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***I'm sure you have seen the endless list of the benefits of optimal testosterone levels, which include (but are not limited to):***

- increased ability to build lean mass.
- improved rate of lipolysis, aka. fat loss
- improved mood, confidence, and motivation.
- better erections, libido, and sexual performance.
- increased desire for success, dominance, and power.
- stronger bones, improved cardiovascular health.
- increased body and facial hair growth...

...Since testosterone is literally the hormone that makes man a man, it's safe to expect increased manly qualities in nearly every area of your life after increased testosterone levels. Not everything is controlled by testosterone obviously, but if you start looking at the studies, it's pretty clear that from womb to tomb, this one hormone determines A LOT in a guy.

Without further ado, let's get to the ultimate guide on how to increase testosterone levels...

## 1. Get a Quality Multivitamin

Perhaps one of the easiest ways to significantly increase your natural testosterone production, is by correcting all of your underlying micronutrient deficiencies. This is best to do with nutrition, and also by using a high-quality multivitamin.

In fact I would go as far as saying that the best “natural T-booster supplement” is in fact just a basic high-quality wide-spectrum multivitamin. When you start looking at how vitamin and mineral deficiencies affect your testosterone production, you’ll realize why its important to keep your body topped up on essential micronutrients.

## 2. Maintain Regular Physical Activity

Aside from lifting weights and sprinting your ass off, you should maintain some regular physical activity on a daily basis.

This includes things like walking, plowing the snow/mowing the lawn, chopping trees, and other sorts of recreational stuff.

Maybe a low-intensity hockey game with the lads? Some ball-games with the family?

Anything that can be considered “active rest”.

There are even studies to show how effective regular physical activity is for T:  
...A recent study from *the Journal of Clinical Biochemistry and Nutrition* observed 41 obese and overweight male subject who were put on a lifestyle modification program lasting 12-weeks, consisting of varied amounts of physical activity (measured by a pedometer) and reduced caloric intake. The goal of the study was to determine which one had the biggest impact on testosterone levels; increased physical activity or reduced caloric intake and the resultant weight-loss? After the 12-weeks had passed, the researchers found out that it was the high physical activity – not so much the magnitude of the calorie deficit – which was the driving factor in the subjects rising T levels.

Of course walking isn’t the only physical activity that boosts T-levels, when sedentary subjects are compared against “active” subjects, the more physically active guys do have higher sperm counts and testosterone levels. Also its seen in studies that when sedentary men start some sort of physical activity and/or low-pace exercise routine, their T levels tend to go up as well.

Take something as woodcutting as an example, in Tsimane tribesmen, 1-hour of chopping trees led to 46.8% increase in testosterone.

### **3. Hydration is the Key**

We all know how important water is for our cognitive function, exercise capacity, and overall bodily functions.

But many still take water as granted, and don't drink nearly enough to really be in a good state of hydration. Even though it's stupidly easy to just grab a steel bottle – this is my favorite – and fill it to the brim with the ever anabolic h<sub>2</sub>o.

During exercise the importance of drinking plenty of water is increased, since even mild dehydration will suppress the exercise induced rise in testosterone and growth hormone, while dehydration also increases cortisol secretion.

### **4. Intermittent Fasting**

Did you know that you don't have to stuff your face with food for every few hours in order to boost T and maintain optimal rates of muscle growth? Despite the fact that the fitness industry tries to sell you the idea of multiple small meals being “optimal”, science has actually shown that meal frequency does nothing to metabolic rate, eating fewer meals does not burn away your muscle or make it harder to build that, and for a fact, short-term fasting does not lower your testosterone levels.

In fact there are few interesting studies which have shown that after a short-term fast, your androgen receptors become more sensitive towards testosterone than what they would be if you'd eat on a constant basis. Even after 10-days of water fasting, re-feeding shoots testosterone levels higher than what the baseline was in the beginning.

### **5. Money is testosterone**

I'm a big believer in the fact that making lots of honest money equals – at least in some form – happiness.

Not necessarily the fact that you can see the numbers in your bank account, but the fact that money (at least if you make it in your own terms) often equals total freedom. Money also equals success in many fields, and can be a form of competition, or at least if not competitive, it generates the feeling that you're “*winning in life*”.

This study of young future-traders is a great example. In it, the traders noted higher testosterone levels on the days that they made above average profits. One young gun

in the study ended up on a 6-day money streak and had 78% higher T-levels in serum as a result.

## **6. Sleep**

Whether you choose to sleep four hours or eight hours, can mean a difference similar to night and day in your T production.

Partial sleep restriction lasting one-week (5h/night) in a laboratory setting has been shown to decrease overall 24-hour testosterone levels in healthy young men by ~15%<sup>6</sup>.

On a study by Penev et al. the men who slept for ~4 hours had an average of 200-300 ng/dL testosterone levels in serum, whereas the guys who slept for ~8 hours had levels closer to 500-700 ng/dL<sup>7</sup>.

A study from Gov et al<sup>8</sup>. showed similar results. On 531 Chinese men, increased sleep time was highly correlated with higher total and -free testosterone levels. The researchers also calculated that each extra hour of sleep led to about 15% more testosterone.

## **7. Spark Up Your Sex Life**

Admittedly one of the most satisfying ways on how to increase testosterone levels naturally is; sexual activity.

It's not fully understood why this happens, but many studies have theorized that its an interplay with dominance, feeling of power, feeling of success, pheromones, dopamine, and interpersonal touch. For this reason it's also likely that sex with an actual human instead of the palm of ones hand,would be a much better way to boost T.

Is there any research on increased sexual activity and testosterone levels? You bet there is.

A study of 44 men visiting a sex club actually showed that the guys who went there only to watch other people have sex, had an average increase of 11% in their testosterone levels, whereas the guys who went and actually had sex there noted an average increase of 72%. It's also seen in couples that on the nights that there is "sexual activity", testosterone levels are significantly higher than on the nights that they don't have sex.

One of the many findings in the *Baltimore Longitudinal Study on Aging* was that in men over 60-years of age, those with higher level of sexual activity had significantly greater serum testosterone levels.

## **8. Fix Your posture**

According to an interesting study done by Cuddy et al. in Harvard University, your body language as well as postural changes can almost immediately impact your stress and steroid hormones.

In their research, the scientists wanted to know what happens to the bodily hormones when the subjects do either a set of ‘high-power poses’ (taking up more space, standing tall, hands on hips, dominant alpha stuff, etc) or ‘low-power poses’ (contractive behavior, closed limbs, taking less space, general insecure positions, etc).

## **9. Stress less**

More easily said than done huh? Well it doesn’t change the fact that stress more or less kills testosterone levels. This happens because chronic stress results in chronically elevated cortisol levels – and cortisol being the body’s principal stress hormone – is a catabolic hormone that among many other things; suppresses testosterone levels.

Now don’t get me wrong here, we all need some cortisol. It gets us up in the morning and allows us as a species to walk with 2 feet, and without cortisol any kind of minor trauma would instantly bring you into full shock and kill you.

However, if you are under physical or physiological stress that constantly “haunts” you, it’s likely that your cortisol levels are constantly high thorough the day.

## **10. Avoid Milk**

In terms of its macronutrient composition (high quality micellar casein, fats from mainly SFAs and MUFAs, and some carbs) and micronutrient composition (A, B1, B2, B12, D, choline, calcium, magnesium, and potassium) one could easily assume that milk is a pro-testosterone drink.

However, if we look bit deeper, there’s a problem with milk, especially the full-fat kind. It’s the amount of hormones, in particular the naturally occurring mammalian estrogens, and especially in countries like US where the cows are kept pregnant (this increasing estrone content by up to 33-times<sup>99</sup>) for over 300-days of the year.

As a big-fan of milk, I was not happy to find Japanese research where drinking cows milk resulted in increased serum estrogen and progesterone levels, which suppressed GnRH secretion from the brain and thus lowered testosterone secretion in men and prepubertal boys during a 21-day study period.

Since the conjugated hormones are mostly in the fat portion of the milk, it seems that skimmed and low-fat milk would be a hormonally better option...

...And indeed there are two studies which support this theory;

1. When physically active men drank full-fat milk and their overall sperm quality significantly decreased.
2. Consumption of low-fat and skimmed milk reliably increased sperm volume and mobility.

## **11. Hit the weights**

To up regulate androgen receptors in muscle tissue while also increasing testosterone levels both acutely and moving the baseline higher and higher can be best done with some form of resistance training.

There's a mounting pile of evidence to suggest that resistance/strength training (basically lifting medium-heavy weights) can stimulate testosterone production in the short-term)

...But also in the long-term by forcing the body to adapt into a new "normal" where your testosterone production is significantly higher even at rest mainly due to "forced" neuromuscular adaptations.

Resistance training is also generally very healthy, and it's easily the best way for men to make your body look great, which amps up your confidence and can furthermore boost your T-levels due to those 'feelings of success' as explained in the subheading #9 of this article.

The idea is not just to "lift weights" in any manner that you can think of, but instead what you want to do for optimal hormonal response is to;

- lift heavy enough
- be explosive but still maintain form
- activate large amounts of muscle mass
- stimulate fast-twitch glycolytic muscle fibers
- do all of this in a short-period of time
- rest properly.



## **12. Sprint**

When it comes to “cardio” high intensity interval training (HIIT) fits a testosterone boosting routine like a nose to the head.

Consider adding 1-2 quick HIIT-sessions on top of your resistance training routine to maximize exercise induced hormonal adaptations.

Due to its explosive nature, short-duration, activation of fast-twitch muscle fibers, and increased production of lactic acid – without being “chronic” enough to cause prolonged increases in stress hormones – HIIT, aka. short bouts of intense exercise can cause sharp increases in total testosterone, free testosterone, DHEA, growth hormone, and dihydrotestosterone.

## **13. Avoid Overtraining**

It seems to be in fashion now in the fitness circles to claim that overtraining would not exist. Sure, those guys claiming that are usually on steroids or don't really know how to really work hard enough to really need recovery. Also their goal is rarely to maximize hormonal output.

If you workout with a reverse pyramid style doing neuromuscular movements and some HIIT cardio once in a while, you really can't be lifting every day. You can try but eventually this will lead to sluggish progress and messed up hormonal response, which is exactly what were trying to avoid here.

In short, you want to workout 3-5 times a week with ALL OUT INTENSITY and then REST properly so that your muscles, endocrine system, and CNS are always primed for your next workout which will be slightly more intense/heavier.

Going to the gym with no energy and when you're still recovering from the previous workouts does very little to your progress and only negatively affects the hormonal response.

## **14. Get some Creatine**

Creatine is – right after protein supplements – the most popular supplement used by bodybuilders and various athletes.

It's a naturally occurring amino-acid, which has a monster amount of scientific studies proving its positive effects in strength output and lean mass gain.

Creatine works by increasing cellular ATP (adenosine triphosphate) levels. ATP is what cells use as energy, so basically you're increasing the supply of energy for your cells when you ingest creatine. Logically this helps you perform better.

But did you know that creatine can also increase testosterone levels? Not only the exercise-induced T-levels but also your resting baseline.

As a side note for a study that tested creatine's effect on cognitive abilities, the researchers found out that it also increased salivary testosterone levels. In athletes creatine has been noted to reliably increase T-levels, for instance; one 4-year study noted that in athletes who reported using creatine, a trend towards increased testosterone levels was noted.

## **15. Lower your Endocrine Disruptor Exposure**

The definition of endocrine disruptor is as follows; "Synthetic chemicals or natural substances that may alter the endocrine system (consisting of glands, hormones, and cellular receptors that control a body's internal functions) and may cause developmental or reproductive disorders."

Compounds that act as endocrine disruptors in the body are used generously in modern personal care items, plastics, preservatives, pesticides, and many many other appliances (even in fast foods apparently).

Out of the millions of chemicals used, most are relatively harmless. However there are some compounds that have been proven to disrupt hormone production and utilization in the body.

How to reduce the exposure then?

Well it gets to be pretty much impossible to avoid all exposure in the modern World, but you can slash your exposure significantly by using a tap water filter, drinking from steel or glass cups and bottles, using natural personal-care items, and eating less canned foods. Grocery store receipts are also coated with BPA, so better not fiddle around with them too much.

## 16. Avoid Prescription drugs

Healthcare is a business. A big, billion dollar business.

Chances are that if you visit a doctor – even without any known health issues – you’ll probably end up leaving with a prescription to some medication.

Therefore its not a coincidence – nor a surprise – to see that the largest pharmaceutical companies are raking in hundreds of billions of dollars annually.

In many cases, prescription drugs can prove to be vitally important to the patient. However, it’s also worth noting that in order for the pharmaceutical companies to make money – people have to be sick – and for some reason we are only treating the symptoms with more and more pills instead of actually focusing on the cause of the illness.

Though at the end of the day, your health is your own personal responsibility. Not the doctors. Not the governments. Yours.

With that being said, here’s some studies about prescription drugs that have side-effect of lowering testosterone levels (what ever you might do with this info is your decision);

## 17. Stop smoking

Two of the most common things that people smoke are; tobacco and marijuana.

The question is, how do they affect testosterone levels? Or do they even?

Looking at the , it’s actually something that increases natural testosterone and DHT levels<sup>46,47</sup>.

This effect is likely caused by nicotine, which acts as aromatase enzyme inhibitor (turning less testosterone into estrogen) and also blocks the conversion from dihydrotestosterone into a weaker metabolite 3-alpha-diol.

...Then there’s also the metals and minerals in tobacco which can have androgenic effects, bottom line being that smokers tend to have bit higher T levels than non-smokers, even though smoking itself is not too healthy thing to do.

When it comes to cannabis, some studies say that the active ingredient (THC) can inhibit testicular enzymes needed in testosterone production and reduce T-levels, though the effects are reversible and not as significant as some people claim. In fact there have been few studies where smoking pot has not negatively impacted any hormones.

## **18. Stop Boozing so much**

Let's just start off by saying that no, you don't have to completely cut off alcohol from your life in order to naturally raise testosterone levels.

Is it beneficial for T? Not in the slightest, in fact it has multiple mechanisms for lowering androgens, but in all honesty its effects on T-levels have been wildly exaggerated.

Sure if you're an alcoholic who slams booze to the point of passing out on nearly all days of the Week, you can be damn sure that it crushes your test production, but few drinks here and there do not have that significant of an effect...In the case of alcohol, the dose really does make the poison. Enjoying a few old fashioned's or beers once in a while isn't enough to chemically castrate you.

## **19. Don't overeat protein**

Protein is vitally important for muscle growth as well as testosterone production.

We know that chronic protein malnutrition causes low testosterone levels, while it's also scientifically proven that roughly 0.8g/lb of lean mass is somewhat the point of diminished returns when it comes to the optimal amount of protein for muscle gains.

The problem is that the bodybuilding sites and magazines preach everyone to eat super-high amounts of protein (remember that they also sell you the protein), and protein IN EXCESS is not only useless for your muscle building goals, but it can also significantly reduce testosterone levels.

## **20. Cardio Before Weights?**

The age old questions spanning around the fitness industry in relation to hormones and workout timing are;

- Should you train in the morning or evening for better testosterone levels?
- Should you hit the weights before cardio or the other way around?

The cardio question first. Sure, there are many opinions, but the actual evidence is suggesting that yes, cardio before weights is more 'anabolic'.

In fact a study by Rosa et al. showed that the guys who hit cardio before weights had 7x higher post-workout testosterone levels than the guys who did cardio after weight training (due to 'stimulus interference' the researchers claim).

## **21. Train in AM or PM?**

When it comes to morning or evening training, it doesn't really matter. Even though your T-levels are naturally highest in the morning, over long-term training increases testosterone levels in similar fashion regardless of the time of the day.