



The Testosterone Companion. A continuation of the Testosterone Book

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More strategies and practical keys to increase and optimize your testosterone, 100% naturally, according to science.

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Introduction

First of all, **thank you**. Really.

Thank you for the support to the Testosterone Book project, for the kind words, for the success stories... You reader, you really rock, I never expected such a good reception of my work, this started as something personal but I've seen that I was not alone and that many people was ready to fight for this, for recovering naturally the testosterone that is robbed by modern lifestyle and misguided "healthy" advice.

This companion is intended as a continuation of the Testosterone Book, adding things that were left out because of space or time reasons and new things that allow us to go even deeper in the topic of testosterone optimization and clearing up some common doubts that I've received via email, for example.

I finished the testosterone book, but I never finished researching the topic, learning more and untangling a very complex web of elements that influence testosterone and general hormone optimization. Not only it's fascinating (for me at least, and yes, I'm weird I know) but every day I learn something new and I understand better, especially how powerful hormones are and how, fortunately, we can influence them via diet, lifestyle and general mindset.

We are not powerless, on the contrary, but that means we need to "man up" and do the work.

This companion is not a whole book, and it does not cover the basics of testosterone optimization, the aim of this material is to complement the previously released Testosterone Book and give even more tools and tactics to increase your testosterone. If you need to know the basics I recommend to download the testosterone book. I assume you read it so you know the fundamentals, because we will be working and speaking from there.

Here we will know some new friends and "foes" of testosterone (remember, I put "foes" in quotes because regarding natural body substances there are not good or bad boys "per se", it's really a matter of balance and having everything in the right quantities), we will see how to optimize them and how everything is connected in a complex system, going from the usual dietary and lifestyle practices to some cool "trick" that will even increase your chances of getting laid, scientifically proven over and over again (I know that's the real reason you are here, and if you are a women, don't worry, it's a two ways road so you can use it too).

We will dig deeper too into the mind - testosterone connection and what kind of lifestyle optimizes testosterone and makes us happier in the process, because almost every self-help guru does not get it, they insist in changing minds, but if you optimize your body, your mind will follow, meanwhile if your body complains, it's unhealthy and it's never at ease, you won't reach happiness nor peace of mind, no matter how many times you repeat useless affirmations in the mirror.

As always this material tries to do three main things:

1) Stimulate thinking for yourself (we will see again that, almost always, “conventional wisdom” is no wisdom at all.

2) Backing up everything according to science. There is no inventions, no magic tricks, nothing unproved, scientific studies are referenced in support of the conclusions.

3) Explaining things in layman terms. Some topics are dry and hard because of their complexity, and this is not a book about biology nor an academic tome, the point is that you get the basic explanation, so you really know what to do and why to do it.

So let's begin.

What is Leptin and why you should care

We saw in the testosterone book that our hormones are very powerful (and overlooked), the hormonal environment determines our general well being and how well our bodies will work, and when we screw with that, all kinds of trouble come knocking on the door.

We saw extensively the most important hormones like insulin, cortisol and, of course, testosterone, but there are many more, one of them being leptin, also known as the “commander in chief” of the other hormones.

We want to know what leptin is because it’s demonstrated that “leptin directly affects gonadotropin-releasing hormone release from the hypothalamus, luteinizing hormone from the pituitary gland and ovarian follicular ¹”.

So much for the layman terms. Remember all that odd names from the testosterone book?

Those were the names that influenced testosterone, and leptin has power over all of them, in fact leptin has our whole libido in the palm of its hand.

Did I get you attention now? Good. This is the “theoretical” chapter, but stay with me, I think you see the importance, right?

So we have our leptin well managed and happy and we will have our libido and testosterone ready for work, it’s that “simple” and it’s another powerful hormone that we can and must control.

As the rest of hormones leptin is hugely influenced by diet and lifestyle, especially diet.

Fortunately for us, we don’t have to get crazy or changing anything important in the diet we saw, if we follow the instructions laid in the testosterone book, Leptin will take care of itself because those were the general rules to optimize the entire hormonal landscape, but if we want to optimize things even more, we must learn more about leptin and we must keep it happy with some tweaks and tricks that we will see.

As always I’ll try to keep this as short as I can, but I believe it’s better to know what we are doing and why, so let’s see what the hell is leptin.

Leptin is a hormone produced by fat cells in our body, he goes to the brain and tell him how much fat we have stored. It influences appetite, energy, metabolic rate... because how much fat we have in our love handles is a signal to regulate appetite and energy (in theory with high fat reserves we should eat less, but as we will see that mechanism can get screwed, especially by modern diets).

¹ Adipose tissue and the reproductive axis: biological aspects. Hausman GJ, Barb CR.

Leptin is some kind of super-hormone, and in fact it's responsible of overeating (or not), cravings and the like, as you see this fellow is the face you see in every important meeting in your body.

Leptin goes up and down throughout the day (as the rest of hormones do) and this has short term and long term implications.

In the short term if leptin goes down we start to get hungry, it's a signal of low body fat and energy, so we go hunting a mammoth... to the KFC. We eat the crispy spicy mutant chicken and leptin goes high telling the brain "we are full, drop that fried wing".

If everything is working ok, that's the mechanism and the role of leptin. But you know that not everything will be so smooth.

In the long term how much leptin we have in our body is determined by our total amount of stored body fat.

Lean people has low leptin levels, meanwhile fat people has high leptin levels (remember, it's produced in fat cells, if we have many of them, then we have many "factories" of leptin).

This can seem like a paradox because when leptin is high we (theoretically) enter in "we don't need so much food, drop the wing" mode, but as you will have seen overweight people tend to develop cravings and problems of appetite regulation, overeating even when leptin is so high that's drowning everything.

How is this possible?

Because, much like insulin, **overweight people tend to develop a condition called "leptin resistance", which means chronically high leptin in our bodies that does not do its work properly.**

In the same way than insulin, a lot of leptin is in our body (because we have high fat mass) but its efficacy is diminished, it does not do the work of saying "drop that mammoth leg" and we keep eating, and eating, and eating even when we have fat reserves for months.

Yes, it's not so easy as a "willpower" problem in overweight people, so better we stop judging...

In overweight people high leptin and leptin resistance is a problem, the normal mechanisms of appetite regulation get screwed and we can not help but keep eating even when it's jeopardizing our health.

Meanwhile low fat and fit people has lower leptin levels and they are very leptin sensitive, so only a small quantity of leptin is needed to make everything work in an efficient way.

Because not only appetite is regulated by leptin, but every other hormone responds to it (even testosterone), we must optimize it, because, as we will see now, Leptin and Testosterone have a close relationship.

The relationship between Leptin and Testosterone

Ok, it's good to know that there are more important hormones out there, so what?

Well, Leptin is not only the commander in chief, but **there is a direct relationship between leptin and testosterone.**

Although it's a new field, some studies are starting to see and discover this relationship. For example this ².

In that paper, titled "Strong association between serum levels of leptin and testosterone in men", three groups of men were analyzed.

The first group consisted of untreated hypogonadal patients with testosterone serum levels lower than 7 nmol/l.

The other two groups were more fortunate and had a serum testosterone level higher than 30 nmol/l.

The second group involved hypogonadal patients under effective androgen substitution therapy (i.e. Low testosterone men with recovered the levels due to medication), the third one comprised males without any endocrine disorder (i.e. Healthy men with healthy testosterone and hormone levels).

What was the result?

Well, groups 2 and 3 showed no significant differences in serum leptin, serum testosterone, and body mass index (BMI), but Group 1 (the unfortunate hypogonadal untreated low testosterone men) had significantly higher leptin serum levels and significantly higher BMI.

Going beyond that, they made multiple linear regression analysis that revealed a significant independent association of leptin with testosterone serum levels and with BMI.

This means, if you have high leptin levels, your testosterone will plummet.

And this means too that we have another direct weapon in our testosterone quest: leptin management.

If we manage well our leptin levels, we influence our testosterone levels.

² Strong association between serum levels of leptin and testosterone in men. Hermann M. Behre, Manuela Simoni, Eberhard Nieschlag

Apparently Leptin and Testosterone are like a married couple and its relationship is not so linear, because it depends on gender and distribution of body ³ (if you are a non obese woman, for example, leptin and testosterone go by the hand), but in general studies are seeing that testosterone and leptin inhibits each other, one more example being that when men were supplemented by anabolic-androgenic steroids (i.e. They boosted testosterone and androgenic hormones injecting them) the leptin went down and when they suppressed the androgenic hormones leptin went ⁴.

Now that we know the relationship it's time to put this into practice.

³ A strong association between biologically active testosterone and leptin in non-obese men and women is lost with increasing (central) adiposity. Söderberg S, Olsson T, Eliasson M, Johnson O, Brismar K, Carlström K, Ahrén B

⁴ Effects of anabolic-androgenic steroid use or gonadal testosterone suppression on serum leptin concentration in men. Hislop MS, Ratanjee BD, Soule SG, Marais AD.

How to manage and optimize leptin

Let's go to the practical things we can do to manage leptin and keeping it low and effective. It's very important because, besides directly affecting our testosterone levels, it will help us with our body mass and we will have the cravings and eating unbalances controlled.

According this ⁵, in men and women: "by multivariate analyses, fat mass, lean mass, and insulin levels were the strongest predictors of leptin levels in all groups".

So we have the keys here to manage our leptin.

1) Reduce body fat.

Not only for vanity reasons, low body fat predicts high testosterone, probably because of low leptin. Eat the diet in the testosterone book and you will reduce body fat.

2) Gain lean mass.

It's a predictor of low leptin, so don't skip your resistance training (again according to the testosterone book), maybe you are not very fond of muscles, but we will see more about this in a second, because they are important.

3) Control insulin.

This point we got it covered in the book too, as the others, but here comes the new (and awesome) part.

4) Practice the key to eternal youth.

What? Don't you know what is it?

Then turn the page and put it into practice, because it will help us so much that you will want to kiss me (but please don't, seriously, don't).

[Get the full testosterone companion](#)
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⁵ Effects of anabolic-androgenic steroid use or gonadal testosterone suppression on serum leptin concentration in men. Hislop MS, Ratanjee BD, Soule SG, Marais AD.