

Your body uses a team of hormones to keep all things in balance. All things. Here, we're only going to discuss the connection between hormones and weight/metabolism.

We call this process of creating balance homeostasis, but the reality is that our attempts to adapt can become mal-adaptive when our mechanisms of balance, designed for an ancient world, create new problem in their best attempt to maintain order in the modern world.

The purpose of this Guide is to introduce you to your team of hormones and help you understand the role each team member was designed to serve, allowing you to work with your team instead of fighting it.

# MVP, TEAM CAPTAIN, CONDUCTOR OR THE ORCHESTRA

Insulin is the undisputed champion of metabolism team. Whether you are losing or gaining weight is determined largely by levels of this single hormone.

Insulin is the MVP, Team Captain, and Conductor of the Hormonal Orchestra.

Insulin, almost single-highhandedly, determines which fuel your metabolic engine burns. If the metabolic fuel switch is flipped to sugar, your weight-loss efforts will be thwarted by food cravings, mood swings, spells of hanger (hunger + anger), and fatigue. In this state, success - if achieved at all - may

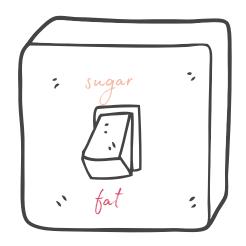


be short lived because you'll be fighting so hard to that you'll exhaust yourself and give up.

Humans don't do willpower very well for very long.

# MVP, TEAM CAPTAIN, CONDUCTOR OR THE ORCHESTRA

The good news is that when your metabolic fuel switch is flipped to fat, your weight-loss efforts can begin to feel... well, effortless. After a brief period of overcoming the habit of cravings, your hunger will drop, your mood will feel stable and bright, you'll forget what it's like to feel hangry, and you'll have more energy than you know what to do with.



Two things play the biggest role in determining the direction of the insulin fuel switch:

- 1 what you eat
- 2 when you eat
- \*\* Please note the absence of how much you eat and how much you exercise!

## MVP, TEAM CAPTAIN, CONDUCTOR OR THE ORCHESTRA

#### What you eat:

Insulin gained its notoriety for its role in lowering blood sugar. When blood sugar is elevated, insulin is released to escort that sugar to safer places. This is "good" because extra sugar in the blood wreaks havoc on the body, causing rapid aging and deterioration. This is "bad" because that safer place is either tucked away in your liver (which leads to insulin resistance and fatty liver disease) or the fat cells scattered around your butt, thighs, arms and belly (which can lead to fractured confidence, frustration, and a sense of failure).

And while the claim to fame is in the lowering of blood sugar, you must understand this is not happening in a vacuum. Insulin is intolerant of competition. So... In order to lower blood sugar, insulin blocks the use of any other fuel source (that means fat burning is completely shut down until the sugar has been cleared from the blood).

If that weren't enough, insulin needs a safe house to put that sugar, so it signals your body to make more fat cells so that it has a place to put the sugar being shuttled from circulation.

## MVP, TEAM CAPTAIN, CONDUCTOR OR THE ORCHESTRA

Finally – and this is really getting into the weeds, but it might just affect you personally – insulin needs salt to move that sugar into the safe house, so it tells the kidneys to hang on to extra salt, which in turn, means you hang on to water.

On the benign side, this makes you look puffy. On the problematic side, it can do a number on your blood pressure. And you can't outsmart the kidneys with salt restriction. They're too smart for that and will hang on to any little bit before it slips through their filters. Plus, salt restriction makes food taste like cardboard.

Notice that it all begins with elevated blood sugar. This is why WHAT YOU EAT is the ticket to lowering insulin.

# MVP, TEAM CAPTAIN, CONDUCTOR OR THE ORCHESTRA

#### When you eat:

Less well-known is that even protein causes insulin to go up. In fact, some say that in response to protein, insulin will go up about 70% as much as it will go up in response to sugar (and here, we treat all carbohydrate, except fiber, and sugar as the exact same thing).

To keep this in practical terms, what this means for you is that unless you're eating pure fat – which is not at all common – your insulin is on the loose anytime you chew and swallow.

To make it even more simple, understand that the exact same amount of calories consumed in two substantial meals a day is far better for weight loss than the exact same amount of calories spread out over six small meals a day because of the impact of eating on insulin.

Yes. I am saying that you have been getting two pieces of flawed advice for the last forty years. The first was to reduce your calories and exercise more. The second was to have small, frequent snacks throughout the day.

# MVP, TEAM CAPTAIN, CONDUCTOR OR THE ORCHESTRA

It's no wonder that 2/3 of Americans struggle to lose weight. It's not your fault. You are not flawed, nor are you doomed to failure.

You were simply fed terrible advice for decades. And now you are free.

#### **SUMMARY**

While insulin is famous for its role in blood sugar management, the cumulative impact it has on your body is to keep your fuel sources locked away in storage, making the experience of "having energy" and the ability to lose weight nearly impossible.

# MVP, TEAM CAPTAIN, CONDUCTOR OR THE ORCHESTRA

#### A comment on low-calorie diets.

Because your hormones rule this roost, a low calorie diet that is HIGH IN CARBOHYDRATE will put you in starvation mode and decrease your metabolism.

When carbs are high, insulin is high, and fuel is on lock down. That leaves your metabolic engine with access only to what you've recently eaten, which - in this scenario - is restricted. Your engine must learn to run on less. Your metabolism slows down.

The slowing of the metabolic engine is what makes long term weight loss so challenging on low calorie diets.

Instead of lowering the calories, lower the carbs, which will lower the insulin and keep the fuel lines open. Your engine never experiences energy restriction, and therefore, never slows down.

This is what makes this approach sustainable.

## CORTISOL

#### **INSULIN'S BEST FRIEND**

Most people know cortisol as the stress hormone. In reality, you have a few stress hormones. Epinephrine and norepinephrine (aka adrenaline and noradrenaline) are released when you are faced with urgency and rise to the occasion. They force fuel into circulation, making your heart race, your thoughts focused, and your appetite fade (it's not convenient to be hungry when you're running for your life).

Cortisol – on the other hand – is released when you've been stressed for a long time and begin to feel a sense of defeat or despair. Cortisol has the opposite effect of epinephrine and norepinephrine. It puts fuel back in lock down (preferentially storing much of it in your belly), sending your cravings for sugar through the roof, your mind feeling dull, and your body sluggish.

A stressed-out person, with uncontrollable urges for sugar, will end up on the insulin/cortisol roller coaster that creates anxiety, emotional swings, binges, and weight gain – an experience that too many people refer to as "normal."

## GHRELIN

#### REGULATOR OF HUNGER

Ghrelin is known as the hunger hormone. It is produced by the stomach, and its job is to get you to eat.

It is triggered by two things:

- 1 time of day
- 2 your cells not having fuel.

#### Timing

It is important to recognize that hunger is a habit. If you eat every day at noon, your body will get used to this pattern and queue you to eat if you haven't eaten by 12:30. This sense of hunger will often fade in 15-20 minutes if ignored, which is why you can get busy and forget to eat.

#### Not enough fuel

If your cells don't have access to fuel, they'll tell you to eat. Not being able to access fuel is not the same thing as not having fuel to access. Recall that if insulin has put all your fuel in lock down so it can clear sugar from the blood, your cells will feel hungry and tell you to eat. This is why you are hungry shortly after eating a high-carb meal. There's plenty of fuel around, but your cells can't use it, and they're starving.

## GHRELIN

#### REGULATOR OF HUNGER

This is why, as an extreme example, diabetes is known as starving in a sea of plenty. There is plenty of fuel around, but it's all locked away due to persistently elevated insulin, and the body cells of the body are starving while Ghrelin is screaming, "feed me."

On the opposite end of the spectrum, this is exactly why people on a high fat, low carb diet lose their appetite. When insulin is low for long periods of time, the cells of the body can run on the fuel it stored yesterday or last year at Christmas –fat.

When the body can access all of its stored fuel, the cells rarely feel hungry. Once you get past the habit of hunger, ghrelin levels drop, cravings disappear, and appetite fades.

This is what makes the hormonal approach to weight balance sustainable. If you're fighting hunger, you're doing something wrong.

## GHRELIN

#### REGULATOR OF HUNGER

As much as I want to keep this is simple as possible, this is a point in which things get a little sticky, and it's important to explain.

When we discussed Insulin, I pointed out that How Much is not of the equation. It's true that you don't need to measure and count calories to win at weight loss.

You do, however, need to listen to and respond to queues from Ghrelin. If you continue to eat out of habit, to soothe stress, or to be social, you will be overriding your body's message that she's adequately fueled and doesn't need more.

While you may find a way to burn it - because your Insulin is low and you're body is in burning mode - you may stall your efforts to lose pounds and inches.

The key is to eat when hungry and to do something else when not hungry.

# GLUCAGON

#### **INSULIN'S OPPOSITE**

Glucagon serves as insulin's opposite, queuing your body to make sugar and release it into the blood.

How cool is that!

Your body can make sugar even if you never eat it. In fact, there is no minimum requirement for carbohydrate in your diet because your brilliant body can make what it needs to keep blood sugar nice and steady between 80 and 90 mg/dL.

\*\* Much of the information in this guide assumes that your liver and pancreas are in working condition.

If you're a diabetic or have liver disease, you must consult with your physician to understand the implications. \*\*

## ESTROGEN

#### YOU MAKE ME FEEL LIKE A NATURAL WOMAN

Estrogen gives you breasts and hips, and makes babies possible.

It is known as the female hormone, but it's important because of it's intimate connection to adipose (fat) tissue. The more adipose you have, the more estrogen you are likely to make. And the more estrogen you have, the harder it is to lose that adipose.

This adipose-estrogen relationship exists for men, as well as women. A man with extra adipose is more likely to convert testosterone to estrogen, creating the same weight loss challenges that many women experience. Beer, especially beer with a lot of hops (a phyto-estrogen), can lead to higher estrogen levels and complicate weight loss more than it's calories or carbs explain.

A healthy liver is the key to healthy estrogen balance (and easy menstrual cycles).

# MAKING CONNECTIONS

# A QUICK GUIDE TO TURN YOUR TEAM TO CHAMPS

Now that you have a quick overview of everyone's role on the team, please understand this one thing.

Through simple dietary changes and learning to work WITH your body (which is basically what this entire course is about), you can bring out the very best in each and every player, turning your squad into a team of all-stars!

Use the techniques taught in Eat to Win to decrease your Insulin and Cortisol levels, allowing your body to flip its fuel switch and burn fat to drive your metabolic engine. This will naturally diminish appetite, and it won't take that long.

Over time, all of you will get healthier and healthier, bringing more of you into balance.

The result is that you will look amazing, but feel even better. Life is about to be awesome.

Go team!