



Do you want to lose weight, feel healthier, look younger,  
and get more out of life - naturally?



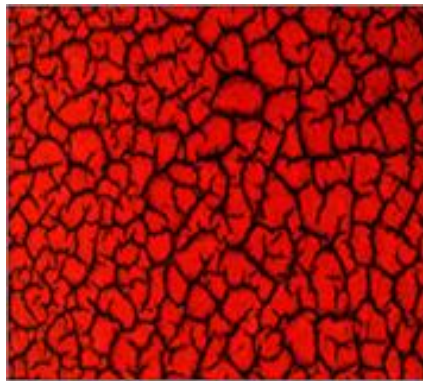
No magic  
bullet



No one size  
fits all



Real science  
Real results



Unleash your Health Potential!  
*Beta Slow Oxidiser Imbalance*

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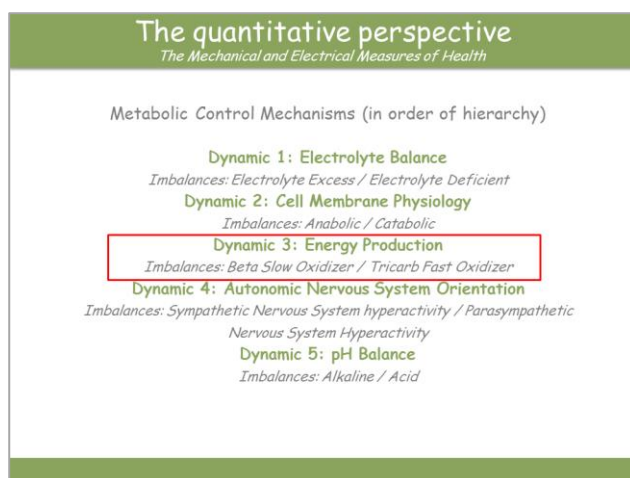
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# Energy Production Metabolic Control Mechanism

## Beta Slow Oxidiser Imbalance

### Have you ever wondered...

- What's the best diet to lose fat?
- What does mental performance and emotional health have to do with burning fat?
- What is the underlying physiological cause of most depression/anxiety/& mental illness?
- How can I tap into the tens of thousands of calories of real energy I carry around with me every day?
- Why can't I burn this body fat no matter how hard I work-out or however strict I diet?
- What's the key to happiness? (Really though, at least part of the puzzle is answered below in understanding the relationship of energy metabolism and brain function.)
- How can I have the body of my dreams AND my sanity at the same time?



Fortunately for us, burning fat, emotional health and mental performance all go

together in a balanced body. So while the full answer to the questions above is a bit complicated, the combined rewards are great enough to merit a little cognitive effort on our part.

The rate at which we burn through different energy sources, and which types of energy sources (fats, carbohydrates, and proteins) significantly impacts the amount of energy we have to think, move, exercise and also how we feel emotionally. To simplify matters though, let us talk about the metabolic behaviour in terms of one's Metabolic Tendency. Your Metabolic Tendency refers to your body's tendency to burn through carbohydrates for energy quickly or slowly. If your body burns through carbohydrates quickly, you may be classified as a "Fast Oxidiser". If you burn through carbohydrates slowly, you could be classified a "Slow Oxidiser". Further, if you do not burn through any energy source efficiently, you could be classified as a "Sub Oxidiser".

Sometimes this Slow/Fast /Sub oxidiser status has been referred to as a Metabolic Type, but "Tendency" is a more accurate and useful term to use because, whether you have a slow, fast, or sub oxidation rate you can correct your body's tendency through intelligent nutritional & dietary choices. These intelligent choices can resolve imbalances in oxidation speed and optimise your metabolism. Once your metabolism is optimised, are you still a fast or slow or sub oxidiser? No. Once corrected, you're not that

type anymore. So, to label yourself a "Type" is misleading and disempowering because it can make people assume they are stuck as that type when, in fact, remedy exists.

For maximum energy production, we have a balanced oxidation rate - which would mean that our body has a steady stream of energy available to it at all times - which requires that we are efficient at metabolising all fuel sources (carbs, fat & protein) AND that our diet provides the right kinds and ratios of fuel sources and the cofactors necessary to process them.

There are various reasons that our body may have a tendency to lean towards being a fast, slow, or sub oxidiser and they can all be corrected. Once they are corrected, you will experience a huge, huge, huge increase in your vitality, your ability to burn fat, be happy and to think effectively and with borderline superhuman endurance!

### Scientifically Speaking...

The fast oxidiser produces pyruvate and o-acetate faster than he does acetate, and is thus deplete of the most potentially bountiful source of energy in the body/diet: acetate. The slow oxidiser is in essentially the same problem, but for opposite reasons: while he is not deplete of acetate as the fast oxidiser is, he cannot access it because he is not producing sufficient quantity of cofactors that are required to metabolise acetate: pyruvate and o-acetate.

In either Metabolic Tendency, the same problem occurs: an insufficient breakdown of acetate in the citric acid cycle (impaired fat metabolism). This is what generally causes and/or significantly contributes to low energy (i.e. chronic fatigue), mental and emotional disease and obesity.

### Simply Speaking...

If you burn through carbohydrates too quickly (fast oxidiser) due to poor diet choices or ineffective digestion of proteins or fats, then you cannot tap into those most abundant sources of energy (protein and fat) that could come from your diet & body energy reserves. If you burn through carbohydrates too slowly (slow oxidiser) then your body lacks all the pieces of the metabolic puzzle needed to burn fat and protein for energy.

### Metaphorically Speaking...

Think of carbohydrates as the kindling needed to start a fire. Your salivary enzymes are the match that initially lights the kindling. The kindling provides some immediate warmth and light (energy), but it's not the real fire. Your body fat and dietary fats and proteins are the major fuel for the fire - they are the big logs that will give you abundant warmth and light (real metabolic energy). The energy from the kindling literally dims in comparison to the potential fire from the big logs, BUT you can't get the fire going with the big logs if you didn't start with the kindling first. Same so in our body - essential digestive intermediaries created as sugar is metabolised as necessary to start the metabolic utilisation of energy from stored body fat and dietary fats and proteins.

### Some common symptoms of a Beta Slow Oxidiser Imbalance

- High Cholesterol (High LDLs and Low HDLs)
- High Triglycerides
- Type II Diabetes
- Weight Gain
- Lack of Energy
- Fatigue

- High Blood Pressure
- Premature Ageing
- High Blood Sugars
- Low Body Temperature
- Mental Disorders
- Depression
- ADD or ADHD
- Insomnia

NOTE: Many of these symptoms can also be caused by a catabolic imbalance, so keep in mind that each individual needs to look at not only the imbalances that may have shown up on their test, but how those imbalances may overlap other dysfunctions, creating layers of imbalances.

## Some Beta Slow Oxidiser biological markers

- Urine pH < 6.1
- Saliva pH > 6.9
- Breath Rate < 13
- Breath Hold > 60 seconds
- Fasting Glucose > 100
- Resting Systolic BP > 133
- Type II Diabetes

## Foods to Avoid if you're a Slow Oxidiser

- Avoid eating polyunsaturated oils. These can include some salad dressings, margarine, mayonnaise and foods fried or cooked with vegetable oils. Coconut oil, real butter and unheated virgin olive oil are all okay.
- Avoid meals consisting predominantly of sugars or starches (a serving of protein and saturated fat is essential with EVERY meal)
- Fruit Juices
- Limit your fruit intake

- Liver and other organ meats
- Seafood such as prawn, lobster, clams, etc.
- Peanuts and peanut butter
- All soy products

## Foods to implement if you're a Slow Oxidiser

- Fish
- Poultry (especially white meat)
- Eggs
- Dairy products
- All vegetables

## How Exercise can help

Exercise, especially lifting weights, helps to move glucose out of the blood stream and into your cells. This will lower your insulin levels and teach your body how to burn glucose for fuel more often so it doesn't build up in your blood stream.

## The Science behind Weight Loss

High Insulin Levels Cravings are the reason that most of us eat too many starches, carbs or sugars.

To simplify things, I will just say "carbs" when I'm referring to starches, carbs or sugars. However, when I say this, I'm referring to foods that are higher in carbs. Many green vegetables contain carbs in small amounts, and that is great. When talking about the ability for carbs to spike insulin levels, I'm talking about higher-carb foods. Foods like bread, pasta, rice, cereal, baked goods, potatoes, fruit, desserts, etc. Carbs are converted to glucose (or sugar) in the body and foods higher in carbs, convert to higher levels of glucose. In any case, the fact that you are consuming these carbs isn't even the

major problem. The real villain in most people's weight loss story is how eating these carbs can push insulin levels too high, too often. Anytime we eat carbs, our insulin levels spike in order to sweep the excess glucose out of the bloodstream and into the cells. The more carbs taken in, the higher the insulin spike. Liquid carbs or sugars like juice, soft drinks, and alcohol spike insulin even higher because liquid hits the bloodstream faster.

Glucose levels can come down pretty quickly, but the insulin levels stay high a lot longer.

The problem is, as long as your insulin levels are high, your body's ability to burn stored fat is impeded. There are more hormones involved in this total process, but viewing high insulin levels as the trigger that makes it all go to hell is a simple way to explain it. High insulin levels also send the signal to your body to store fat. It says, "We have plenty of glucose to use here so store other fuel as fat in case we don't have glucose later." Make sense? So, the sugars are burned in a couple hours, yet your body can't access stored fat for fuel while the insulin levels are still high. No glucose and no access to stored fat means you don't have a good fuel source. Now, you start to crave more carbs because your body needs fuel to function. Even though the insulin isn't going to come down for another two or three hours, you eat a snack that's filled with carbs and your insulin spikes again, never giving the insulin a chance to come down and allow your body to burn fat for fuel. This pattern can result in insulin spike after insulin spike, all day long. Considering the way some people eat, do you see how it can be literally impossible to burn stored fat?

## How it works

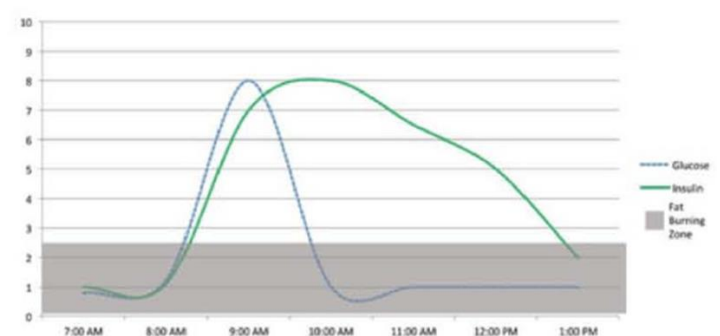
Let's look at examples of how certain meals could affect insulin levels and, therefore, fat storage.

In the meal graphs below, we use a general scale from one to ten. We're not using actual blood glucose or insulin numbers. This is a visual to show how high each level is on a scale of one to ten.

**Meal 1 - 8:00 AM (Carb Count: 73 grams) Bowl of oatmeal, whole wheat English muffin with jam, and a glass of orange juice.**

If Diane eats meal 1 at 8:00 AM, in the graph below, we see her glucose (the dotted line) rise to a level 8 and her insulin (the solid line) follow right behind it. The shaded zone that tops out around 2.5 is the fat burning zone. Insulin levels need to be within this zone in order for your body to access stored fat and burn it as fuel. While insulin levels are outside that zone, not only can your body not access stored fat, but also your body will likely be storing more fat.

### Meal 1 Graph



By 9:30 AM Diane's glucose has come down, but her insulin is still very high and will likely take a couple more hours to come down.

With glucose levels as low as they appear near 10:00 AM, the body would normally dig into fat storage and burn this fat as a fuel source.

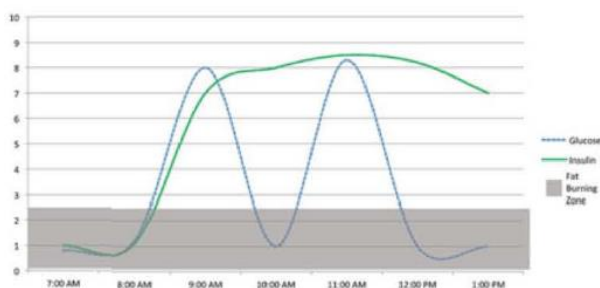
Yet, in the graph above, you can see that the high insulin levels block the body's ability to access stored fat, leaving Diane with no fuel.

What does Diane do? She eats a banana and drinks pomegranate juice because her friend saw an infomercial that stated pomegranate juice has health benefits.

### Meal 2 - 10:00 AM (Carb Count: 59 grams) Banana and a glass of pomegranate juice.

In the Meal 1 Graph you can see how insulin levels would have come down gradually, putting Diane back into the fat burning zone later that day. However, in the Meal 2 Graph below you can see that once she consumed Meal 2 with all those carbs (especially liquid sugars, which can spike insulin even higher than sugars in solid form) her glucose soars straight up again and another increase in insulin follows immediately. The sugar supplies her with an energy boost, but her insulin levels never have the chance to come back down before the sugars create another jump in insulin.

#### Meal 2 Graph

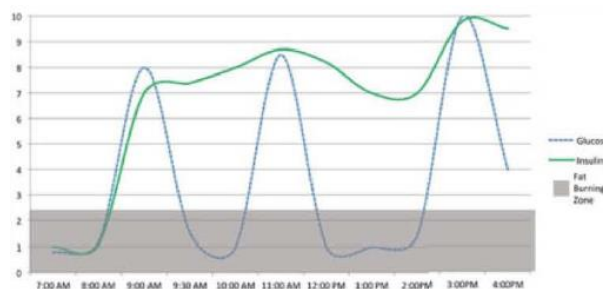


Meal 3 - 2:00 PM (Carb Count: 130 grams) Turkey sandwich on whole grain bread with lettuce, tomato and fat-free

dressing, side of brown rice and a fat-free mocha latte.

You can see that Diane was trying to "eat right" by selecting choices many consumers believe will lead to weight loss; yet, look at how this meal cranks her insulin levels off the charts in the Meal 3 Graph.

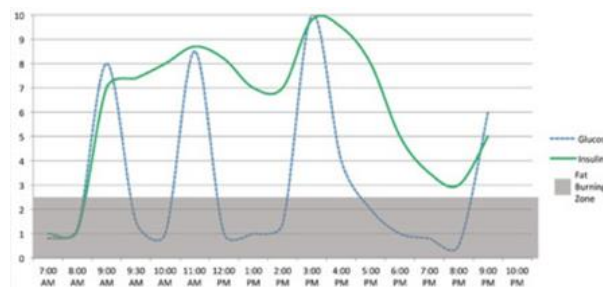
#### Meal 3 Graph



Meal 4 - 8:00 PM (Carb Count: 47 grams) Small salad with ranch dressing and two rice cakes.

Diane tries not to eat too many calories late at night so she made a low-calorie meal. Too bad these low-calorie options still have high carbs. Rice cakes are one of the most nutrient-depleted, insulin-spiking foods you can eat, and many dressings have more sugar than a chocolate bar. Graph 4 represents her glucose and insulin reaction to this meal.

#### Meal 4 Graph

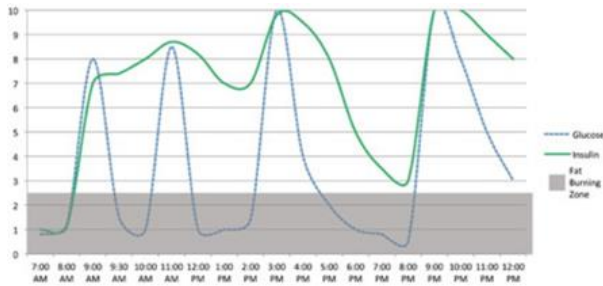


Oops - 8:20 PM (Carb Count: 64 grams) One litre of chocolate ice cream.

An even bigger problem shows up after Diane eats her night-time meal fit for a bird.

Since she went six hours without eating, she is now ravenous. She already lost her mind and snapped at an elderly lady in traffic earlier that afternoon. Now, after her tiny dinner, she thinks she'll just have a few bites of ice cream. Ten minutes later she realises she has wiped out the whole tub of ice cream.

### Oops Graph



Looking at Diane's insulin levels over the span of the day, it's easy to see that, not only was her body unable to access stored fat for most of the day, she will likely stay out of fat burning mode for most of the night as well.

What would her insulin levels look like with different choices?

**Meal 1 Alternative - 8:00 AM (Carb Count: 2 grams) Spinach omelette with butter, two turkey sausages, and one cup of chamomile tea.**

This meal provides a very nominal rise in insulin levels. Now, Diane can go right back into fat burning mode before it's time for a snack. She may be able to skip the snack altogether since her body will have the ability to access stored fat for fuel and she will have plenty of energy. But let's throw a snack in there anyway to see what happens.

**Meal 2 Alternative - 10:00 AM (Carb Count: 18 grams) Cottage cheese with berries.**

This snack provides Diane with some needed carbs without spiking insulin levels too high.

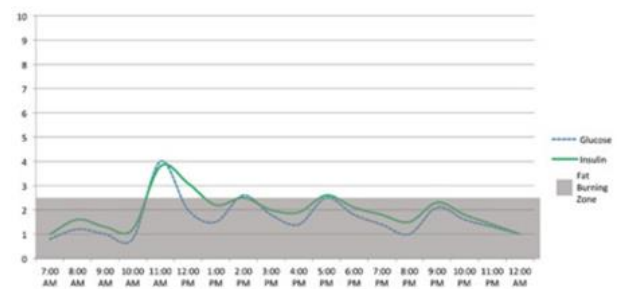
**Meal 3 Alternative - 1:00 PM (Carb Count: 3 grams) Grilled chicken Caesar salad without croutons.**

The Caesar dressing contains good fats to help keep Diane satiated.

**Meal 4 Alternative - 4:00 PM (Carb Count: 6 grams) Protein shake and a handful of raw almonds.**

**Meal Alternative - 8:00 PM (Carb Count: 5 grams) Lamb chops with sautéed broccolini and asparagus.**

### Alternative Meals Graph



Though Diane had one small insulin spike mid-morning, look at the extended periods in the day where she is able to access stored fat and burn it for fuel.

This is the science behind weight loss. There is no getting around this science. If insulin levels are high, you will not burn much stored fat, and in most cases you will end up storing more fat.

The only difference from person to person is the strength at which the insulin operates, whether or not that person's cells are still receptive to insulin, and how much insulin needs to be utilised to move glucose into the cells.



This is one of the factors that allows some people to eat a high-carb diet with no weight gain. If their insulin is strong enough, they can move a large amount of glucose into the cells with a relatively low amount of insulin; therefore, they rarely have a big insulin spike. It's not the amount of sugar that we consume that necessarily dictates the amount of body fat we store. It's the level of insulin needed to move that glucose into the cells that dictates how long the body will stay in the fat-storage mode and out of the fat-burning mode. The more carbs consumed, the more insulin is normally needed to process those carbs; but the insulin is the driving force behind fat storage. If you can keep your insulin levels low, you can restrict the amount of fat your body stores and increase the amount of stored fat your body burns. That's it. It's called science.

Am I saying that everyone should go on a low-carb diet? No, I'm not. Many people don't qualify to go on a low-carb diet because they can't process other nutrients very well. If you take away their carbs, you will take away all of their fuel. They tend to get a little pissy when that happens. Therefore, if a guy wants to lose weight, but he doesn't qualify to reduce his carbs and lower insulin levels, the goal should be to correct those pathways that are restricting his ability to process other nutrients. Once he can use other nutrients, like fats and proteins, then he can work on reducing his carbs and bringing down his insulin levels.

### 3:00 PM Carb Cut off

Keep in mind that some individuals will burn sugars better than fats and vice versa. Let's also assume that you're already working on digestive issues you might be dealing with. That being said, the information below is all

about trying to reduce the demand for high insulin levels for at least part of the day so the body can be freed up to better focus on other issues such as burning stored fat as fuel.

So, here's the trick. .. Try to eat any carbs before 3:00 PM on every day that you can get away with it. If you're done with carbs by 3:00 PM, that gives your body fifteen or sixteen hours that it can focus on burning fat, removing junk (that could otherwise get stored as fat) and taking care of all the tasks that make us healthy - all the jobs that the body is meant to do but often can't because it's being slammed with high insulin levels all day long. (Keep in mind that most foods have at least a small amount of carbs in them. Proteins and low-carb vegetables are a great choice in this scenario. You just want to avoid the carbs that will spike insulin levels.)

Many people like this trick because it allows them to have some of the foods that they like, just earlier in the day. In that way, you're not really depriving yourself of any one thing. That doesn't mean you should wake up and have two sandwiches, a bowl of pasta and whole box of cereal before 3:00 PM. You still have to eat healthy.

Then, once a week or so, when you want to go out with friends and eat a bit of carbs at night or have a drink, you don't have to be so concerned about it because you just had five or six nights in a row where you allowed your body to do what it needs to do. Maybe one week you have two nights that include more carbs and one week you have none. Even if you just eliminate most carbs after 3:00 PM three or four times a week, it's still better than having carbs every night-and you should still see some improvement. But please remember that any type of carbohydrate "bingeing episode" can rock a variety of

systems in the body that can take up to seventy-two hours to recover from. So, while I'm suggesting that you have fewer carbohydrates in the evening, overindulging in carbohydrates at any point during the day can really throw the body off its kilter. Some individuals will have more leeway while others may need to stick to this plan on a daily basis. It's just the knowledge of how the body works that will let you judge for yourself how often you want to implement this plan or not.

Those who have enough mineral in their systems to reduce carbs for the majority of their meals will be able to achieve much faster results. For those who need carbs because you don't have enough mineral in the system to function properly, this 3:00 PM carb cut-off plan can be a great way to still get results.

## Beta Slow Oxidiser Supplement Formulas

Specific supplements to help correct a Beta Slow Oxidiser Imbalance:

- **Banaba Chrome** – 2 caps with each meal
- **Flow A** – 1 dropper before breakfast (not to be taken if you are also Catabolic)
- **Beet Flow** – 1-3 caps with each meal
- **Magnesium Malate** – 2-3 caps with breakfast and lunch. Avoid with a Catabolic Imbalance (best taken with breakfast. Avoid at night.)
- **Vitamin A** - Limit with a Catabolic Imbalance).

- **L-Taurine** - An amino acid - Avoid with Electrolyte Deficiency or Catabolic Imbalances.
- **L-Tyrosine** - An amino acid - Avoid with a Catabolic Imbalance. (Avoid at night.)
- **MSM** – 1-3 tsp before breakfast and before tea (not too late).

NOTE: Most of these supplements can be ordered by contacting Mark (when ordering in Australia) or via [Naturalreference.com](http://Naturalreference.com) (when ordering in the USA). You will need to enter practitioner code 40551240 to order from NR.

## Avoid with this imbalance

- Vitamin B5

## Contact Mark

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