If the rest of your your your body's systems are working body's systems are working against you, you against you, you will get less will get less benefit from each benefit from each step. First, muscles are an endocrine are an endocrine organ. When muscles organ. When muscles contract, they contract, they release signaling release signaling molecules molecules molecules called called called myokines. They myokines. They travel through your travel through your bloodstream and “communicate” bloodstream and “communicate” with your liver, with your liver, fat tissue, fat tissue, brain, and brain, and pancreas pancreas. Some of them. Some of them reduce inflammation.

reduce inflammation. Some help Some help the liver produce the liver produce less sugar. Some less sugar. Some help help help burn fat. This is burn fat. This is why people who why people who move move move feel better throughout their feel better throughout their body, not just their body, not just their legs. You're not just legs. You're not just burning calories. You burning calories. You are sending are sending are sending hormonal signals.

hormonal signals. Secondly, mitochondria are the “power plants” are the “power plants” of your cells. of your cells. Insulin resistance is Insulin resistance is Insulin resistance is closely linked to closely linked to sluggish sluggish sluggish mitochondria. Fat mitochondria. Fat accumulates accumulates accumulates inside muscle inside muscle cells because they cells because they don't burn it don't burn it efficiently, and this fat efficiently, and this fat interferes with interferes with insulin signaling. Regular movement,. Regular movement, especially walking and especially walking and stable stable stable loads like soleus soleus soleus push-ups, create push-ups, create more, healthier more, healthier mitochondria. Better mitochondria. Better mitochondria mitochondria mitochondria mean better mean better fuel burning, fuel burning, less muscle fat, and less muscle fat, and better better better insulin sensitivity. Third, insulin sensitivity. Third, sleep is a hidden sleep is a hidden insulin multiplier.

insulin multiplier. Short or poor Short or poor sleep increases sleep increases insulin resistance insulin resistance insulin resistance even in healthy even in healthy people and even after people and even after a few bad a few bad nights. You can nights. You can do everything right do everything right with your workouts but with your workouts but still struggle with still struggle with high sugar if high sugar if you sleep 5 hours a you sleep 5 hours a night or have night or have untreated apnea.

untreated apnea. Aim for 7–8 hours of Aim for 7–8 hours of sleep. If you snore sleep. If you snore or wake up or wake up tired, tired, tired, get checked out. And here's a get checked out. And here's a nice bonus: nice bonus: daily mobility daily mobility also improves also improves sleep quality.

Fourth, stress and Fourth, stress and cortisol. Cortisol cortisol. Cortisol increases increases increases blood sugar levels. blood sugar levels. Chronic stress Chronic stress keeps it keeps it high and high and deposits fat in the deposits fat in the belly. This is where a belly. This is where a light, calming light, calming activity like activity like walking walking walking outdoors, yoga, outdoors, yoga, or tai chi works or tai chi works double duty. You double duty. You get both get both muscle benefits and muscle benefits and stress reduction.

stress reduction. Even five Even five slow breaths slow breaths before eating, with a longer before eating, with a

longer exhalation than inhalation, exhalation than inhalation, tunes the nervous tunes the nervous system to system to rest and rest and digest. Five: digest. Five: Morning light and Morning light and your biological your biological rhythms.

rhythms. rhythms. Insulin sensitivity has a circadian Insulin sensitivity has a circadian rhythm and rhythm and works best in the works best in the morning. Morning morning. Morning light outside light outside helps helps helps set this set this biological clock. A short walk. A short walk after breakfast is after breakfast is movement, daylight, and a movement, daylight, and a better rhythm all at the better rhythm all at the same time. Eating your same time. Eating your main main main meal earlier and meal earlier and not not not snacking late snacking late at night maintain the at night maintain the same rhythm. Six: same rhythm. Six: protein—“feed protein—“feed protein—“feed the sponge.” You can't the sponge.” You can't build muscle without build muscle without building building building material. Many of material. Many of my elderly my elderly patients and people patients and people taking taking taking GLP-1 drugs GLP-1 drugs consume too little consume too little protein. A reasonable goal protein. A reasonable goal for most people is about 1–1.2 grams per about 1–1.2 grams per kilogram of body weight per kilogram of body weight per day, spread across day, spread across all meals. Fish, all meals. Fish, eggs, Greek yogurt, chicken, beans,, chicken, beans, lentils, and tofu—all are good lentils, and tofu—all are good choices. If choices. If you have you have kidney disease, kidney disease, consult your consult your doctor first, as your doctor first, as your norm may be norm may be lower. Seven: Magnesium and lower. Seven: Magnesium and Vitamin D. Magnesium is a Vitamin D. Magnesium is a cofactor in the insulin signaling pathway and insulin signaling pathway and energy production in energy production in muscles.

muscles. muscles. Magnesium deficiency is common in Magnesium deficiency is common in people with diabetes, people with diabetes, partly because partly because high sugar levels high sugar levels cause it to be cause it to be lost in the urine.

lost in the urine. Low Low Low vitamin D levels are also vitamin D levels are also linked to linked to insulin resistance insulin resistance insulin resistance and muscle weakness.

and muscle weakness. These are not magic pills, but if there is a deficiency,, but if there is a deficiency, addressing it addressing it will help muscles and will help muscles and exercise exercise exercise work better. It work better. It 's better to check 's better to check the level than to guess.

the level than to guess.

Eight: Your gut

Eight: Your gut loves movement too. loves movement too. Exercise Exercise Exercise alters the microbiome, alters the microbiome, increasing the number of increasing the number of bacteria that bacteria that produce produce produce short-chain short-chain short-chain fatty acids, which fatty acids, which improve improve improve glucose control and reduce glucose control and reduce inflammation. Combine inflammation. Combine movement with fiber: movement with fiber: vegetables, beans, vegetables, beans, oatmeal, oatmeal, oatmeal, chia seeds, and flax seeds—this way you'll chia seeds, and flax seeds—this way you'll support your system support your system on both sides. Nine: on both sides. Nine: hydration. Muscles are hydration. Muscles are mostly mostly mostly made up of water.

made up of water. Dehydration Dehydration Dehydration weakens you, weakens you, makes it harder to exercise, makes it harder to exercise, and can lead to and can lead to high high blood sugar levels. Drink water blood sugar levels. Drink water throughout the day, throughout the day, especially in hot weather.

Safety First: Move Smart

Safety first, Safety first, train smart. train smart. Exercise is Exercise is safe for almost safe for almost everyone, but there are a few everyone, but there are a few important points.

If you take If you take insulin or insulin or sulfonylureas (glipizide, glipizide, glipizide, glibenclamide, glibenclamide,

glibenclamide, glimepiride), exercise glimepiride), exercise can lower your blood can lower your blood sugar, sometimes sugar, sometimes within a few hours.

within a few hours. Check your Check your sugar levels before and after. sugar levels before and after. Keep Keep Keep glucose tablets with you and glucose tablets with you and discuss discuss discuss dose adjustments with your doctor.

dose adjustments with your doctor. As blood sugar levels improve with exercise, sugar levels improve with exercise, medication doses may medication doses may need to be reduced. This is good news. If you have. This is good news. If you have severe diabetic severe diabetic retinopathy, avoid retinopathy, avoid strenuous exercise, strenuous exercise, holding your breath, and holding your breath, and heavy lifting heavy lifting until your doctor gives you until your doctor gives you permission. Easy permission. Easy walking is usually walking is usually safe. If you have safe. If you have neuropathy, neuropathy, neuropathy, examine your feet examine your feet daily. Wear comfortable, daily. Wear comfortable, supportive shoes supportive shoes and socks, and and socks, and consider consider consider low- low- low- impact options like impact options like an exercise bike, an exercise bike, chair exercises, or chair exercises, or swimming. If you have swimming. If you have heart disease or heart disease or chest symptoms chest symptoms,,, get tested get tested before starting any strenuous any strenuous exercise. Walking is usually a is usually a safe start, safe start, but but but check with check with your doctor. If your doctor. If you take you take SGLT2 inhibitors such SGLT2 inhibitors such as Jardiance or Farxiga, stay as Jardiance or Farxiga, stay well hydrated well hydrated, especially in hot, especially in hot weather. Start at the weather. Start at the level level level you are at. If you you are at. If you can only do can only do one sit-up today one sit-up today —do —do —do one. Next one. Next week, do two.

week, do two. The goal is progress, not The goal is progress, not perfection. How perfection.

How to Know Itu2019s Working

How to know it's to know it's working. You don't working. You don't have to wait 3 have to wait 3 months for a months for a glycated glycated glycated hemoglobin test to hemoglobin test to see the result.

see the result. If you have a CGM, you If you have a CGM, you will see this immediately. will see this immediately. Eat the same Eat the same dinner two nights dinner two nights in a row.

in a row. Sit down after dinner one evening, and take a walk the next, and walk the next, and compare the graphs. compare the graphs. This is one of the most This is one of the most motivating motivating motivating experiments you will experiments you will ever do.

ever do. If you If you use use use a blood glucose meter, check your a blood glucose meter, check your level 2 hours level 2 hours after dinner on the day of after dinner on the day of the walk and on the day the walk and on the day without it. After a few without it. After a few weeks, you will notice weeks, you will notice more energy, more energy, better sleep, a smaller better sleep, a smaller waist, and a different fit of your waist, and a different fit of your clothes. Waist size clothes. Waist size is often a better is often a better indicator of indicator of indicator of improving improving improving insulin resistance insulin resistance than weight, as than weight, as you can build you can build muscle while losing fat.

muscle while losing fat. Within 3 months, your levels of Within 3 months, your levels of glycated glycated glycated hemoglobin, hemoglobin, hemoglobin, fasting insulin, and fasting insulin, and triglycerides should triglycerides should begin to change.

begin to change. Ask your Ask your doctor about doctor about fasting insulin and fasting insulin and triglyceride to triglyceride to HDL ratio. These are great HDL ratio. These are great markers of markers of markers of insulin resistance insulin resistance that many people that many people never get tested for.

Recap: The Three Essential Switches

So, let's summarize the three So, let's summarize the three changes. One. Walk changes. One. Walk after meals, even for 2-5 after meals, even for 2-5 minutes, especially minutes, especially after dinner. Two.

after dinner. Two. Have "muscle Have "muscle snacks." Getting up snacks." Getting up from a chair, from a chair, wall push-ups, wall push-ups, inclines and pull-ups. 5 inclines and pull-ups. 5 minutes several times minutes several times a week. Three.

a week. Three. Fix your Fix your seat. Take seat. Take breaks every 30 breaks every 30 minutes and do minutes and do toe raises toe raises when you can't stand up. Then back that up with. Then back that up with sleep, sleep, sleep, stress management, morning stress management, morning light, enough light, enough protein, and protein, and checking your checking your magnesium and vitamin D levels.

magnesium and vitamin D levels.

Final Thoughts

You don't need a You don't need a gym membership. You gym membership. You don't need don't need to spend an hour a to spend an hour a day. You need 15 day. You need 15 minutes throughout the day, minutes throughout the day, done done done consistently. Your consistently. Your muscles are waiting to muscles are waiting to help you. You help you. You just need to just need to wake them up. If this wake them up. If this video was helpful, video was helpful, try a walk try a walk after dinner after dinner today and write in today and write in the comments how the comments how your sugar changed. And your sugar changed. And if you're on the Treasure Coast and if you're on the Treasure Coast and want a want a want a personalized personalized personalized plan, we do that every day plan, we do that every day at the Diabetes, Thyroid and Hormone at the Diabetes, Thyroid and Hormone Center of the Treasure Coast. I am Center of the Treasure Coast. I am Dr. Ahmet Ergin.

Dr. Ahmet Ergin. See you in the See you in the next video. Don't next video. Don't forget to forget to like, like, like, share, and share, and