You Metabolism Isn't Broken. It's Overdrawn. Transcript

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Exhaustion vs. being overdrawn

Most people who tell me they're Most people who tell me they're exhausted aren't actually tired, they're exhausted aren't actually tired, they're overdrawn. A good example of this was a overdrawn.

The overworked tech executive case study

A good example of this was a recent appointment with a 47-year-old recent appointment with a 47-year-old tech executive who walked into my office tech executive who walked into my office and took out his phone and flipped to and took out his phone and flipped to his exercise app and he said, "I feel his exercise app and he said, "I feel like I'm doing everything right, but like I'm doing everything right, but nothing seems to be working." He wasn't nothing seems to be working." He wasn't really looking for help, he was looking really looking for help, he was looking for confirmation. Confirmation that if for confirmation. Confirmation that if he just pushed a little harder, he just pushed a little harder, everything would finally start to click.

everything would finally start to click. He runs a tech company in San Diego He runs a tech company in San Diego about 120 employees. Five or six times a about 120 employees. Five or six times a week he does high-intensity interval week he does high-intensity interval training. He does Peloton rides on the training. He does Peloton rides on the weekends. He has an Apple Watch on one weekends. He has an Apple Watch on one wrist and an Oura Ring on the other.

wrist and an Oura Ring on the other. He's tracking HRV, he's tracking steps, He's tracking HRV, he's tracking steps, and he's tracking training output. But and he's tracking training output.

A typical day of stress and poor recovery

But it interestingly he hasn't really looked it interestingly he hasn't really looked at his sleep data in a few months. His at his sleep data in a few months. His typical day looked like this. Coffee at typical day looked like this. Coffee at 5:30 in the morning.

5:30 in the morning. His first real food was around noon and His first real food was around noon and then dinner at about 8:00 or 8:30. then dinner at about 8:00 or 8:30.

Sleeping about 5 and 1/2 hours, maybe Sleeping about 5 and 1/2 hours, maybe six on a good night. When I asked about six on a good night. When I asked about the sleep, he said, "I just don't seem the sleep, he said, "I just don't seem to need much sleep." Every time I hear to need much sleep." Every time I hear that, I get a little suspicious. His that, I get a little suspicious. His labs came back and looked like this. His labs came back and looked like this. His fasting insulin was 14. We like to see fasting insulin was 14. We like to see this less than 10 and even better if this less than 10 and even better if it's less than six. His triglycerides it's less than six. His triglycerides were 195.

were 195. We like to see that less than 90. His We like to see that less than 90. His HDL was 40. It should be at least in the HDL was 40. It should be at least in the 60s.

60s. 60s. The The The So his triglyceride HDL ratio was 4.9 So his triglyceride HDL ratio was 4.9 and we like to see that less than 1.5. and we like to see that less than 1.5.

In clinical practice that ratio is one In clinical practice that ratio is one of the most revealing markers in of the most revealing markers in metabolic medicine. It's more metabolic medicine. It's more informative than LDL, it's more informative than LDL, it's more informative than total cholesterol. His informative than total cholesterol. His hs-CRP was 3.2. We want to see that less hs-CRP was 3.2. We want to see that less than one. His morning cortisol was high than one. His morning cortisol was high normal. His testosterone was mid-low for normal. His testosterone

was mid-low for his age. His ALT liver marker was at 48.

his age. His ALT liver marker was at 48. Most labs say less than 40 is Most labs say less than 40 is acceptable. We like to see it less than acceptable.

Lab markers reveal metabolic strain

We like to see it less than 25. So on paper nothing catastrophic, 25. So on paper nothing catastrophic, nothing flashing red, but the pattern nothing flashing red, but the pattern was actually unmistakable. On paper he was actually unmistakable. On paper he looked like someone doing everything looked like someone doing everything right. In reality his body was right. In reality his body was exhausted. This is important. This is a exhausted. This is important. This is a patient that was not lazy. He was not patient that was not lazy. He was not undisciplined. He was extremely driven.

undisciplined. He was extremely driven. By conventional standards he was doing By conventional standards he was doing more than most people ever will. And more than most people ever will. And that was actually the problem. Because that was actually the problem. Because the way he was thinking about metabolism the way he was thinking about metabolism was wrong. Not partially wrong, it was was wrong. Not partially wrong, it was fundamentally wrong. He believed his fundamentally wrong. He believed his body was a machine. Put in more work, body was a machine. Put in more work, restrict more input, push harder, restrict more input, push harder, eventually the machine will have to eventually the machine will have to comply. But metabolism comply. But metabolism doesn't work like a machine. Your doesn't work like a machine. Your metabolism works more like an economy.

metabolism works more like an economy. Think about what a budget actually is. Think about what a budget actually is. Money comes in, money goes out. If more Money comes in, money goes out.

Why metabolism is like an energy budget

If more goes out becomes inconsistently, you end goes out becomes inconsistently, you end up in debt. And debt changes how the up in debt. And debt changes how the system behaves. Your body works exactly system behaves. Your body works exactly the same. Except the currency isn't the same. Except the currency isn't dollars, the currency is energy. That dollars, the currency is energy. That energy funds your brain, your immune energy funds your brain, your immune system, your hormone production, muscle system, your hormone production, muscle repair, stress adaptation, and your body repair, stress adaptation, and your body is constantly checking the books. This is constantly checking the books. This is how I explained it to him. I drew two is how I explained it to him. I drew two columns on the whiteboard. On the left I columns on the whiteboard. On the left I put withdrawals, sleep debt, work put withdrawals, sleep debt, work stress, alcohol, high-intensity interval stress, alcohol, high-intensity interval training, inflammation, late-night training, inflammation, late-night eating. On the right I put deposits, eating. On the right I put deposits, sleep, protein, sunlight, recovery, sleep, protein, sunlight, recovery, circadian rhythm. Then I asked him a circadian rhythm. Then I asked him a simple question, "Which column looks simple question, "Which column looks more like your life?" He stared at the more like your life?" He stared at the board for a few seconds, then he said, board for a few seconds, then he said, "I've never thought about it this way." "I've never thought about it this way." The largest withdrawal for him was The largest withdrawal for him was sleep. Consistently sleeping 5 and 1/2 sleep. Consistently sleeping 5 and 1/2 hours instead of 7 and 1/2 or 8. That's hours instead of 7 and 1/2 or 8.

Sleep debt, stress, and alcohol

That's not just missing rest, that's missing not just missing rest, that's missing growth hormone secretion, growth hormone secretion, brain clearing metabolic waste through brain clearing metabolic waste through the glymphatic system, insulin the glymphatic system, insulin sensitivity resetting, mitochondria sensitivity resetting, mitochondria recovering. Sleep is not passive. Sleep recovering. Sleep is not passive. Sleep is the largest metabolic deposit is the largest metabolic deposit available. When you cut that deposit available. When you cut that deposit short,

everything downstream becomes short, everything downstream becomes more expensive. Then later in work more expensive. Then later in work stress, running a 120-person company stress, running a 120-person company means constant decisions, managing means constant decisions, managing people, managing uncertainty, managing people, managing uncertainty, managing revenue. Your body interprets all that revenue. Your body interprets all that through the same physiology it evolved through the same physiology it evolved for physical threat. Cortisol, for physical threat. Cortisol, sympathetic activation, your body sympathetic activation, your body doesn't really distinguish between a doesn't really distinguish between a tiger and an 11:00 p.m. email saying tiger and an 11:00 p.m. email saying that everything just went wrong. That that everything just went wrong. That may sound exaggerated, but physically may sound exaggerated, but physically and physiologically it's actually pretty and physiologically it's actually pretty accurate. Then there was the alcohol.

accurate. Then there was the alcohol. Two to three glasses of wine most Two to three glasses of wine most nights. I'm moralizing here about wine, nights. I'm moralizing here about wine, but metabolically alcohol always gets but metabolically alcohol always gets processed first, which means fat burning processed first, which means fat burning pauses, pauses, pauses, sleep quality degrades, deep sleep sleep quality degrades, deep sleep drops, and alcohol itself raises drops, and alcohol itself raises cortisol. So the thing most people use cortisol.

Training load and the cost of recovery

So the thing most people use to relax actually perpetuates the stress to relax actually perpetuates the stress cycle. And then there was the training.

cycle. And then there was the training. Five or six days a week of Five or six days a week of high-intensity sessions high-intensity sessions per week. Sometimes he even did some two per week. Sometimes he even did some two days. This is where high performers days. This is where high performers often struggle to hear the truth.

often struggle to hear the truth. Exercise is actually withdrawal, or at Exercise is actually withdrawal, or at least we call it a hormetic stressor. least we call it a hormetic stressor.

With proper recovery it produces With proper recovery it produces adaptation, but without recovery it adaptation, but without recovery it becomes an additional stress. Your body becomes an additional stress. Your body responds to signals, not effort. This is responds to signals, not effort. This is where the classic calories in and where the classic calories in and calories out model breaks down. It's not calories out model breaks down. It's not wrong, it's just incomplete. Your body wrong, it's just incomplete. Your body constantly monitors energy availability.

constantly monitors energy availability. When that availability drops too low for When that availability drops too low for too long, the body adapts. Thyroid too long, the body adapts.

Overdrawn metabolism and the path back

Thyroid output can decline, testosterone often output can decline, testosterone often drops, appetite increases, insulin drops, appetite increases, insulin resistance worsens, stored energy resistance worsens, stored energy becomes protected. Your body it's becomes protected. Your body it's protecting itself. There was one more protecting itself. There was one more detail that actually explained a lot. He detail that actually explained a lot. He said, "When I take a few days off from said, "When I take a few days off from training, I worse." I hear this quite a training, I worse." I hear this quite a bit actually. If I don't work out, I bit actually. If I don't work out, I gain weight. Rest days make me feel gain weight. Rest days make me feel worse. But that sensation is not proof worse. But that sensation is not proof that you need more training. By the way, that you need more training. By the way, we see this with people who go on we see this with people who go on vacation. Often times when they relax, vacation. Often times when they relax, that relaxation is actually enough of an that relaxation is actually enough of an opportunity for the immune system to opportunity for the immune system to kick in and they actually get sick. So kick in and they actually get sick. So this is actually all evidence that the this is actually all evidence that the nervous system has adapted to the nervous system has adapted to the chronic stress and the absence of that chronic stress and the absence of that stressor feels like withdrawal because stressor feels like withdrawal because in a physiological sense it is.

in a physiological sense it is. Eventually I said something to him that Eventually I said something to him that kind of changed the conversation. I kind of changed the conversation. I said, "Your metabolism isn't broken, said, "Your metabolism isn't broken, it's overdrawn." He went quiet. Not it's overdrawn." He went quiet. Not uncomfortably quiet, but like a thinking uncomfortably quiet, but like a thinking quiet. Then he said, "That's the first quiet. Then he said, "That's the first explanation that actually makes sense." explanation that actually makes sense." He runs a company. He understands He runs a company.

Restoring balance and improving results

He understands budgets, revenue, burn rate. He just had budgets, revenue, burn rate. He just had never applied the same logic to his never applied the same logic to his physiology. The interesting thing is we physiology. The interesting thing is we didn't add anything initially. We didn't add anything initially. We reduced two training sessions per week.

reduced two training sessions per week. We worked on extending his sleep window We worked on extending his sleep window towards 7 and 1/2 hours. We addressed towards 7 and 1/2 hours. We addressed the nightly alcohol. We shifted his meal the nightly alcohol. We shifted his meal timing earlier to better align with timing earlier to better align with circadian biology. His instinct was circadian biology. His instinct was resistance. This doesn't feel like resistance. This doesn't feel like enough. But eight weeks later his enough. But eight weeks later his fasting insulin had dropped, his fasting insulin had dropped, his triglycerides were falling, morning triglycerides were falling, morning energy had improved. He had lost 6 lb energy had improved. He had lost 6 lb without really deliberately. He came without really deliberately. He came into his follow-up appointment and he into his follow-up appointment and he said, "I feel better doing less than I said, "I feel better doing less than I did when I was doing everything." That's did when I was doing everything." That's not a paradox, that's what happens when not a paradox, that's what happens when an overdrawn account starts running a an overdrawn account starts running a surplus. Most people trying to lose surplus. Most people trying to lose weight don't have a discipline problem, weight don't have a discipline problem, they have an energy management problem.

they have an energy management problem.

Energy budget takeaway and quiz CTA

If you do those two columns right now, If you do those two columns right now, withdrawals on the left and deposits on withdrawals on the left and deposits on the right, which column would be longer?

the right, which column would be longer? Most people already know the answer. Most people already know the answer. They just haven't looked at it quite They just haven't looked at it quite that way. So if you're curious where that way. So if you're curious where your energy budget stands, I've linked a your energy budget stands, I've linked a short metabolic health quiz below. It short metabolic health quiz below. It takes just a couple minutes to and it'll takes just a couple minutes to and it'll give you a good starting point for give you a good starting point for understanding whether your metabolism is understanding whether your metabolism is running in surplus or running debt. And running in surplus or running debt. And if this was helpful, please like and if this was helpful, please like and subscribe. It helps us get this subscribe. It helps us get this information out to more people. We'll information out to more people. We'll