

THIBARMY WEBINAR

# THE SECRETS TO A SUCCESSFUL CUTTING PHASE

By Coach Christian Thibaudeau





**PART I**  
**IMPORTANT PHYSIOLOGICAL KNOWLEDGE**  
*(DON'T FALL ASLEEP)*

# CORTISOL & ADRENALINE

It is called the “**stress hormone**”, but I prefer to call it the “**operational availability hormone**” or “**readiness hormone**”

## THE ROLE OF CORTISOL IS TO MAKE SURE THE BODY CAN FACE ANY POTENTIAL DANGER

1. It increases mental awareness, motivation and focus via conversion of norepinephrine to epinephrine
2. It increases heartbeat and the contraction strength of the heart and skeletal muscles via the same mechanism
3. It mobilizes stored energy (carbohydrates, fats & proteins)
4. It increases blood sugar if it is too low (to keep it stable)
5. It inhibits the immune system

## PROBLEMS ARISE WHEN CORTISOL IS CHRONICALLY ELEVATED

1. It increases the level of myostatin
2. It increases muscle degradation
3. **It reduces the conversion of T4 to T3 (which can lower basal metabolic rate)**
4. **It reduces insulin sensitivity**
5. It reduces the re-synthesis of muscle glycogen
6. **It creates water retention via an increase in aldosterone and vasopressin**
7. It can lead to lowered testosterone and estrogen levels (via pregnenolone steal)
8. It can lead to beta-adrenergic desensitization
9. It negatively affects the methylation cycle
10. **It increases glutamate production and glutamate receptor sensitivity**



# CORTISOL/ADRENALINE & CNS FATIGUE/BURNOUT

Also called “adrenal fatigue”. Both terms (neurological fatigue/CNS fatigue and adrenal fatigue) are inadequate. The central nervous system or adrenal glands do not become fatigued

However, the symptoms are real:

1. Decreased energy
2. Loss of motivation
3. Apathy
4. Anhedonia
5. Decreased sex drive/libido
6. Depression
7. Loss of confidence
8. Decreased performance
9. Decreased focus, concentration and/or memory



# CORTISOL/ADRENALINE & CNS FATIGUE/BURNOUT

Those symptoms are due to problems with one or more neurotransmitter systems

1. Downregulation of beta-adrenergic receptors
2. Depletion of norepinephrine
3. Depletion of dopamine
4. Desensitization of dopamine receptors

In all of those cases, the **main cause is an overproduction of epinephrine/adrenaline** caused primarily by an excessive increase in cortisol levels



# TRAINING VARIABLES AND CORTISOL/ADRENALINE

1. Volume
  2. *Intensiveness* (not to be confused with **intensity**... how hard you are pushing each set)
  3. Psychological stress (being intimidated by a task)
  4. Neurological stress (complexity of an exercise, learning a new task, doing many different exercises)
  5. High training density
  6. Competitive training
- \* Note that cortisol should not be blocked completely as it is necessary for optimal performance. But it is important to avoid chronic overproduction



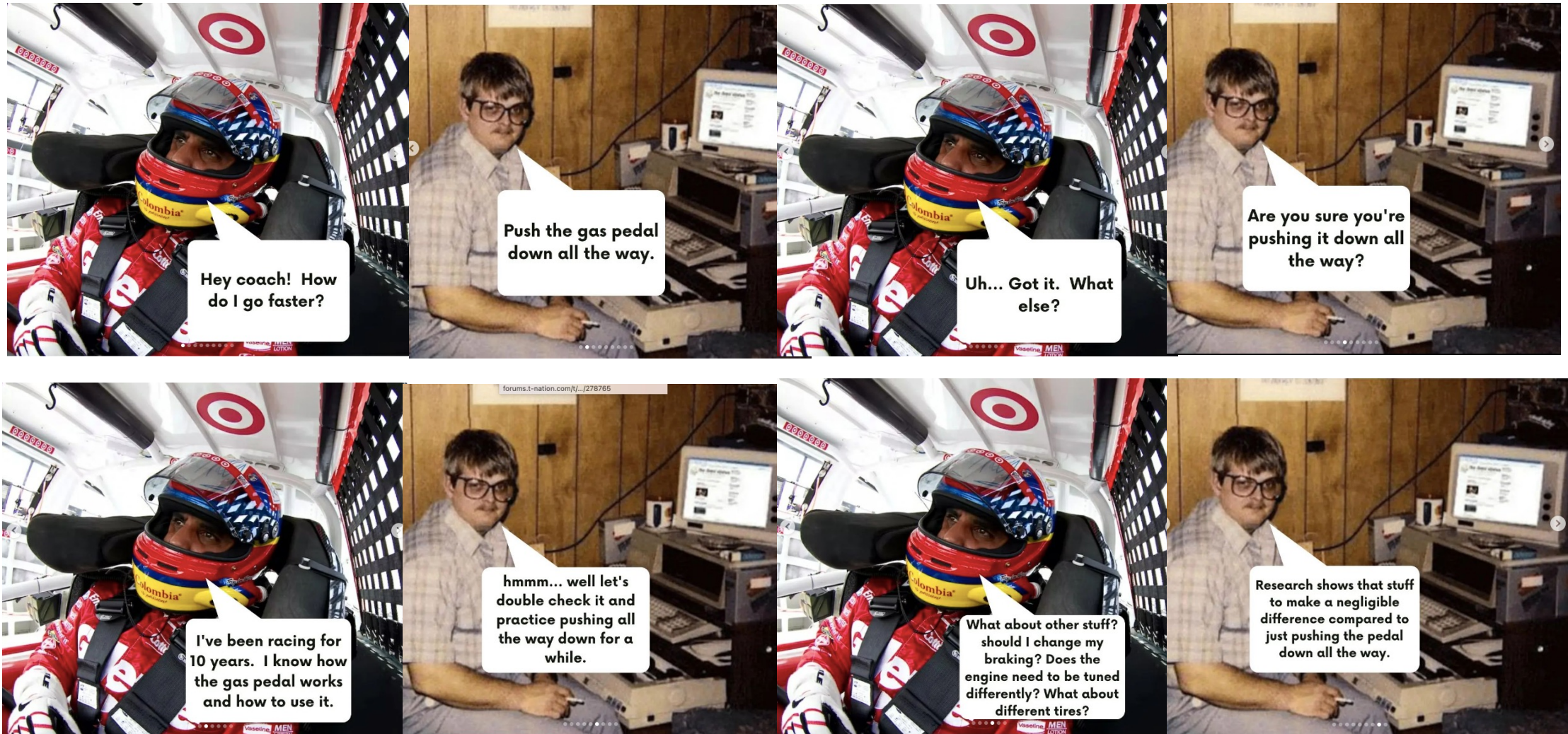
# CORTISOL/ADRENALINE AND DIETING

1. The greater the caloric deficit, the more cortisol you produce (greater need for energy mobilization)
2. The lower your carbs are, the more cortisol you release (carbs are the best anti-cortisol supplement)
3. The longer you spend in a significant deficit, the more cortisol you will produce
4. Chronic cortisol elevation is one of the main reasons behind metabolic adaptations to dieting





# IT'S ONLY ABOUT BEING IN A CALORIC DEFICIT?







\* Credit to Mike Tuscherer for the slides

# NUTRITION AND YOUR BRAIN

LOW CARBS / MODERATE-TO-HIGH PROTEIN & FATS	HIGHER CARBS
INCREASES...	INCREASES...
Dopamine Noradrenaline Adrenaline GABA Acetylcholine Cortisol AMPK	Serotonin Glutamate IGF-1 mTOR
DECREASES...	DECREASES...
Serotonin Glutamate IGF-1 mTOR	GABA Adrenaline + + Dopamine* Noradrenaline* Acetylcholine* Cortisol AMPK

WHY IS THAT IMPORTANT???

	LARGE DEFICIT	MODERATE OR SMALL DEFICIT	SMALL & MODERATE SURPLUS	LARGE SURPLUS
Cortisol	Chronic elevation	Moderate increase	No significant effect	Decrease
Adrenaline	Chronic elevation	Moderate increase	No significant effect	Decrease
Testosterone	Decreases	No significant effect	Can have small elevation if fats are fairly high	Can increase or decrease depending on inflammation and body fat
IGF-1	Decreases	Small decrease	Small increase	Increases
mTOR	Decreases	Small decrease	Facilitated	Increases
AMPK	Increases	Small increase	No significant effect	Decreases
T3	Decreases	No effect or slight decrease	No significant effect or slight increase	Increases
Leptin	Decreases	Can decrease as fat stores diminish	No significant effect or slight increase	Increases but you can develop resistance
Overall insulin sensitivity	Increases	Increases	No significant effect	Decreases
Muscle insulin sensitivity	Decreases, especially with low carbs	Increases as you lose fat but can decrease in the long run	No significant effect	Decreases

# IS INSULIN AND INSULIN SENSITIVITY IMPORTANT FOR FAT LOSS?

## Insulin: going from the big *meany* to irrelevant?

I remember a time when insulin was actually seen as the main culprit of fat gain, a lot of "experts" even claiming that insulin control, not caloric balance, was the key to fat loss.

This was the main premise behind the original low-carbs wave. Despite what social media would have you believe, low-carbs/keto dieting is not new. It originates from the late 1800s and was popular as early as the 1950s in bodybuilding through the work of Vince Gironda. Then keto and cyclical keto dieting became very popular in bodybuilding circles during the 1980s thanks to books like "The Anabolic diet" by Dr. Mauro DiPasquale and "Bodyopus" by Dan Duchaine.

These last two books were the first ones to offer a theory as to why keto/low-carbs dieting worked well for fat loss, including a theory centered around lowering insulin as much as possible.

While smart authors like DiPasquale and Duchaine wrote that caloric intake was still very important, a lot of second generation keto experts neglected to mention it... it's a better marketing strategy to claim that calories don't matter (subconsciously implying that you could eat as much as you wanted as long as you didn't eat carbs).

The pendulum swung all the way to the other end now with the philosophy that caloric intake (provided that protein is equal) is all that matters for gaining/losing. In fact, it's now almost taboo to talk about insulin and hormones when it comes to fat loss.

YES, studies tend to show that various types of diets have the same impact on fat loss provided that caloric and protein intake are the same. But these studies have several limitations (**DISCUSSION**).

The "the only important thing for fat loss is a caloric deficit" angle is popular because people love simple concepts.



# IS INSULIN AND INSULIN SENSITIVITY IMPORTANT FOR FAT LOSS?

## Insulin and insulin sensitivity: still important factors in changing your body

1. Insulin is a storage hormone and can only increase the storage of nutrients you have ingested. As such, it is true that if you consume a caloric deficit, you should not gain more fat even if insulin is high: the high insulin doesn't create nutrients to store.
2. However as long as insulin is significantly elevated, fat (and glycogen, protein) mobilization is decreased.
3. When you produce more insulin, it stays elevated for longer and thus takes longer to come back down to baseline
4. Being insulin resistant means that you release more insulin in response to the same blood sugar elevation
5. So whether you produce more insulin because of food choices or insulin resistance, it can negatively affect fat loss by reducing energy mobilization even while in a caloric deficit state
6. There is an adaptation to low-carb dieting called peripheral insulin resistance: your body makes the muscles less sensitive to insulin so that it will be harder to send glucose there. This is to keep more glucose in the blood and favor other tissues when carbs intake is low. This adaptation is fairly rapidly reversed but while you have it, it will be difficult to "carb load"
7. Insulin can be useful to protect muscle mass while dieting and favors muscle growth (which is why I always keep carbs around training).
8. In a state of hyperinsulinemia, **metabolic rate goes down** ... Which doesn't go against the calories in vs. calories out theory. A nutrition plan with a lower average insulin level leads to a higher caloric expenditure, thus working on the "calories out" portion of the equation





# A CALORIC DEFICIT WITH SUFFICIENT PROTEIN IS THE MAIN KEY TO FAT LOSS AND THE CORNERSTONE TO DIETARY PLANNING. BUT...

**If you take several different diets and all of them...**

- a) Have the same amount of protein
- b) Provide the same amount of energy (calories)

They will pretty much lead to the same weight/fat loss. At least initially... And in theory.

But it doesn't mean that you should disregard carb/fat ratios or the quality of the foods you eat.

I personally manipulate calories, carbs and fats with every phase of the fat loss plan (protein remains fairly stable).

Calories will be decreased (or activity level increased) if fat loss stalls.

The carb to fat ratio will **increase** from phase to phase (while calories can decrease or be maintained since activity level increases). This is really the key part of my system.

Let's look at my reasoning.



# A CALORIC DEFICIT WITH SUFFICIENT PROTEIN IS THE MAIN KEY TO FAT LOSS AND THE CORNERSTONE TO DIETARY PLANNING. BUT...

## Why I gradually add carbs when dieting:

1. **To prevent excessive leptin reduction.** Lowered leptin affects hunger, caloric expenditure and your capacity to lose fat. Leptin decreases during periods of caloric deficit BUT it is the drop in carbs, not fat (or protein) intake that leads to this drop<sup>1</sup>. By gradually increasing carbs as the diet progresses you have a better shot at maintaining leptin levels.
2. **To maintain thyroid levels.** Cortisol and carbohydrate intake are two of the main regulators of the conversion of T4 into T3. The longer you spend in severe carbs restriction, the more likely you are to down-regulate that conversion and reduce metabolic rate.
3. **To help you sleep better.** Carbohydrates are the best “supplement” to lower cortisol. Since cortisol increases adrenaline levels (via conversion of nor-adrenaline to adrenaline) if you lower cortisol, you also lower adrenaline, which will help you sleep better. It’s also interesting to note that lack of sleep is one of the main causes of a drop in leptin levels.
4. **To give you the fuel for the training changes.** The more we progress in our fat loss plan, the more high intensity work (intervals, loaded carries, high-density workouts, more training volume) is added. This type of work is fueled more efficiently by carbs. Increasing carbs will allow for better performance and recovery.
5. **Gives the illusion of less severe dieting.** If you add carbs to a diet and maintain caloric intake (or even if you decrease it slightly) most people will feel like they are not dieting as strictly. This can give a mental boost in the later portion of a fat loss phase.

1. Jenkins, A., Markovic, T., Fleury, A. *et al.* Carbohydrate intake and short-term regulation of leptin in humans. *Diabetologia* **40**, 348–351 (1997).)



# HERE'S AN ILLUSTRATION OF WHAT I MEAN BY CHANGING THE CARBS/FAT RATIO AS THE FAT LOSS PHASE PROGRESSES...

For example...

## PHASE 1

**Calories:** 2400 kcals/day  
**Protein:** 250g (1000 kcals)  
**Fats:** 130g (1170 kcals)  
**Carbs:** 50g (200 kcals)

## PHASE 2

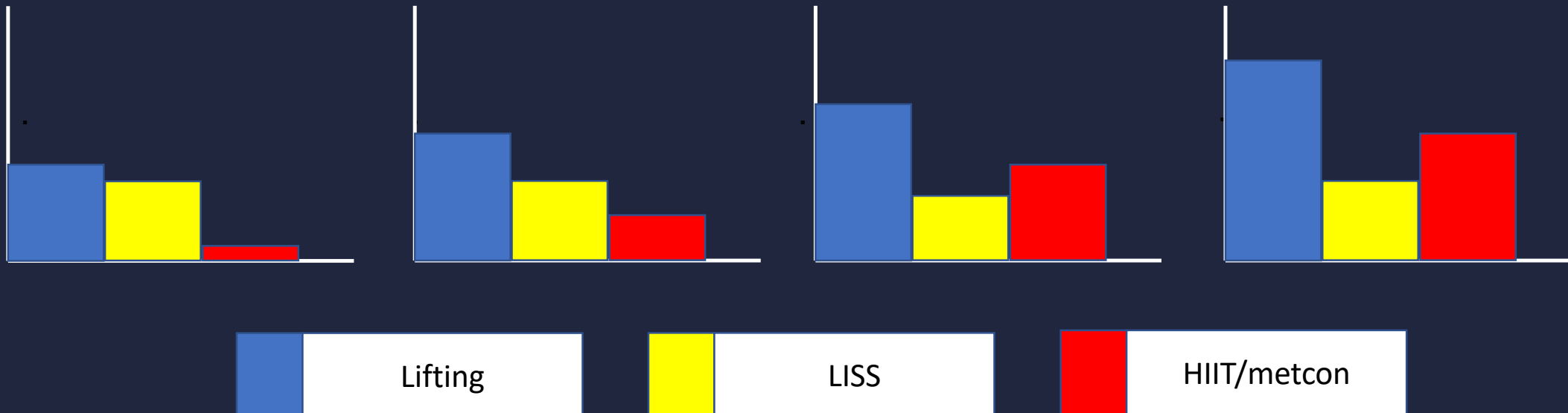
**Calories:** 2200 kcals/day  
**Protein:** 250g (1000 kcals)  
**Fats:** 89g (800 kcals)  
**Carbs:** 100g (400 kcals)

## PHASE 3

**Calories:** 2100 kcals/day  
**Protein:** 250g (1000 kcals)  
**Fats:** 55g (500 kcals)  
**Carbs:** 150g (600 kcals)

## PHASE 4

**Calories:** 2000 kcals/day  
**Protein:** 250g (1000 kcals)  
**Fats:** 34g (300 kcals)  
**Carbs:** 175g (700 kcals)





## **PART II**

### **BEFORE YOU START**

# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

Very few people actually reach their desired goal when it comes to dieting down.

We start out planning to get shredded, but we never get there.

This is not because of a lack of discipline or because the diet is not working but because we were not mentally prepared for the stumbling blocks to come... stumbling blocks that will happen to everyone. But when they happen most go off script and kill their progress or stop their fat-loss effort altogether.

Here are things you need to know before you even start your diet. **Being aware of them in advance will prepare you to face them and overcome the obstacle they may represent.** If you expect something to happen, it is much less unsettling and daunting when it does happen.





# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 1. YOU WILL LOOK WORSE ... ENTER THE BODY COMPOSITION “DEADZONE” (A.K.A THE FLAT AND FAT STAGE)

This could be one of the main causes of dieting failure among those who don't just want to be lean, but lean and muscular. It can destroy your motivation and when that happens, it's only a matter of time until the diet is thrown out the window. After all, it's already bad to restrict your food intake and make some foods you like off limit, it gets even harder mentally when you feel like you are not progressing towards your goal.

I call this the “deadzone”. The stage in your body transformation where you have lost enough fat, water and glycogen to look and feel smaller, but not enough to visually look more defined. This essentially makes you look worse.

It's harder to get a pump.

Your t-shirts start to get loose on you.

You actually have LESS muscle definition. That's because your muscles are not popping as much because they become deflated from dropping water and glycogen.

You might even look fatter because the deflated muscles make you look softer.

People might ask you the dreaded “Did you stop training?”

You need to know that this happens to everybody (steroid users get it to a much lesser extent). There will be a point that will last a few weeks where you actually look worse and worse.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 1. YOU WILL LOOK WORSE ... ENTER THE BODY COMPOSITION “DEADZONE” (A.K.A THE FLAT AND FAT STAGE)

**Listen:** unless you were doing something stupidly excessive diet or training-wise to start with, you didn't lose muscle at that point, even if it feels like it.

If your protein intake is sufficient, your caloric intake is at a moderate deficit and you are training at the proper level of effort you really don't risk losing muscle until you reach around 8% body fat.

What is happening is that you dropped a lot of water from both inside the muscle and beneath the skin. Both of which make you look much bigger in clothes. It also helps you get a better pump.

Your glycogen stores are also significantly lowered, giving the illusion of muscle loss (like letting the air out of a balloon). The lower in carbs you go, the greater the impact.

**A lot of people also decrease sodium intake** when dieting. Not because they are trying too, but because the foods they eat while dieting are much lower in sodium than some of the crap they eat normally. Decreasing sodium will make it harder to get a pump, decrease vascularity and also make the muscles look flatter. That's why I keep sodium high when dieting.

You might even lose strength on some exercises (more on that in a moment) but that is not necessarily an indication of muscle loss. When you get to the deadzone, and you will (everyone does), you just need to keep your head down and trust the process.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 2. THERE IS A GOOD CHANCE YOU WILL LOSE STRENGTH ON SOME MOVEMENTS

When dieting down you should use lifting to maintain or increase your muscle mass and your strength rather than as a main fat loss tool. But even if you do that, there is a good chance that you will lose strength on some movements.

At this point, it is natural to assume that you are losing muscle, especially if you are feeling flat and small. In reality this strength loss is related to something totally different than muscle loss.

It's due to a **decrease in passive stability**. See, muscles can create stability in a joint. But you can also make a joint more stable by increasing pressure around it.

You increase pressure by packing more stuff around the joint.

When your muscles are full of water and glycogen there is more pressure around the related joint(s), stability is increased without voluntary effort.

When there is more extracellular water retention it also increases pressure around a joint, making it more stable.

When there is more fat to cushion a region, it also increases stability.

When you lose some of that while dieting down, some joints can become less stable.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 2. THERE IS A GOOD CHANCE YOU WILL LOSE STRENGTH ON SOME MOVEMENTS

And this is **important**: when the body senses that a key joint involved in a lift is unstable, it will not allow you to use all of your strength potential. The body wants to limit force production because it doesn't feel safe.

The shoulder joint (which is already the most mobile and least stable joint) will be the most affected, mostly in pressing movements. As such the bench press, incline bench, military press and related lifts are the most likely to go down.

Heck, you could maintain your strength, or even increase it on isolation exercises for triceps, pecs and delts and still have a drop in your bench! That's because isolation exercises do not require the same stability and because there is less loading on the joint, the body doesn't need to inhibit your performance.

The squat and its variations are the second most likely to be affected.

Pulling exercises and even the deadlift are the least likely to be affected among the multi-joint movements. Isolation and machine exercises are the least likely to drop down.

**It is also possible that the lift you are the less structurally suited to be good at, will be affected the most.**

But it is important to look at the big picture: if some lifts are going down a bit but other exercises are staying up or even getting stronger, you are not losing muscle. You are just losing stability.

Know this before getting started so that you don't freak out about losing muscle when it happens.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 3. WHEN YOU REACH YOUR GOAL, YOU WILL LOOK SMALLER IN CLOTHES

The “feeling” and looking smaller in clothes is something that can mess you up mentally throughout the whole process. But even once you reach your goal of being ripped, it will still be an issue.

Heck, at my last photoshoot I was in awesome condition and looked great. Lean and muscular. But when we posted a video on social media of me wearing a t-shirt people asked if I had stopped training, one even asked if I had cancer.

That’s how it is when you get super lean. And that is absolutely normal. If you lose 20, 30 or even 40lbs, that is a lot of size that you are removing from your body. It is unrealistic to think that you will occupy the same volume in space once you drop it, even if you kept all of your muscle mass.

I was reminded of this when I watched the TV show “Kingdom” a drama about MMA fighters. Jonathan Tucker, who played fighter Jay Kulina in the series looked absolutely ripped and jacked in shirtless scenes but when he is wearing a dress shirt, he looks small.

That’s how it is when you get to very low levels of body fat (except if you are a true monster).





# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 4. YOU HAVE MORE WEIGHT TO LOSE THAN YOU THINK TO LOOK THE WAY YOU WANT

The thing is that most people make two mistakes when evaluating how much weight they will need to drop to reach the look they want.

1. **They underestimate their body fat.** They either guess it, in which case most people are at least 5% higher than they think they are. A **true** 10% body fat has full abdominal separation and decent definition and vascularity. If you are not at least very close to that you are not 10, 12 or 13-14%. If you are 200lbs and in your mind you are 15% body fat and you want a look that is achieved at 8% it's easy to think that you only need to lose around 12lbs to get where you want to be. But since you likely carry a lot more fat than that, you will find yourself still far from your goal once you lose 12lbs.

Even accurate caliper testing will give you a number that is around 3% too low because it doesn't include intramuscular, intra-visceral and other internal fat deposits that you will lose during a diet too.

But from experience most coaches “pinch thin” when it comes to calipers. I've seen plenty of guys test at 9-10% without a shadow of abdominal definition. Even calipers can mislead you in the amount of weight you need to drop.



I'm ArOUnd 10% bOdYFat... mAYbe a Bit  
LeSS



This is 9.2%



This is 9.9%

# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 4. YOU HAVE MORE WEIGHT TO LOSE THAN YOU THINK TO LOOK THE WAY YOU WANT

2. **Subcutaneous fat is not the only thing you lose on a diet.** You drop glycogen, water, intramuscular fat, among other things. From experience for every pound of fat you need to lose, you will also lose up to 0.5lb of “something else”.

If you really have 20lbs of fat to lose, in reality scale weight will have to drop by around 30-35lbs to look the way you want.

Even worse is when people have a specific number in mind of what they want to be, even if they have no idea how much muscle or fat they really carry.

For example, “I want to be 190lbs at 8% body fat”. Well, you don’t even know if you have the muscle mass to carry a lean 190.

Don’t have expectations. Just follow the process and stop when you reach the level of leanness you desire and don’t let the number on the scale demoralize you.

Also understand that just because you assumed that you’d be “190 and ripped” and end up at 175 and ripped, doesn’t mean you lost 15lbs of muscle. It’s much more likely that you overestimated how much muscle you carried.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 5. RELYING ON DISCIPLINE RARELY WORKS OVER THE LONG RUN

Discipline essentially means forcing yourself to do things you don't really want to do. And while some can pull it off, most will crumble once they start to feel bad or when they get cravings. And even if they can stay resilient, it makes the whole process suck.

The key to an “easy” cutting phase is desire.

Your desire to achieve your body composition goal must be stronger and more important than any potential obstacle that can come in the way.

If your desire for that pizza you love or going partying is stronger than your desire to be super lean, you will suffer and will have to fight with yourself the whole time.

When you desire to achieve your goal is stronger than everything else, it actually makes the process “fun”.

That's why a lot of people need a form of extrinsic motivation to potentiate their internal motivation (competition, photoshoot, vacation on the beach, wedding, etc.).

**DISCUSSION ON HOW MOTIVATION AND RESILIENCY WORKS**



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

1. **Dopamine and motivation (pleasure response ratio vs. goal attainment and reward and how it evolves)**
2. **Is extrinsic motivation really a thing?**
3. **Caloric restriction can increase the sensitivity of the dopaminergic receptors (why cheating can become “dangerous”)**
4. **How glutamate can affect motivation**
5. **DHEA : Cortisol ratio as a factor of resilience**





# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## CHARACTERISTICS OF INDIVIDUALS WHO CAN RELY ON DISCIPLINE TO REACH THEIR GOAL

- Highly structured by nature
- Pragmatic - doesn't make decisions based on emotions
- Great at following plans, doesn't like to ad lib
- Prefers routine over variation
- They love to select a goal, build a plan to get there and follow it. Building and following the plan is as motivational as reach the goal for them
- Tends to be overanalytical



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## CHARACTERISTICS OF INDIVIDUALS WHO CAN RELY ON RESILIENCE

- Extremely goal driven
- Need to win at all cost, all the time (will turn a game of Monopoly into World War 3)
- “On/Off”, “Black/White” personalities
- Pig headed
- Genetically speaking they have a slow COMT enzyme
- Workaholics



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## CHARACTERISTICS OF INDIVIDUALS WHO CAN RELY ON DESIRE

- Personality changes when doing something they like versus something they don't
- Procrastinate when something doesn't really interest them but are excessive when they love something
- Need to be motivated or excited to do something
- Tendency to model themselves on people they admire
- Strong need to be liked, respected, admired, loved
- More frequent changes in behavior and personality
- Prefer variation over structure



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 6. You will get demoralized by progress pictures

Still pictures rarely do a muscular physique justice. Unless they are done by a professional, using proper lighting and angles, a muscular physique will tend to look “flatter”, smaller and less defined in pictures.

Especially when you get decently muscular, when you look at yourself in the mirror you get more of a 3D look and you see muscle in movement. At a similar lighting and position, pictures will always look a lot less impressive than when you look at yourself in a mirror.

This can be demoralizing and make you believe that you aren't progressing like you should or that the end result will not be as good as what you want to achieve.

Even in “fatter” individuals, pictures will be underwhelming in terms of showing the amount of fat loss because they don't show “volume”.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

**7. At some point, you will become more easily impacted by stressful situations, will have a harder time sleeping and might even get down mentally**

Remember...

- Caloric restriction increases cortisol and is more likely to lead to chronic cortisol elevation
- Chronic cortisol elevation increases both glutamate production and glutamate sensitivity
- Glutamate is an “emotional amplifier” , as such when it is elevated, emotions, good or bad, will hit harder
- Cortisol elevation also leads to elevated adrenaline. Too much adrenaline will make you more impulsive and aggressive and it will make it harder to shut down in the evening to sleep
- Caloric restriction (especially with low carbs and high protein) decreases serotonin levels, which will also make it harder to sleep as well as to adapt to unexpected situations.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 8. You will need to make dietary adjustments along the way

The key to reaching your body composition goal is not starting with the proper diet but the weekly adjustments that you make.

That's why it is important to measure your food if you want to have the best chance of reaching your goal: it's hard to make adjustments to your intake when you don't know what your intake is!

And **super important**: the caloric intake that worked in the beginning will eventually not work anymore. Why? Two main reasons:

- 1) As you lose fat your body has less mass to carry around. Having less mass to carry around diminishes the amount of fuel you need to carry your body. This means a lowered caloric expenditure for the same activity level.
- 2) There are metabolic adaptations that adjust your body to a certain level of nutrient intake if it is fairly constant.





# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 8. You will need to make dietary adjustments along the way

While how much fat you can lose weekly will vary depending on your size and how much fat you are starting with (a 110lbs woman with 15% body fat will have a lot less fat to lose than a 350lbs man with 35% body fat, so she cannot lose as much on a weekly basis) the 2lbs per week is pretty well accepted and adequate for everybody but the outliers.

As such, we will consider a weekly loss of 1.5 to 3lbs to be acceptable. If you lose that in your week, maintain the same food intake for the next week.

Let's look at the table for the proper adjustments:

FAT LOSS PHASE ADJUSTMENTS	
Body weight changes in the past 7 days	Caloric adjustments
Losing more than 4.1lbs	Increase caloric intake by a factor of 2*
Losing 3.1-4lbs	Increase caloric intake by a factor of 1
Losing 1.5 – 3lbs	Stay the same
Losing 0 – 1.4lbs	Decrease caloric intake by a factor of 1
Gaining 0.1 to 1.5lbs	Decrease caloric intake by a factor of 1.5
Gaining more than 1.6lbs	Decrease caloric intake by a factor of 2

**Important:** A “factor of” refers to your bodyweight multiplied by the factor mentioned. For example, if you are 200lbs and need to decrease calories by a factor of 2 it is  $BODYWEIGHT \times 2$  or  $200 \times 2$ . This would mean lowering your daily caloric intake by 400 calories.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 9. You start losing fat with a mechanical loader and you finish with a teaspoon

Chances are that when you start your diet your body weight will drop a lot more in the first week than it will in any other week.

That's because initially you will drop a lot of water weight and glycogen. By eating less food you will probably also carry less food weight in your intestinal tract, also lowering your weight. It's not unusual to lose 5-6 lbs or more in the first dieting week.

That's why you shouldn't make dietary adjustments if you lose "too much weight" in your first 1-2 weeks.

That rapid weight drop in the first week is also one of the main reasons why keto and carnivore diets are popular: even those who couldn't lose weight on a typical diet will drop a lot of weight on those plans. The lower the carbs are, the more weight you drop.

But in someone who has always had a hard time losing weight, seeing the scale indicating a drop of 5 lbs in a week is addictive and they become a hardcore believer in the diet.

Certainly, if you do not drop weight at all in that first week, it is cause for concern. In that case you should go back to the drawing board because you should drop weight more easily in that first week.

But don't let monster weight losses in that first week cloud your judgment.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 9. You start losing fat with a mechanical loader and you finish with a teaspoon

The body will be more responsive to fat loss at the beginning of the diet, **especially if you have been eating a big surplus prior to starting your cutting phase**. Furthermore, if you have been eating a lot of pro-inflammatory foods before starting your diet, you will lose a lot of water weight initially.

As the diet progresses, metabolic adaptations will take place and it will become harder and harder to lose fat. Plus, the leaner you are, the more the body will try to “protect” the fat stores it has (leptin, neuropeptide Y, thyroid modulation for example).

The leaner you get, the harder it is to keep losing fat.

**That's why if you start using every tool at your disposal from the start, you will be screwed once you need a boost.**

I will cover the strategies to use for each “phase” of the dieting process in the second part of this webinar.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

**10. If you ask when your cheat meals are before you even start your cutting phase, you're screwed!**

***Cheats*** and ***refeeds*** do have physiological and psychological benefits. But also drawbacks.

Let's first define cheats and refeeds.

If the foods you eat are “clean” or if you are simply eating more of the (carb) foods already in your diet we are talking about a **refeed**.

If the foods you eat are something you do not have in your diet and are what we would normally consider “bad foods” (fast food, pastries, syrup, candy, etc.) we normally call it a **cheat**.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

**10. If you ask when your cheat meals are before you even start your cutting phase, you're screwed!**

## **Potential benefits**

1. They can help prevent the drop in leptin that comes with dieting, or at least slow it down.

Leptin is a hormone secreted by fat cells that tells your brain that you are well fed. As you lose fat, less leptin makes it to the brain and this increases hunger, cravings and can even play a role in decreasing metabolic rate. A short-term increase in caloric intake can slow down that decrease in leptin (reversing it requires a longer period of overfeeding). Carbs are more effective than fat for this purpose. **Sidebar:** why are obese people always hungry despite high leptin production?

2. It can replenish muscle glycogen stores. Storing more muscle glycogen will improve lifting performance and can even be anabolic: more glycogen increases intramuscular pressure, which can be a signal to increase protein synthesis/muscle building. This could help you avoid losing muscle (or even gain some) while dieting down.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

**10. If you ask when your cheat meals are before you even start your cutting phase, you're screwed!**

## **Potential benefits**

3. It can increase T3 levels. The body produces T3 (the thyroid hormone that plays a role in elevating metabolic rate) by converting T4 (which is much less impactful). This conversion is highly dependent on caloric and carbohydrate intake (more = higher conversion) as well as cortisol levels (more cortisol = less conversion).

Boosting calories and carbs could spike the T4 to T3 conversion both by providing more calories/carbs and by lowering cortisol. It's likely not a huge deal, but it can happen to a small extent and might help out a bit, especially in the later stage of a fat loss phase.

4. A large caloric/carbs intake can spike mTOR activation, IGF-1 and insulin levels. All of these are highly anabolic. If they occur after a training session, the growth from the session might be enhanced. A refeed/cheat meal around a workout for a lagging muscle might be helpful in bringing up that muscle.

5. It can restore mental clarity and lift brain fog. The brain runs mostly on glucose (and ketones). When dieting down you can have bouts of brain fog/mental fatigue when your carb intake is low. Refeeds can help with that.

6. The only real physiological benefit of “cheats” (over refeeds) is that you maintain your capacity to tolerate and properly absorb “crap” (important only for the peaking process... more on that later).





# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

**10. If you ask when your cheat meals are before you even start your cutting phase, you're screwed!**

## **Potential drawbacks**

1. Keeping trigger foods in your weekly plan will make you keep craving them. And because caloric restriction causes an increase in dopaminergic sensitivity, your trigger food fantasies will get stronger over time and it can make the whole dieting process unbearable.
2. You are much more likely to splurge during a cheat than a refeed and a splurge could potentially negate or offset the calorie deficit you had during the rest of the week (if a cheat meal turns into a 6 – 10k calorie cheat day).
3. Big splurges can easily lead to compensatory behaviour the next day. For example, excessive restrictions or exercise. This will create a vicious cycle that will make you crave food even more.
4. Seeing a cheat as a reward encourages the development of an unhealthy relationship with food that could go beyond your cutting phase.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

**10. If you ask when your cheat meals are before you even start your cutting phase, you're screwed!**

## **THIB'S 10 RULES OF CHEATING/REFEEDS**

- 1. I don't have refeeds or cheats built in.** I use them when they are needed (significant performance decrease, weight dropping too fast, flat muscles for several days, problems sleeping and excessively cold).
- 2. Always diet for 3 full weeks before thinking of adding a refeed or cheat.** Prior to that, unless you did some seriously excessive restrictive dieting, it is not needed physiologically. And if you mentally need a cheat less than 3 weeks in, you're already in trouble.
- 3. Most of the time and for most people I go with clean refeeds not cheats.** I'm not gonna lie, if the macros are fairly similar there will be no real difference in the efficacy or impact of a clean or "dirty" refeed.

However, dirty cheats can shift your mindset and make it harder and harder to stay driven. At one point your desire to eat the dirty foods you like can become stronger than your desire to be shredded and from that point on it's only a matter of time before you fail. A coke addict who is trying to come clean can have a drink on the weekend, but having a "coke cheat" once a week will make it a lot harder to come clean.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

10. If you ask when your cheat meals are before you even start your cutting phase, you're screwed!

## THIB'S 10 RULES OF CHEATING/REFEEDS

4. **The Rock can have cheat *days*, you can't:** The Rock is known for his massive cheat days. But he is already pretty much at the level of leanness that he wants to be. He just wants to stay there; he doesn't need to be 5% body fat.

He is also 260lbs+ at a pretty low body fat level. The more muscular you are, the more crap you can eat before it starts to pile up as fat.

Basically, the more fat you want to lose, the lesser the frequency and "volume" of refeed/cheating you can have.

Once you are at the level of body fat you want, it's perfectly fine to have a full cheat day per week. But not if you still have a lot to lose.

5. **Ideally, refeed/cheats meals are eaten after a workout. And if possible, after a workout for your weakest muscle group.** Might as well use the extra food to enhance anabolism: caloric surplus, especially in the form of carbs will increase mTOR, large amounts of carbs post-workout can also increase IGF-1 levels, which is very anabolic.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

**10. If you ask when your cheat meals are before you even start your cutting phase, you're screwed!**

## **THIB'S 10 RULES OF CHEATING/REFEEDS**

**6. Do not adjust after cheats.** If you have a cheat meal (planned or not) or even a splurge day. Go right back to your diet. Do not try to cut calories even more or do more training to “compensate” for the splurge the previous day. This will do more harm than good. It just puts your brain in a deprivation-reward cycle that is very hard to break. You splurged, it was a mistake, move on.

**7. Do not prepare for cheats.** I generally recommend against planning a cheat ahead of time; like thinking about what you will eat for days beforehand and visualizing the experience, etc.

Ok, if your cheat is a meal at a nice restaurant with your significant other it's fine to plan.

But if your plan is to sit alone and eat boxes of cakes and pastries while watching Netflix, please do not think about it in advance. Why? Because you make it harder to stick to your diet in the days preceding your cheats. And by romanticising your cheat meal, you will either be disappointed (it cannot live up to your fantasy) which will normally lead to bigger and bigger cheats, or you make your regular eating even more bland by comparison.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

**10. If you ask when your cheat meals are before you even start your cutting phase, you're screwed!**

## **THIB'S 10 RULES OF CHEATING/REFEEDS**

8. In an ideal world, **do not cheat alone**. You are much less likely to pig out and do something stupid if you are at the table with someone. It helps you keep things under control.

9. **Do not watch TV (or your laptop) while cheating**. Watching TV or a streaming service increases the pleasure response to the meal almost threefold.

Your brain has mixed pleasure signals from the food, from the movie/show and the blue light emitted by the device (blue light creates a strong dopaminergic response, which gives your brain more pleasure).

Your brain will not dissociate the three sources of pleasure and it will start to associate the cheat food with an even greater pleasure response than it provides by itself. This makes it a lot harder to avoid cravings because your desire for the bad food can more easily exceed your desire to get lean.

10. **Cheat as late as possible**. This has two benefits. First, you cannot turn a cheat meal into a cheat day when the day is over. If you have a cheat meal early it's likely that you will be craving more for the rest of the 12-15 hours left. A cheat meal will turn into a cheat day (the "I'll get back to my diet tomorrow" phenomenon). Also, a cheat meal in the evening will lower cortisol and adrenaline which will help you relax and sleep better.



# THINGS YOU NEED TO KNOW BEFORE YOU START « CUTTING »

## 11. Several factors affect the rate of possible “safe” fat loss

1. **Previous dietary habits.** If you were eating a large caloric surplus for a while, it will be easier to lose fat and you will not need as much of a caloric restriction (relative vs. absolute caloric deficit). Chronic dieters who always either diet or eat at maintenance will have a harder time losing fat during their “fat loss” phases.
2. **Sex.** Everything else being in proportion, men lose fat more easily than women. But women tend to be better equipped at dealing with several mental issues related to dieting (feeling smaller, strength loss, etc.)
3. **Body size.** Being bigger “burns” more calories. A pound of muscle will increase caloric expenditure by 25 kcals/day, not huge but if someone has 20lbs of muscle more than someone else that is 500 kcals/day. And simply being heavier can also impact energy expenditure because the cost of moving is higher. For example a 200lb, 5’10”, 30 year old male walking at 2.0 mph will “burn” around 153 kcals/h. A guy of the same age and height but who is 230lbs will “burn” 185 kcals/h.
4. **Amount of fat.** Fatter individuals can lose fat more rapidly without starting to have metabolic adaptations and risking muscle loss.
5. **Sleep/stress level.** Individuals who are chronically stressed and poor sleep should be more conservative in their fat loss efforts.







# **PART III**

## **FAT LOSS TRAINING TOOLS**

# WALKING

Wow. How soft! So underwhelming! Okay, but it works. Walking is the best way to increase fat mobilization and caloric expenditure without raising cortisol. In fact, it might even lower cortisol because it's an anti-stress activity.

Let's not kid ourselves; we won't be blowtorching the fat away with simple walking.

While caloric expenditure will vary from one person to the next (based on body size, weight, age, sex and walking speed), most will "burn" around 200-300 kcals per hour of walking.

It is certainly not an efficient way to lose body fat.

But it can still contribute. It requires very little effort and can help you wind down when you are stressed out.

It can also improve your capacity to mobilize fatty acids over time, which would make overall fat loss more efficient.

All walking counts. You don't have to plan a specific time to go take a walk.

A good target to shoot for is accumulating **10 000 steps throughout your day**. Which will lead to a caloric expenditure of around 300-400kcals per day depending on the variables mentioned above.



# Low Intensity Steady State Cardio (LISS)

When I started out as a coach, I hated cardio, period.

I came from a weightlifting background (snatch, clean & jerk) and studied under Coach Charles Poliquin who was notoriously anti-cardio (he would recommend HIIT from time to time, but that's it).

I believed that all cardio was detrimental to body composition and would lead to muscle loss and a marathon runner look. And because I personally disliked cardio (I found it boring and demotivating) it was easy for me to reinforce my belief that it was evil.

When I started competing in bodybuilding, I got my ass kicked in my first contest because I wasn't lean enough. I hired a coach and he had me do plenty of cardio for my next show and I ended up a boatload leaner and bigger.

I became pro-cardio but still believed that fasted cardio was dumb and would eat away my muscle mass.

## **SOME REASONS WHY PEOPLE BELIEVE THAT CARDIO IS BAD IF YOU WANT TO LOOK MUSCULAR**

1. If you do it post-workout it can hurt your gains because the AMPK elevation will inhibit mTOR
2. It will jack up your cortisol
3. It will convert fast-twitch fibers into slow-twitch ones

## ***IS THERE ANY TRUTH TO THAT?***

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# Low Intensity Steady State Cardio (LISS)

Is **fasted LISS** effective or detrimental when trying to lose fat/get shredded?

It is popular with many physique competitors. The logic is that doing your cardio fasted will mobilize more fat because you have less glucose readily available.

The counterpoint is that it could lead to more muscle loss because of a higher cortisol production.

And there is also the argument that when you do an activity doesn't impact how much fuel it requires to perform, provided the variables are the same and that losing fat is ultimately about creating a caloric deficit.

If you "burn" 300 kcals from your cardio session, it doesn't matter when you do it or what fuel you directly use during the activity.

Let's look at two studies:

**Schoenfeld, B.J., Aragon, A.A., Wilborn, C.D. et al. Body composition changes associated with fasted versus non-fasted aerobic exercise. J Int Soc Sports Nutr 11, 54 (2014).**

And...

**Yung-Chih Chen, Rebecca L. Travers, Jean-Philippe Walhin, Javier T. Gonzalez, Francoise Koumanov, James A. Betts, and Dylan Thompson. Feeding influences adipose tissue responses to exercise in overweight men. American Journal of Physiology-Endocrinology and Metabolism. Vol. 313. No. 1 (2017)**



## Low Intensity Steady State Cardio (LISS)

The **Schoenfeld study** compared two groups of women (which has some importance) doing 3 weekly cardio sessions for 4 weeks (12 total sessions). Half the group did the sessions fasted while the other half had food prior.

The subjects were given a diet plan based on their estimated caloric requirements.

While the training sessions were supervised the meals were not supervised (obviously) but the subjects were asked to fill out a nutrition journal.

The key finding is that both groups lost weight and fat and both groups were not statistically significantly different in how much weight and fat they lost.

The **fasted cardio group** had an average weight loss of 1.6kg (3.52lbs) and fat loss of 1.1kg (2.42lbs). They also lost 0.4kg (0.88lbs) of fat-free mass (which could be water, glycogen, muscle, or even un-excreted fecal matter at the time of the test).

The **non-fasted cardio group** had an average weight loss of 1kg (2.2lbs) and fat loss of 0.7kg (1.54lbs). They also had a loss of 0.2kg (0.44lb) of fat-free mass.

The conclusion was that there was no significant difference in weight or fat loss between both groups and that fasted cardio was no better than fed cardio for fat loss purposes



## Low Intensity Steady State Cardio (LISS)

The **Chen study** was a different type of study. They measured energy expenditure, carbohydrates oxidated for fuel, fats oxidated for fuel as well as the elevation of the various enzymes involved in energy mobilization and utilization.

The subjects were overweight males (which could be important). The subjects who consumed breakfast before the cardio session ate a “normal UK breakfast” averaging 646 calories, 120g of carbohydrates, 12g of fat and 20g of protein. Both the fed and fasted groups did 60 minutes of cardio, at the same speed (5.7mph), intensity (60% of max VO2), perceived effort and achieved a similar heart rate (155 bpm).

The findings were that both groups had a similar total energy expenditure (746 calories for the fasted group, 771 calories for the fed group). However, **the fasted group utilized significantly (statistically speaking) more fat** than the fed group (16g vs. 9g) whereas **the fed group utilized significantly more carbs** than the fasted group (167g vs 147g).

But more interesting is that the enzymes responsible for fat mobilization and utilization were elevated more in the fasted group than the fed group. The following enzymes were elevated to a greater extent in the fasted group than the fed group:

PDK4 – An enzyme that causes cells to burn more fat as opposed to glucose.

ATGL – An enzyme that disassociates fat cells.

HSL – Another enzyme that disassociates fat cells.

FAT/CD36 – An enzyme that helps muscle cells take up long-chain fatty acids.

IRS2 – An enzyme that plays a part in insulin secretion.

The interpretation is that fasted cardio directly uses more fat for fuel than fed cardio and increases the expression of the enzymes that makes the body better at mobilizing and using fat for fuel.





# Low Intensity Steady State Cardio (LISS)

Both of these studies had limitations:

## Schoenfeld study

- \* The study lasted 4 weeks, at 3 sessions a week (12 total sessions). The sessions lasted 60 minutes (5 min warm-up, 5 min cool down, 50 min work) and were done at 70% of their max heart rate. Based on the average weight, age, sex, intensity and duration the **average caloric expenditure of each session would be around 330 calories**.
- \* 12 sessions at 330 calories is a total energy expenditure of 3960 calories coming from the cardio throughout the whole program. A pound of fat contains around 3500 calories. Throughout the whole 4-weeks plan, the cardio done provided enough energy expenditure to “burn” only 1.13lbs of fat by itself.
- \* Both groups lost a bit more fat than the maximum that could be burned by the activity itself. This is likely coming from either the diet or activity level outside of the sessions.
- \* But more importantly, the fasted group DID lose a bit more fat (close to 1lb more). This was not statistically significant. BUT it was actually impossible to reach statistical significance from the exercise alone because both protocols couldn’t “burn” enough calories to lose more than 1.13lbs of fat. Yet the fasted group still lost 1lb more in fat. This is pretty good for the amount of exercise performed.
- \* The main issue with an approach like this is how well was the diet followed and how appropriate the selected calories/nutrients were for each individual. If some subjects eat more or less (and under/over-report, which is VERY common in studies), it could have a huge impact on the results. And what if some subjects are more active (or less) than they reported, and their nutrition plan was thus not adequate for them?



# Low Intensity Steady State Cardio (LISS)

## Chen study

- \* This study showed clearly that fasted cardio relies more on fat for fuel than fed cardio and that fed cardio burns more “carbs”. However, even though the fasted state led to a statistically significant superior fat use (16g vs 8g) it doesn’t mean that it would lead to more fat loss over the course of the day. Both protocols “burned” the same number of calories which means that over the day, both would contribute the same to establishing a caloric deficit. At an equal deficit over the day, you should lose the same amount of fat.
- \* Even if the amount of fat “burned” in the fasted state was double over that of the fed state (16 vs 8g), the difference is still only 8g of fat in an hour. A pound of fat has 4545g. It would literally take 568 hours of cardio to lose one more pound of fat from doing fasted cardio! We can’t really say that it works better for directly losing fat.
- \* The subjects were overweight individuals. This led to a much higher energy expenditure during the session (770 calories for the hour). In fitter individuals of a lower body weight, the same session would have “burned” a lot less calories (around 330 for women and 450 for men) which would make it even longer to directly burn one more pound of fat directly from the activity.
- \* There is also the possibility that obese individuals, who are often poor fat mobilizers, have a different response to fasted cardio than leaner individuals.



# Low Intensity Steady State Cardio (LISS)

## **CONCLUSION: IS FASTED CARDIO BETTER, WORSE, OR NO DIFFERENT TO FED CARDIO?**

### **FASTED CARDIO DOESN'T DIRECTLY LEAD TO MORE FAT LOSS...**

I mean, yes, the body will use a bit more fat for fuel when you do your cardio fasted. But it's not enough to make a difference. If you do 5 hours of cardio per week, it would still take you two years to **directly** burn one pound of fat more with fasted cardio.

### **... BUT IT CAN HELP YOU BECOME MORE EFFICIENT AT USING FAT FOR FUEL**

This is the main benefit of fasted cardio in my eyes. By affecting the gene expression that increases the enzymes that play a role in mobilizing and using fat for fuel you can, over time, program your body to be more efficient at utilizing fat for fuel.

This is especially interesting in obese individuals who normally are poor at mobilizing and utilizing fat for fuel.

In that regard, fasted cardio would be an “investment” toward making your body better at utilizing fat 24/7.

Can it make a difference in how much fat you lose over time? Maybe.

### **WILL FASTED CARDIO EAT AWAY MY MUSCLE MASS?**

No it will not. Not if your nutrition is adequate for the rest of the day. And especially not if you are lifting weights. The Schoenfeld study reported a similar loss in fat-free mass (which could have been water, glycogen, muscle, etc.) with fasted vs. fed cardio. And in both cases it was minor and more likely due to the caloric deficit (the subject lost more weight than the activity alone could have made them lose, indicating a caloric deficit) and didn't weight train.



# Low Intensity Steady State Cardio (LISS)

## CONCLUSION: IS FASTED CARDIO BETTER, WORSE, OR NO DIFFERENT TO FED CARDIO?

### SO, WHAT IS THIB'S POSITION ON FASTED CARDIO?

That if you want to do it, I'm okay with it.

If you don't want to do it, that's fine too.

It is not better, or worse, than fed cardio in the short term or to directly lose fat. It will not lead to more muscle loss either.

It could be of use however in the long run to make the body more efficient at using fat for fuel, making it easier, over time, to lose fat. This is likely more significant for overweight individuals.

**One potential benefit of fasted cardio** is on diet compliance. Doing fasted cardio requires more commitment than doing it at other times during the day. This behavior/habit can reinforce your other dieting strategies and strengthen your resolve.



# Low Intensity Steady State Cardio (LISS)

## **A BIT MORE INFO ABOUT LISS CARDIO TIMING**

While I doubt that the level (duration and intensity) of LISS cardio we see from people dieting/training to get shredded will strongly interfere with the gains from the lifting workout, it is still my preference to separate the cardio and lifting work if possible.

I personally prefer to do the LISS cardio earlier in the day or on a non-lifting day.

When we use it within the same workout as the lifting session (many don't have a choice) I like to do a split session: doing some of it at the beginning of the workout (acts as a general warm-up too) and some of it after the lifting.

This way you reduce the risk of significantly blunting mTOR by having a shorter bout once mTOR has been activated.



# Long carries

This is my favorite fat loss tool.

Essentially you walk for 15-45 minutes carrying a weight. You can use various tools like:

- Sandbags (Zercher carry, shoulder carry, bear hug carry)
- Sled drags
- Farmer walks (using light load and straps)
- Heavy backpack
- Weight vest
- Etc.

While I haven't found data on the caloric expenditure of the various loaded carries. I did find that rucking with a 10-20kg backpack "burns" around 250-300 **more** calories per hour (for someone my size) than regular hiking.

I feel that it is thus fair to assume that my loaded carries are at least that effective (likely more because of the less mechanically efficient positions).

And that is not taking into consideration the EPOC effect which will be more important than with LISS and the impact on muscle development (building muscle requires energy/calories).



## Long carries

I also want to note that I believe that very long carries (which I will talk about in a second) will build muscle mass too. I began using long carries instead of typical cardio to lose fat this summer. Essentially, I carry a 50lbs sandbag around the neighborhood for 30-45 minutes per day.

I noticed two things:

- 1) I lost fat A LOT faster than in the past when I used to do 45-60+ minutes of cardio per day.
- 2) My arms and upper back (rhomboids, rear delts) improved significantly.

There is no doubt in my mind that the later is due to the carries.

Because they are a loaded activity, even if it's done for a fairly long duration, it is my belief that long carries will not interfere with gains from a workout done previously.

While I still prefer to separate the long carries session from the lifting workout, I've done them back to back on more than one occasion and had no issue with recovery or progression.





# High Intensity Interval Training (HIIT)

- Alternating a brief period (typically) 15-45 seconds of near maximal intensity with a period of either active (walking for example) or passive rest. The duration of the rest period can range from 10 seconds (Tabata protocol) up to 90 seconds (sprint 8 protocol).
- Requires a good level of conditioning to do effectively: the less conditioned you are, the greater the stress response (cortisol and adrenaline) will be from the workout.
- Is a high-stress activity when done properly: should not be done too frequently.
- People either abuse HIIT or do it often but do it wrong. Both leading to suboptimal results
- The “intense period” is near maximal. That’s the whole point. You should not do more than 6-8 intervals in most workouts (short periods of 10-12 are fine). If you can or even want to do more, you are not doing them at the proper intensity level (or have world class conditioning).
- Can be done with many tools (elliptical, running, treadmill, battle rope, vertical climber, stationary bike, assault bike, rowing ergometer, ski ergometer, etc.)



# High Intensity Interval Training (HIIT)

- I like HIIT, but only once we have built a base of aerobic capacity first.
- HIIT is gradually integrated into the plan from phase to phase. From none to one of the most important fat loss tool in the plan.

A 4 phase progression could look like:

**Phase 1:** No HIIT

**Phase 2:** 15/45 x 6-8, once or twice per week

**Phase 3:** Sprint 8 protocol, twice per week

**Phase 4:** 30/30 x 6-8, 2-3 times per week



# Variation in methods to get more results

The more efficient you are at something, the less energy you burn doing it (and the more you need to maximize fat loss). That's why I like to use many different types of work when trying to get shredded or working with a client with that goal.

I will use stuff like:

- \*Long sandbag carries (30-45 minutes)
- \*Rucking (45-60 minutes)
- \*Long sled drags (20-30 minutes)
- \*Long farmer walks (20-30 minutes)
- \*Shorter and heavier versions of the above
- \*Sprints
- \*Jumps
- \*Throws
- \*Loaded stretching
- \*Battle ropes
- \*Heavy bag (boxing) work
- \*etc.

And I don't do all of them every week, I actually don't want them to be too structured. When you want to maximize performance, you want to become as efficient as possible in a few activities. But for body composition, staying inefficient (while still having good mechanics) can be very helpful.





# **PART IV**

## **QUICK TOPICS**

# All deficits are not equal

- When people think of “caloric deficit” (which is the cornerstone of a fat loss protocol) their mind immediately go to “caloric restriction”.
- A caloric deficit is really about the difference between **calories in** and **calories out**.
- You can thus create a deficit either by **reducing food intake** (calories in), **increasing overall physical activity** (calories out) or a combination of both.
- **FOOD** is anabolic. Not only by providing the material and energy to build muscle but by increasing hormones and enzymes that favor weight storage (including muscle gain, glycogen storage and fat gain).
- The more food you eat (to an extent) the more muscle you can build. But more food potentially means fat gain.
- But if you are in a deficit, you will not gain fat. You will lose fat.
- The key to gaining muscle (or at least maintaining it) while losing fat is to be in a deficit while consuming a large amount of food!
- This can only be done by increasing physical activity to create the deficit. Now you have enough food to support muscle growth and favors an anabolic environment (or at least, a less catabolic one) while still losing fat.
- You will still need to reduce caloric intake at some point
- The limitation is that you cannot increase the volume of hard physical activity, at least not by much (cortisol/recovery issues) so you need to increase NEAT, walk more and do more low intensity work.

# What are diet breaks? When should you use one?

The longer you stay on a diet and fat loss effort, the more likely you are to have issues come up.

Such as:

- Decrease in T3 levels due to lowered T4 to T3 conversion (chronically elevated cortisol levels and low carbs can do this)
- Decrease in leptin levels which increases hunger, decreases motivation to train, increases depression symptoms and decreases energy expenditure
- Peripheral (muscular) insulin resistance (when you diet with a low carbs approach the body reduces glucose transport to the muscles to avoid hypoglycemia)
- Increased risk of muscle loss
- More chances of burnout (downregulation of the beta-adrenergic receptors due to overproduction of adrenaline, depletion of nor-adrenaline and even dopamine)
- Higher likelihood of developing a problematic relationship with foods
- Social life and “normal life” being affected

**THAT'S WHY I PREFER THAT SOMEONE DOESN'T FOLLOW A CALORIC DEFICIT FOR LONGER THAN 10 WEEKS (bodybuilding contest prep would be a different story)**

# What are diet breaks? When should you use one?

While a refeed/cheat can help reduce some of these issues, to some extent, it cannot completely prevent them.

## For example...

- A weekly (or even biweekly; if you are really lean) carb refeed can prevent peripheral insulin resistance.
- That refeed can also slow down the decrease in leptin levels and the reduction of the T4 to T3 conversion. But it cannot completely prevent it, nor can it reverse it. Contrary to the claim of many “experts”, a cheat meal or day is not sufficient to reverse the leptin drop. It takes a week or more consuming a caloric surplus and ample carbs to bring leptin levels back up.
- Also, the longer a diet gets, the bigger the cheats tend to become and the harder it is to avoid cravings during the week.

That's why a **diet break** is a useful tool if you have a lot of fat to lose and have not reached your goal after 10-12 weeks of dieting.



# What are diet breaks? When should you use one?

A diet break should not be seen as a free-for-all period in which you overcompensate for all the foods you missed while dieting.

Rather it should be seen as a 1-2 week long refeed (not cheat) where you:

- Bring calories above maintenance (you should gain 2-4lbs, don't freak out, it is mostly from increased glycogen and water)
- Increase calories mostly from carbs
- As much as possible consume the same carb sources as you did on your diet (both to avoid digestive/gastric issues and psychological ones)
- Reduce physical activity (especially cardio/energy systems work)

You CAN have a cheat meal here and there during your break, but it should not turn into a week-long binge.

Remember, a diet break means that you will get back to a calorie restricted diet afterwards. The more junk you eat during your break, the less likely you are to be successful in the second leg of your diet.

**It is my experience that a 1-week diet break “buys you” 4 more weeks of dieting while a 2-week break “buys you” 6 more weeks of possible dieting.**

# What is a diet blitz? Who can do it?

A diet blitz is trying to lose as much fat as humanly possible in a very brief period of time. Basically, being excessive in caloric restriction and activity level but only for a short period, before negative adaptations can take place.

From experience, guys can lose up to 5-6lbs per week (especially if they are coming from a very high caloric intake) and girls 3-5lbs. Obviously, the more fat you carry, the more you can lose.

This approach is often used in obese individuals who are too heavy to undergo surgery, using an approach called a Protein Sparing Modified Fast (PSMF).

A typical PSMF includes around 1.5g of protein per kg (roughly 0.70g per pound), 20g or less of carbs and trace fats. This intake is normally used with obese individuals who are not physically active and need to lose a ton of weight.

For individuals who train it would go up to around 1.0 – 1.25g of protein per pound and 50g or less of carbs and minimal fats (trace from the protein sources).

Activity level would be as high as tolerable without performance decreasing too much or lethargy setting in.

This can be done normally for 2-3 weeks at the most and will be good for a loss of 10-15lbs of fat for guys and 6-10lbs for women (provided that they are not chronic dieters). More if the person had been consuming a very high caloric intake for a while.



# If I reach my leanness goal before the « event » what do I do?



That picture was taken 3 weeks before my last bodybuilding competition. I was 205lbs with striated glutes.

I kept on with the cardio and reduced calories even more and I eventually was so burned out that all I could do were 15 minutes workouts. I would train 15 minutes, lie down next to the pool for 3-4 hours, go back to train another 15 minutes and then go to bed.

On show day I was down to 192lbs with much less definition than 3 weeks prior (because I was too flat).

**Cardio and caloric restrictions are tools to lower your body fat levels.** Once you reach the level you need, there is no reason to keep up with the full regime even if your event is in a few weeks.

The key is finding the caloric intake and activity level that will allow you to maintain your condition. I personally drop cardio first as it take more out of me than the caloric restriction (but that can vary from person to person).





# **PART V**

## **INITIATION / PROGRAMING PHASE**

## PHASE 1 (3-4 WEEKS)

The main purpose of this phase is to improve your body's capacity to mobilize and use fat for fuel. It will make every subsequent phase more effective. We also want to improve your cardiovascular foundation to be able to use the more intense metabolic methods with less of a stress response in future phases

<b>DIET</b>	High fat, very low carbs (-50g), mid protein (1g/lbs) ... keto-ish Start at a slight caloric deficit
<b>RESISTANCE TRAINING</b>	"Heavy" hypertrophy training. Avoid going into the lactate accumulation zone. Sets lasting 30 seconds or less (typically 6-8 reps/set) Keep rest intervals fairly long (2-3 minutes) In this phase I like programs like Dorian Yates style training, Fortitude training, DC training or even a strength-based plan.
<b>STEADY STATE CARDIO</b>	20-30 minutes at a heart rate of around 110-120 BPM 3-5 times per week
<b>HIGH INTENSITY INTERVALS</b>	None
<b>METABOLIC CONDITIONING</b>	None



# **PART VI**

## **MAXIMUM SUSTAINABLE PHASE I**

## PHASE 2 (3-4 WEEKS)

In this phase we continue developing your capacity to mobilize fat and use it for fuel but we start to introduce some higher intensity cardio work as well as a bit more lifting volume. BUT to allow this, we increase your carb intake, while maintaining or decreasing caloric intake.

<b>DIET</b>	Targeted carbs. Consume 75-150g of carbs (depending on body size) mostly around your workouts (pre and post). The rest of your meals are low carb. Protein is still at around 1.0g/lbs (up to 1.25g) and fat is reduced to allow for the extra carbs while maintaining or lowering caloric intake
<b>RESISTANCE TRAINING</b>	Here we can use a combination of “heavy” hypertrophy work (6-8 reps) and moderate load hypertrophy work (8-12 reps). I suggest either doing the big basic lifts in the 6-8 range and the machine or more isolated work for 8-12 reps. I like the upper/lower and push/quads & pull/hams splits the best in that phase
<b>STEADY STATE CARDIO</b>	20-30 minutes at a heart rate of around 110-120 BPM 3-4 times per week
<b>HIGH INTENSITY INTERVALS</b>	1-2 sessions of 45/15 intervals (45 sec “rest”, 15 sec hard) for around 6 minutes done with the steady state work (10 min steady state/ 6 min intervals/10-20 minutes steady state)
<b>METABOLIC CONDITIONING</b>	None





# **PART VII**

## **MAXIMUM SUSTAINABLE PHASE II**

## PHASE 3 (3-6 WEEKS)

This phase ramps up the intensity of the cardio work by introducing metabolic conditioning. Weight training remains fairly similar. To allow for the greater demand on the glycolytic system due to the energy systems work, we once again add carbs while maintaining or decrease overall caloric intake.

<b>DIET</b>	We consume carbs at two set times: around the workout (75-100g) and in the evening (50-100g). In this case the carbs will be useful not only to fuel and recover from the workouts, but also to lower adrenaline and cortisol. At night this is important as it will help you sleep better (normally sleep becomes impaired after 6-8 weeks of dieting). Protein is the same, fat is decreases to allow for the extra carbs
<b>RESISTANCE TRAINING</b>	Here we can use a combination of “heavy” hypertrophy work (6-8 reps) and moderate load hypertrophy work (8-12 reps). I suggest either doing the big basic lifts in the 6-8 range and the machine or more isolated work for 8-12 reps. I like the upper/lower and push/quads & pull/hams splits the best in that phase
<b>STEADY STATE CARDIO</b>	20-30 minutes at a heart rate of around 110-120 BPM 3-4 times per week
<b>HIGH INTENSITY INTERVALS</b>	1-2 sessions of 30/30 intervals (30 sec “rest”, 30 sec hard) for around 6-8 minutes done with the steady state work (10 min steady state/ 6-8 min intervals/10-20 minutes steady state)
<b>METABOLIC CONDITIONING</b>	1-2 sessions per week, at the end of the lifting work. I like to use loaded carries for 3-4 sets of 1 minute with 1-2 minutes of rest.



# **PART VIII**

## **BEAST MODE PHASE**

## PHASE 4 (2-4 WEEKS)

**This phase is not always utilized.** It is what I would call “illogical” programming in that it will have drawbacks (metabolic adaptations, training burnout, feeling like crap, poor sleep, drop in motivation). For that reason it is only used with those who have to get in “contest” or “photo shoot” shape and who are willing to suffer the consequences of the plan. Note that there will be an aftermath and measures to take to reverse some of the negative adaptations after the prep is over. This is the only phase where the type of diet is not in-line with the training plan. This is not sustainable for more than 2-3 weeks. Even in 2-3 weeks there will be side-effects (especially at the tail end of 10-12 weeks of dieting) but going for longer than 3 weeks might lead to long term issues.

<b>DIET</b>	Very low carbs (-50g), low to moderate fat, higher protein (1.25 – 1.5g/lb). This phase also has the largest deficit of all the phases.
<b>RESISTANCE TRAINING</b>	High density training (supersets, giant sets, circuits, GBC, short rest intervals, etc.). I like Gironda’s 8x8, compound 8x8, GBC training, etc.
<b>STEADY STATE CARDIO</b>	20-30 minutes at a heart rate of around 110-120 BPM 4-5 times per week
<b>HIGH INTENSITY INTERVALS</b>	2-3 sessions of 15/45 intervals (30 sec “rest”, 30 sec hard) for around 6-8 minutes done with the steady state work (10 min steady state/ 6-8 min intervals/10-20 minutes steady state)
<b>METABOLIC CONDITIONING</b>	2-3 sessions per week, at the end of the lifting work. I like to use loaded carries for 3-4 sets of 1 minute with 1-2 minutes of rest.



# **PART IX**

## **PEAKING**

# How to look your best on competition/photoshoot day?

\*If you are not in contest/shoot condition the week before, you can't rely on a peaking week to pull off a miracle

VARIOUS PEAKING STRATEGIES			
	TRADITIONAL	"SHIT/BLAST LOADING"	MY APPROACH
Day - 6	Deplete	Regular diet	Deplete
Day - 5	Deplete	Regular diet (sometimes deplete)	Deplete
Day - 4	Deplete	Deplete	Fat loading to fill IM triglycerides
Day - 3	Carb loading	Deplete	Fat loading to fill IM triglycerides
Day - 2	Carb loading	Deplete	Carbs loading
Day - 1	Carb loading., cutting water in the evening	Loading for a short time frame with very calorically dense food (aka "crap") while cutting water	Back to your normal "diet", possibly with slightly more carbs depending on look.  Cutting water in the evening
Show/shoot day			