4 STRATEGIES TO TRIPLE YOUR TESTOSTERONE

SPARTAN
MASCULINITY

LEGALITY

MEDICAL DISCLAIMER

The information presented is not intended for the treatment or prevention of disease, nor is it a substitute for medical treatment, nor is it an alternative to medical advice.

This publication is presented for informational purposes, to increase the public knowledge of developments in the field of boosting testosterone naturally. The recommendations outlined herein should not be followed without a consultation with your healthcare professional. Use of the information provided is at the sole choice and risk of the reader. You must get your physician's approval before beginning this or any other exercise or nutrition program. This information is not a prescription. Consult your doctor, nutritionist, or dietitian for further information.

INTRODUCTION

Hello and welcome, my name is Alexander.
I am the CEO of *SpartanMasculinity.Com*.

Spartan Masculinity is your Number #1 resource for boosting Testosterone levels naturally using the latest research & most effective proven strategies.

I want to give you a huge welcome to the **"4 Strategies To Triple Your Testosterone"** eBook and the Spartan Masculinity family of ambitious action takers looking to become the best version of themselves.

Inside the 4 Strategies eBook, I'll share with you the 4 out of the 20 scientifically proven strategies I've used to triple my Testosterone.

These methods helped me raise my Testosterone from a low 370ng/dL to a high 934ng/dL. This is close to the top of the natural range.

As someone who used to suffer from low Testosterone, I've spent years researching and reading hundreds of medical studies to learn how to fix my low Testosterone levels.

Out of all the strategies I've used, these 4 are some of the most effective, as they work by fixing the ROOT causes of low Testosterone.

Use all the tips and tricks inside the 4 Strategies eBook, and you'll triple your Testosterone levels in the next 2 to 8 weeks GUARANTEED and transform your life.

The question is: **Are you ready to triple your Testosterone levels & unleash your full potential as a man?**

If YES, flip the page….and uncover the secrets to tripling your Testosterone levels today. Remember: there is no turning back!

If you'd like to contact me, shoot me an email at bestmanunleashed@gmail.com or send me a DM on my instagram page @bestmanunleashed. You can also shop our exclusive gym merch at https://unleashed.clothing/

Dominate Your Day,

Alexander

CEO of Spartan Masculinity
SpartanMasculinity.Com

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BENEFITS OF HIGH TESTOSTERONE

HIGH TESTOSTERONE BENEFITS	LOW TESTOSTERONE SYMPTOMS
MENTAL	**MENTAL**
Improves Mental Health - raises confidence & self esteem. Reduces symptoms of anxiety & depression.	**Poor Mental Health -** low self esteem, lacking self confidence. Causes severe anxiety & depression. Increases risk of suicide.
Increased Motivation - increases ambition & drive.	**Lacking Motivation -** no goals, desire or drive.
Enhances Focus & Cognitive Function - mental clarity. Improves concentration, enhances short term & long term memory. Faster decision making & problem solving.	**Decreased Focus & Cognitive Function -** brain fog. Difficulty concentrating & staying on task. Slower cognitive processing, decision making & problem solving.
Reduced Stress - improves ability to handle stress, reduces production of stress hormone cortisol.	**Increased Stress -** reduced ability to handle stress, increased production of stress hormone cortisol.
Increased Energy Levels	**Low Energy Levels**
Increases Social Dominance & Masculinity - desire to lead & raise social status. Increased risk taking. Decreased agreeableness.	**Increases Submissive & Feminine Behavior -** desire to follow orders. Risk averse behavior. Increased agreeableness to avoid conflict.
PHYSICAL	**PHYSICAL**
Increases Muscle Mass & Strength - via raising muscle protein synthesis, reducing muscle protein breakdown and increasing DHT.	**Muscle Weakness & Decreased Strength -** via reducing muscle protein synthesis, increasing muscle protein breakdown & lower DHT levels.
Decreases Body Fat & Increased Fat Burning - raises BMR (Basal Metabolic Rate), increasing total daily calories burned. Facilitates fat burning.	**Increased Body Fat & Decreased Fat Burning -** reduces BMR, lowering total daily calories burned. Facilitates fat accumulation.

Enhances Exercise Recovery - faster muscle repair and decreased post workout fatigue.	**Slower Exercise Recovery -** slower muscle repair, increased post exercise fatigue.
Enhances Jawline Development - creates wider, more prominent and masculine jawline. Increases facial muscle size and reduces fat accumulation in the face.	**Decreased Jaw Development -** narrow, softer, less prominent, more feminine jaw. Smaller less developed facial muscles. Increased fat accumulation in facial region.
Raises Libido - increased sexual desire.	**Low Libido -** decreased sexual desire.
Enhances Erection Quality - harder, bigger and longer lasting erections.	**Erectile Dysfunction -** difficulty getting hard. Softer, smaller, and shorter lasting erections.
Raises Fertility - Increases sperm count & semen ejaculation volume. Improved sperm motility & morphology.	**Infertility -** Low sperm count & decreased ejaculation volume. Decreased sperm motility & abnormally shaped sperm.
Increases Attractiveness To Women - High testosterone indicates good health, strong immune system & great genes, increasing desire to mate.	**Reduced Attractiveness To Women -** Low Testosterone indicates poor health, weak immune systems & bad genes, decreasing desire to mate.
Reduces Risk Of Diseases: Reduces risk of heart disease, diabetes, osteoporosis and Alzheimer's. Reduces severity of COVID19 symptoms.	**Increased Risk Of Diseases:** Raises risk of heart disease, diabetes, osteoporosis and Alzheimer's. Increases severity of COVID19 symptoms.
Data compiled from 24 medical studies (linked in each subsection below)	

"Testosterone is the success hormone for men. Testosterone makes effort and hard work feel good. High Testosterone levels make accomplishing your personal goals and reaching success much easier." Dr Andrew Huberman, Stanford University.

Boosting your testosterone levels naturally is the fastest way to reach your full potential as a man. Both mentally and physically.

What are the benefits of increasing your Testosterone? Let's examine them in depth:

Testosterone Improves Mental Health

A major benefit of optimal Testosterone is improved mental health. High Testosterone is associated with increased confidence and higher self esteem. (JAMA Psychiatry, 2019)

Optimal Testosterone levels reduce symptoms of depression and social anxiety. (JAMA Psychiatry, 2019; Front Psychiatry, 2015). Low Testosterone is linked to depression, suicidal thoughts and social anxiety. (Front Psychiatry, 2015)

A systematic review of 27 studies in 1,890 men found: Testosterone treatment was linked to significant reduction of depressive symptoms, particularly in participants who received higher-dosage of Testosterone (JAMA Psychiatry, 2019)

Testosterone improves symptoms of depression by: increasing serotonin uptake in the brain and increasing dopamine levels – thus improving mood, happiness and overall mental health. (BMC Neuroscience, 2012; PubMed, 1998)

Testosterone Enhances Focus, Cognitive Function And Learning

A key benefit of Testosterone is that it acts like a natural nootropic – enhancing memory, concentration and learning while improving spatial cognition and spatial awareness. (Frontiers In Endocrinology, 2020; PubMed, 2006)

High Testosterone prevents cognitive decline and memory loss at old age, preventing diseases like Alzheimer's. (PubMed, 2006)

In small amounts, Testosterone gets converted to DHT and neuro steroids responsible for improving memory, focus and cognitive function. (Frontiers In Endocrinology, 2020)

Testosterone Increases Social Dominance And Dominant Masculine Behavior

One of Testosterone's major benefits is increasing drive, ambition, masculinity and leadership. High Testosterone increases a man's desire to dominate in social situations and increase his social status. (PubMed, 2009) As a result, Testosterone increases motivation, ambition and risk taking behavior. (PubMed, 2009)

Men with high Testosterone often want to be leaders, and are less agreeable to follow instructions and be told what to do. (PubMed, 2015)

Meanwhile low Testosterone makes men less dominant, more submissive and more risk averse (avoiding risk taking). (PubMed, 2009) Men with low Testosterone are more agreeable, and desire to be followers instead of leaders (PubMed, 2015). Low Testosterone in men is linked to low levels of motivation and ambition. (PubMed, 2009)

Testosterone Promotes Strong Jawline Development

Jaw size and attractiveness are closely linked. Women are more attracted to men with larger, more developed jawlines, as these demonstrate high Testosterone, good health and social dominance. (DeBruine et al., 2011)

Testosterone contributes to the development of masculine facial features, including the jawline. During puberty, increased testosterone production promotes growth of the jawbone and facial muscles. This creates a wider, more prominent, angular and masculine jawline.

During puberty, Testosterone makes a significant impact on jaw development as growth plates have not yet fused. If you have:

- Higher testosterone, your face will develop a more pronounced, chiseled jaw.
- Lower testosterone, your face will develop a softer, rounder, less prominent jaw.

After puberty is complete, the growth plates in your bones fuse, and the bones in your jaw can no longer increase in length.

Testosterone's impact on facial development in adulthood is much lower than in puberty.

However, increasing Testosterone levels in adulthood can:

- Increase facial muscle development, making the jaw appear more prominent
- Decrease fat deposition in the face, making the face appear leaner and more angular

Testosterone Boosts Muscle Growth & Strength

By far the biggest benefits of high Testosterone is increased strength and muscle mass. Testosterone puts your body in an anabolic state, increasing muscle protein synthesis (the process of building muscle). Testosterone reduces catabolism (preventing muscle protein breakdown and loss of muscle mass).

Around 10% of Total Testosterone gets converted to DHT (Dihydrotestosterone) via the 5 Alpha Reductase enzyme (PubMed, 2022; Your Hormones, 2018). DHT increases force production in type II fast twitch muscle fibers (PubMed, 2011). Fast twitch muscle fibers have high growth potential and can significantly increase in size. Increased DHT allows you to lift more weight and stimulate muscle growth via progressive overload.

Interestingly, DHT reduces force production in slow twitch muscle fibers (PubMed, 2011). Slow twitch muscle fibers have low muscle growth potential and are more geared towards endurance activities like marathons.

Read Next: Does Testosterone Increase Muscle Mass?

Testosterone Enhances Exercise Recovery

Via increasing protein synthesis, High Testosterone allows your body to recover faster from intense exercise – allowing you to train more frequently at the gym and stimulate more muscle growth. (PubMed, 2017)

Testosterone Reduces Body Fat

As a result of increasing muscle mass, Testosterone raises your basal metabolic rate (BMR) – helping you burn more calories per day. As a result, you can eat more food while maintaining a lean muscular physique and burning excess body fat.

Boosting Testosterone to a healthy optimal range increased metabolism by 10% to 13% in only 3 months for men suffering from low Testosterone. (PubMed, 1992).

If your body has a basal metabolic rate (BMR) of 2000 calories per day, optimizing your Testosterone levels could help you increase your BMR to 2200 to 2260 calories, helping you burn an additional 200 to 260 calories per day while expending zero additional effort.

Read Next: The Science Of Fat Loss – How To Get 6 Pack Abs

Furthermore, Testosterone improves metabolism of carbohydrates, proteins and fats – directing more glucose from carbohydrates towards muscle cells instead of fat accumulation. (PubMed, 2013).

Testosterone does this by improving glucose metabolism and insulin sensitivity – improving fat loss while reducing risk of Type 2 diabetes. (Journal Of Endocrinology, 2014)

Testosterone Enhances Erection Quality

High Testosterone is responsible for stronger, bigger and harder erections. (PubMed, 2006) Testosterone and its metabolite DHT (Dihydrotestosterone) facilitate erections by increasing nitric oxide production and acting as vasodilators. This widens blood vessels and increases blood flow to the penis. (PubMed, 2006). The penis is like a balloon – the more blood flows to it – the bigger, stronger and harder the erection. (PubMed, 2006)

Testosterone Increases Sperm Count And Semen Ejaculation Volume

High Testosterone is linked to increased sperm count and fertility, while Low Testosterone is associated with decreased sperm count and infertility. (Loma Linda University, 2022) Luteinizing Hormone (LH) and Follicle Stimulating hormone (FSH) are essential for the production of Testosterone and sperm in the testes.(PubMed, 2014)

High levels of LH and FSH are associated with high Testosterone, increased sperm count and increased semen volume. (PubMed, 2014). Low levels of LH and FSH are associated with Low Testosterone, low sperm count and decreased semen volume. (PubMed, 2014)

Read Next: How Is Testosterone Made?

Testosterone Increases Attractiveness To Women

Women are more attracted to men with high testosterone and low levels of cortisol (the primary stress hormone). (PubMed, 2019)

Meanwhile, women are significantly less attracted to men with low Testosterone and high levels of the stress hormone cortisol. (PubMed, 2019)

Women are attracted to physical features in men like broad shoulders and wide jaw lines which are indicators of High Testosterone.

If you have high Testosterone levels, your body releases chemicals called pheromones – which signal to women subconsciously you have high Testosterone and increase attraction (Live Science, 2013).

High Testosterone is a sign of a strong immune system, good overall health and dominant genes. From an evolutionary perspective, this is attractive to women, as it will ensure her future offspring have a high chance of survival and resistance to disease.

Low Testosterone is a symptom of poor immune system and low overall health. From an evolutionary perspective, women find this unattractive as poor genes means her future offspring will have a low survival rate and low resistance to disease.

Interestingly, men with high Testosterone are attracted to hyper feminine women (with more feminine facial features and submissive feminine behavior), while men with low Testosterone are attracted to less feminine women. (PubMed, 2008)

High Testosterone Prevents Diseases

A key benefit of Testosterone is reduced risk of disease.

Testosterone Reduces Severity Of COVID 19 Symptoms

According to Frontiers in Endocrinology's study from 2021:

- Men with high Testosterone experienced less severe COVID symptoms and had higher survival rates. (FOE, 2021)
- Men with low Testosterone experienced more severe COVID 19 symptoms during hospitalization and had higher risk of dying from COVID. (FOE, 2021)

Testosterone Reduces Risk Of Diabetes, Obesity & Heart Disease

Testosterone deficiency is associated with an:

- Increased fat mass (in particular central adiposity),
- Reduced insulin sensitivity,
- Impaired glucose tolerance,
- Elevated triglycerides and cholesterol and low HDL-cholesterol.

All these factors are found in the metabolic syndrome (MetS) and type 2 diabetes, contributing to cardiovascular risk. (Journal Of Endocrinology, 2013)

Optimal Testosterone levels improves metabolism of glucose and insulin sensitivity, reducing risk of Type 2 diabetes and obesity (Journal Of Endocrinology, 2013).

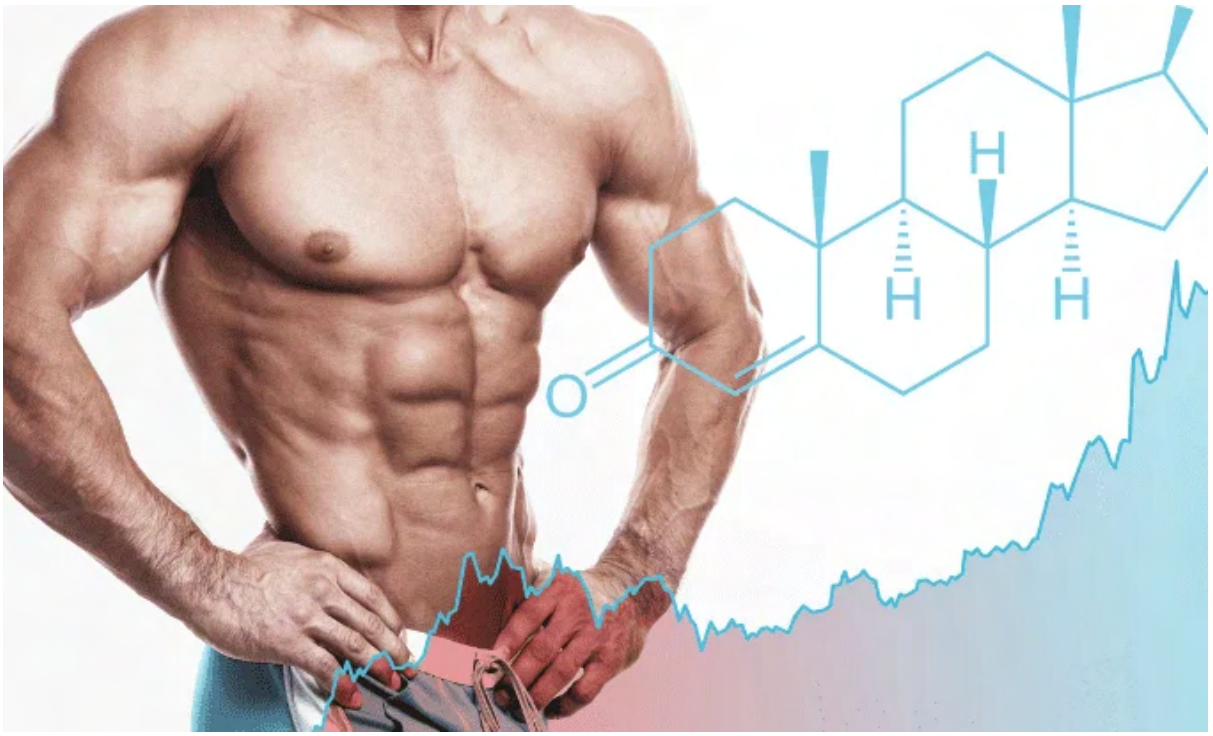
Furthermore, healthy Testosterone levels improve heart health and reduce risk of heart disease (Journal Of Endocrinology, 2013)

In a 2015 study in 83,000 elderly men, men with healthy Testosterone levels were 24% less likely to suffer a heart attack, 36% less likely to have a stroke. (European Heart Journal, 2015)

Testosterone Reduces Risk Of Osteoporosis

High Testosterone levels increase bone density and prevent osteoporosis.

Testosterone Prevents Muscle Atrophy



Testosterone also prevents muscle atrophy and loss of muscle mass due to old age and from muscle wasting conditions like AIDS and HIV.

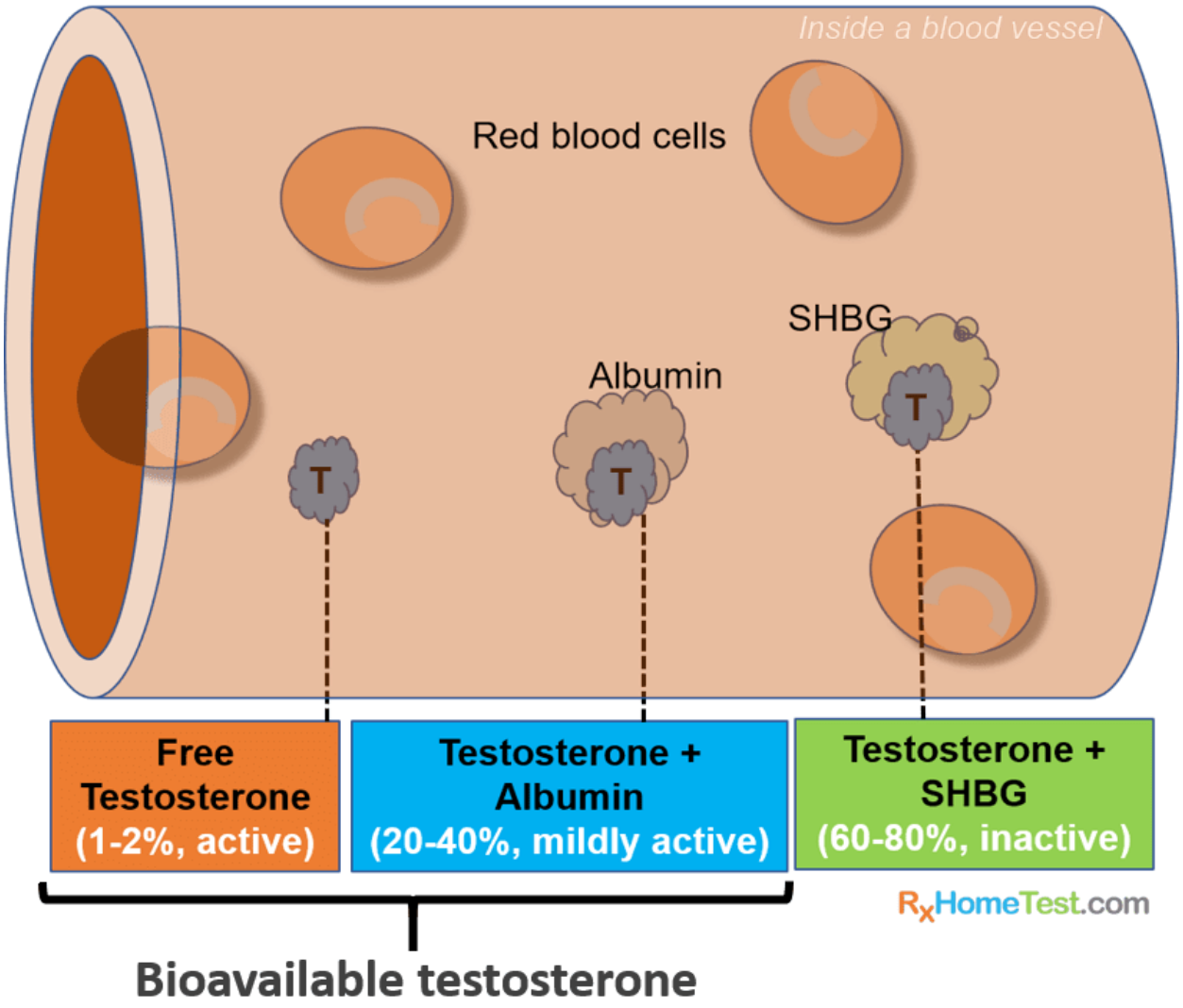
Testosterone Prevents Alzheimer's & Neurodegenerative Diseases

Additionally, high Testosterone prevents Alzheimer's Disease and other neurodegenerative diseases by enhancing memory and cognitive function. (PubMed, 2004)

Testosterone Improves Symptoms Of Depression

Testosterone has been shown to improve symptoms of depression, anxiety, low self esteem and improve mental health.

DECODING TESTOSTERONE



What Is Total Testosterone Made Of?

The Total Testosterone in your bloodstream is made up of:

- Free Testosterone
- SHBG-bound Testosterone and
- Albumin-bound Testosterone.

Free Testosterone

Free Testosterone makes up 1% to 2% of your body's Total Testosterone. (Li et al., 2016)

Free testosterone is the active form of testosterone in your body. It moves freely through your bloodstream, unattached to any protein molecules.

Free Testosterone binds to specific spots on your body's cells called androgen receptors.

Once it's bound there, it can trigger the beneficial effects testosterone is known for. (Krakowsky et al., 2015)

SHBG

70% of your Total Testosterone is attached to a protein called SHBG (Sex Hormone-Binding-Globulin). (Li et al., 2016)

Testosterone attached to SHBG is inactive and unusable by the body. Testosterone has a high affinity towards SHGB.

This means the bond between the Testosterone and SHBG molecule is strong and difficult to break. (Li et al., 2016)

Albumin

20% to 30% of your Total Testostosterone is attached to a protein called Albumin.

Albumin bound Testosterone is biologically inactive. (Li et al., 2016)

However, Testosterone has a weak affinity to the Albumin protein.

This means the bond between the Testosterone molecule and Albumin protein is weak.

This bond can be easily broken to create Free Testosterone when needed.

Total Testosterone Versus Free Testosterone

Most doctors will look only at Total Testosterone levels as a way to measure low or high Testosterone. However, Free Testosterone has a bigger impact on whether you feel the benefits of Testosterone or symptoms of low Testosterone.

High Total Testosterone & Low Free Testosterone

Even with high Total Testosterone over 600 ng/dL, you may experience symptoms of low Testosterone if you have:

- High SHBG
- Low Free Testosterone

High SHBG shows a large amount of the Total Testosterone in your body is inactive and unusable by the body.

Low Free Testosterone means a small portion of Testosterone is biologically active and can be used by your body.

As a result, you will experience symptoms of Low Testosterone.

Low Total Testosterone & High Free Testosterone

Even with average or low Total Testosterone levels (under 500 ng/dL), you may experience the benefits of high Testosterone if you have:

- High Free Testosterone
- Low SHBG

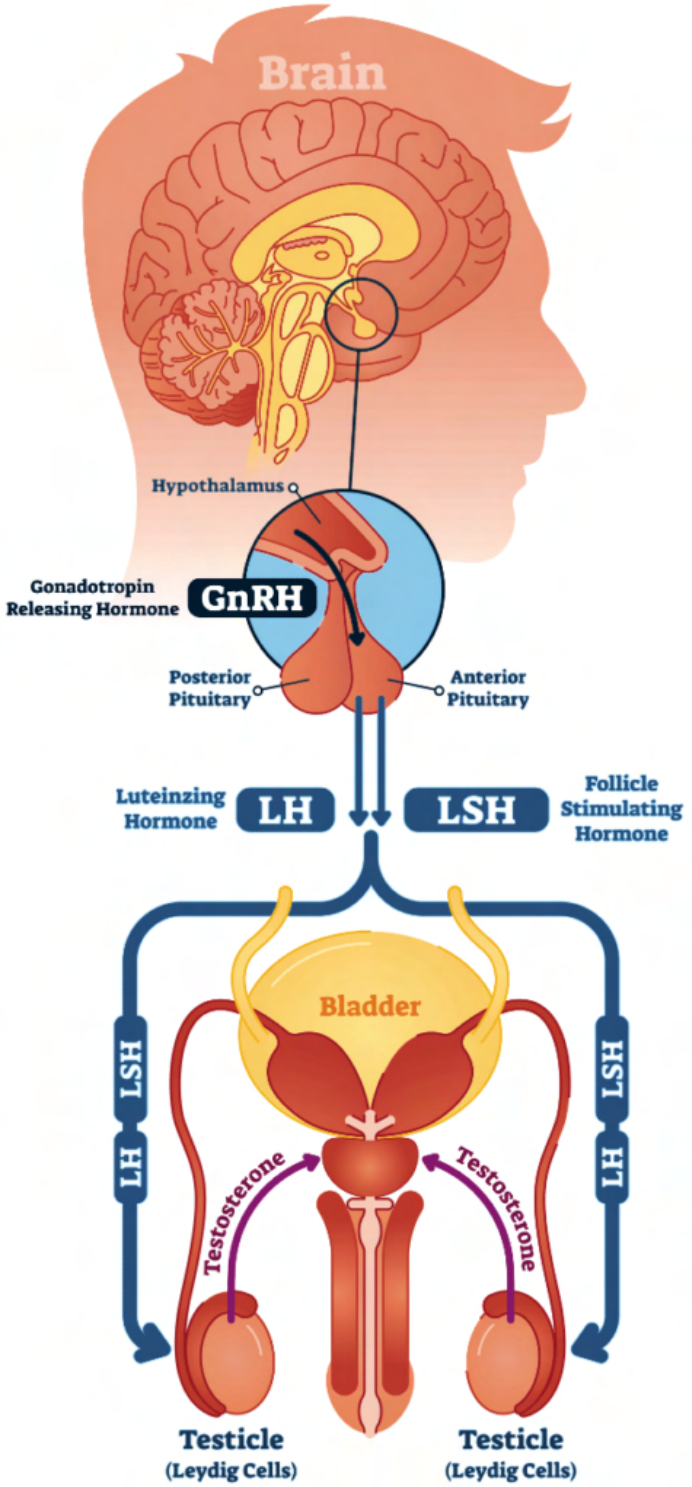
High Free Testosterone shows a large amount of your body's Total Testosterone is biologically active and can be used by your body.

Low SHBG shows a low amount of the Testosterone is inactive.

As a result, you will experience the benefits of high Testosterone.

HOW IS TESTOSTERONE MADE?

The HPTA



Your body produces 95% of its Testosterone via the Hypothalamus Pituitary Testes Axis (HPTA):

Step By Step:

1. The part of your brain called the hypothalamus produces GnRH (Gonadotropin Hormone-Releasing Hormone).

2. GnRH stimulates the Pituitary Gland in your brain to produce:

    a. LH (Luteinizing Hormone) and
    b. FSH (Follicle-Stimulating Hormone.

3. LH and FSH travel in the bloodstream to the testicles.

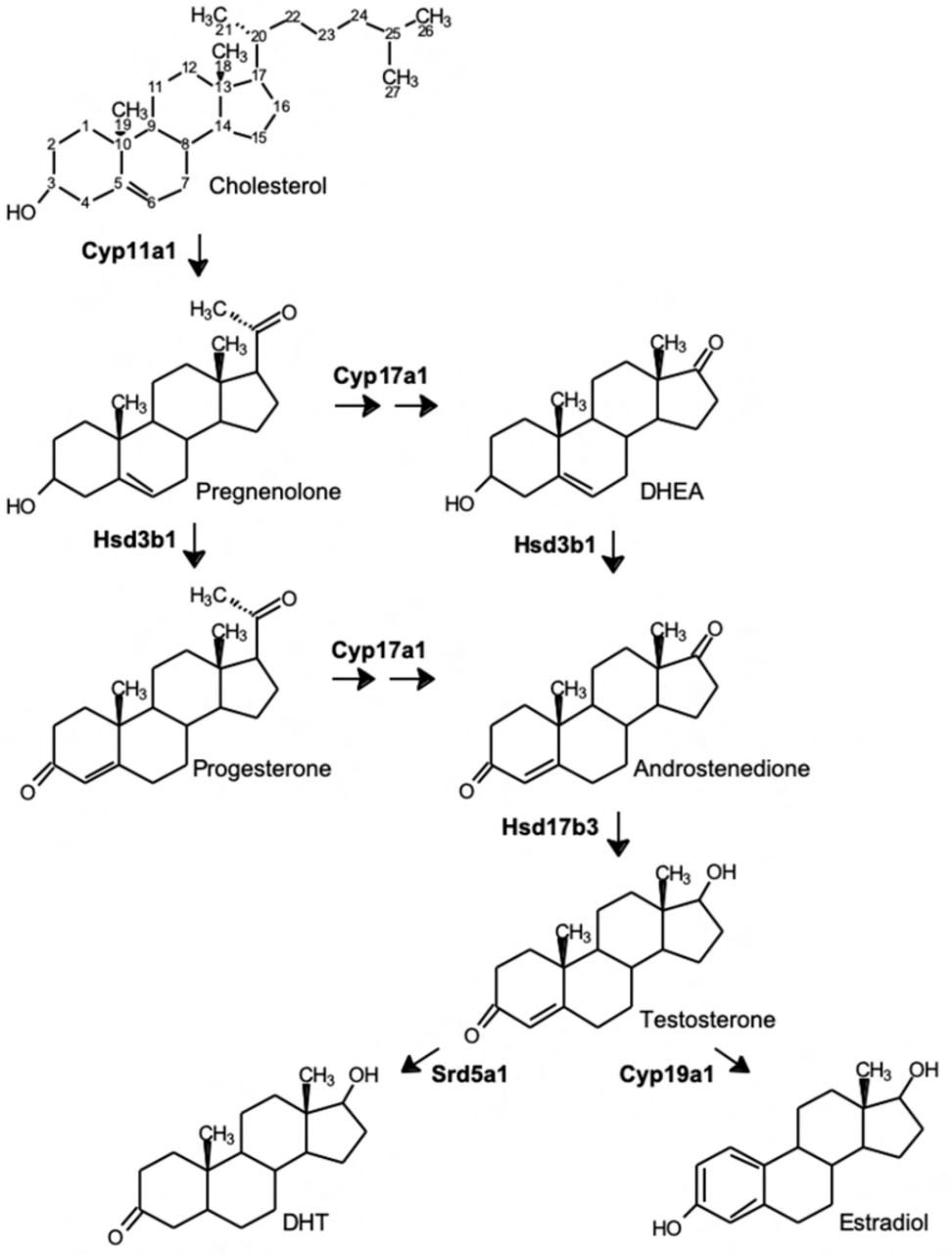
4. Luteinizing Hormone stimulates Leydig cells inside the testicles to produce Testosterone. It does this using Cholesterol in the blood stream obtained from your diet (via saturated fats).

If blood Cholesterol levels are low, the Leydig cells can produce their own Cholesterol.

However, Testosterone production is lower when Leydig cells have to produce their own cholesterol. (PubMed, 2001)

Testosterone production is higher when Leydig cells can rely on dietary cholesterol obtained from saturated fats. (PubMed, 2001)

Cholesterol follows a 4 step process to become Testosterone, and also gets converted to metabolites of Testosterone like DHT and Estrogen:



5. Follicle Stimulating Hormone stimulates the Sertoli cells inside your testicles to produce ABG (Androgen Binding Globulin) and Inhibin B – which are both responsible for sperm production (spermatogenesis).

6. Once Testosterone is produced in the testes, it is sent back into your bloodstream. Most of it immediately attaches to SHBG and albumin, becoming biologically inactive.

   The small percentage that remains free and unbound circulates around the body – attaching itself to androgen receptors inside your brain, muscles and organs to exhibit the positive effects of Testosterone.

7. Via negative feedback, increased levels of Testosterone and Inhibin B in the bloodstream and reduce production of:

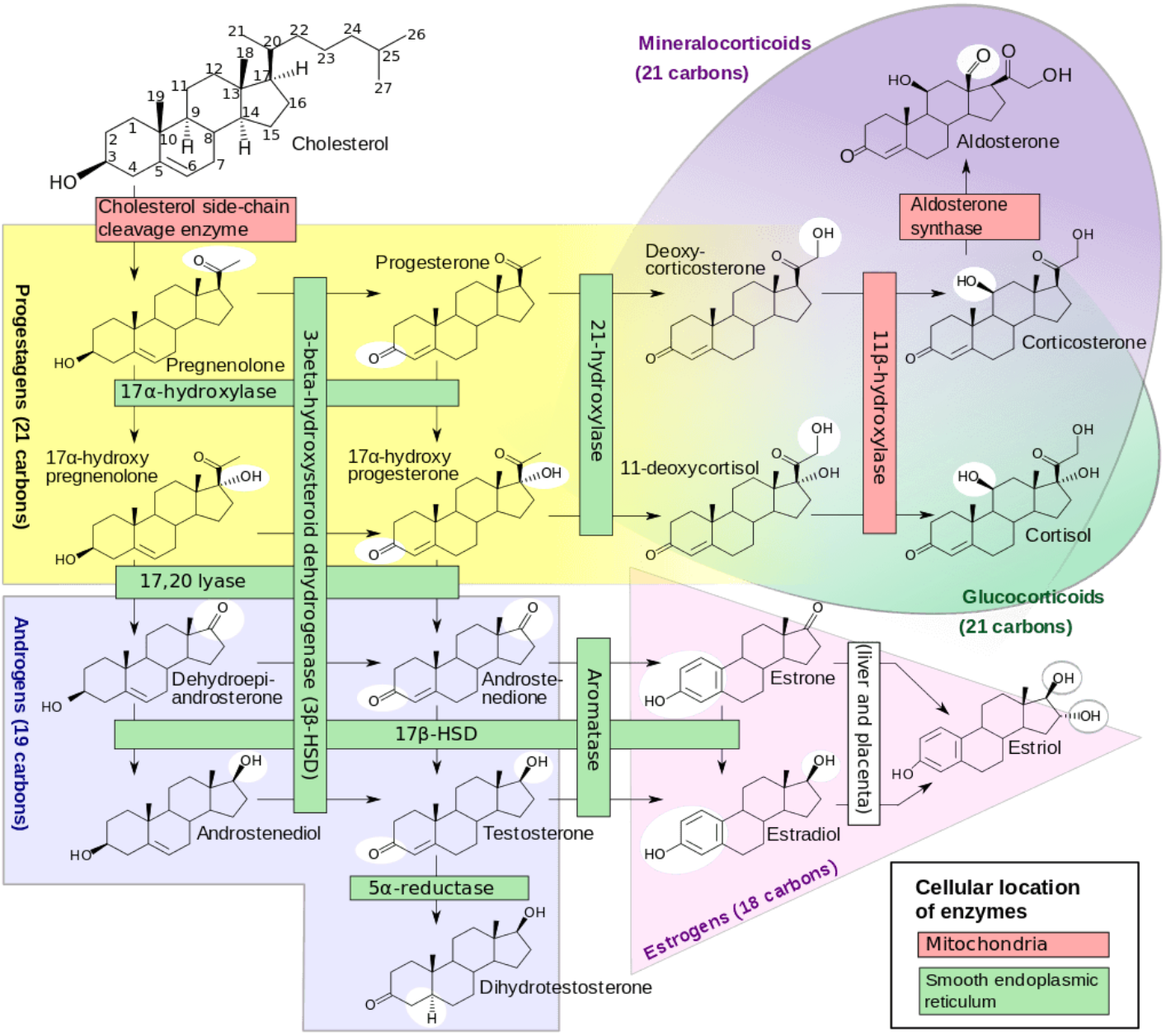
   a. GnRH from the hypothalamus and
   b. LH and FSH from the pituitary gland.
   c. Testosterone in the Leydig cells of the testes

8. Once the body has enough Testosterone in the bloodstream, the production of testosterone decreases.

“The process of producing Testosterone (Testosterone synthesis) is complex. It is made up of 8 different steps. Disrupting any of these steps can decrease Testosterone production, causing low Testosterone. ”

The HPA Axis

Approximately 5% of your Total Testosterone is produced via the Hypothalamus Pituitary Adrenal Axis (HPA Axis). This is in the adrenal glands above the kidneys. The process involves converting Cholesterol to Testosterone via several steps.



The primary role of the Adrenal glands is to produce cortisol, a stress hormone. Cortisol is crucial for waking you up each morning and raising your alertness in emergency or "fight or flight" situations.

HOW TO CHECK TESTOSTERONE

Checking your Testosterone levels is essential to see if you have high or low Testosterone. You can get your Testosterone levels checked with Let's Get Checked.

You can order a Testosterone blood testing kit online from their official website. Unlike a traditional blood test, you do not need to go to a doctor or hospital – it can be done from the comfort of your own home, and you will receive your blood test results within 2 to 5 days.

How It Works:

Step 1: Choose A Blood Test From Let's Get Checked:

TEST	WHAT IS MEASURED?	PRICE
Testosterone Test	• Total Testosterone	$89
Male Hormone Advanced Test	• Total Testosterone • Sex Hormone Binding Globulin (SHBG) • Prolactin • Estradiol (Estrogen) • Free Androgen Index (Bioavailable Testosterone)	$179
Male Hormone Complete Test	• Total Testosterone • Sex Hormone Binding Globulin (SHBG) • Prolactin • Estradiol (Estrogen) • Free Androgen Index (Bioavailable Testosterone) • Cortisol (Stress Hormone)	$199

The Testosterone Test is the cheapest. However, because it only measures your Total Testosterone, it will NOT allow you to analyze your blood test results. If your Testosterone levels come back low (under 300 ng/dL), the basic test will not help you pinpoint the cause.

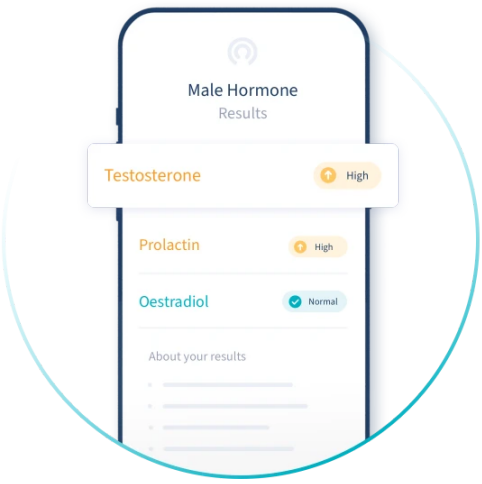
I strongly recommend you pick from the Male Hormone Advanced or Advanced Male Hormone Complete Test. Although more expensive, these will allow you to better interpret your blood test results.

If your Total Testosterone or Free Androgen Index is low, you can analyze the other measurements (SHBG, Estrogen, Prolactin, Cortisol) to better understand why.

You can then fix the cause of your low Testosterone by implementing one of the strategies inside this eBook. Afterall, targeting the root cause of your low Testosterone is the fastest way to achieve optimal Testosterone levels naturally.

Step 2: Follow Instructions

This usually involves poking the skin in your finger with a small needle, then putting the blood in a small test tube (which should take less than 5 minutes).



Step 3: Send to Let's Get Checked

Using the shipping label provided, send your test tube to Let's Get Checked.

Step 4: Receive Results

Within 2 to 5 days, you will receive the results of your blood test that have been reviewed by a certified doctor from Let's Get Checked.

What Is Testosterone Measured In?

In blood tests, Total Testosterone and Free Testosterone levels are usually measured in:

- **Nanograms/Decilitre (Ng/dL):** This is commonly used in the United States
- **Nanomoles/Litre (Nmol/L):** Used in Europe and the rest of the world

Your Testosterone blood test results from Let's Get Checked will be in one of these units.

How Do I Know If I Have Low, Average Or High Testosterone?

Total Testosterone

"Average Total Testosterone levels for men are quoted between 270 to 1070 ng/dL," according to the U.S. National Library of Medicine. You can use the tables to check your blood test results against the average for your age:

Nanograms/Decilitre (Ng/dL):

AGE RANGE	LOW TESTOSTERONE (NG/DL)	AVERAGE TESTOSTERONE (NG/DL)	HIGH TESTOSTERONE (NG/DL)
10 - 19	Under 300	300 - 1200	Over 1200
20 - 29	Under 270	270 - 1070	Over 1070
30 - 39	Under 220	220 - 900	Over 900
40 - 49	Under 200	200 - 850	Over 850
50 - 59	Under 170	170 - 730	Over 730
60 - 69	Under 150	150 - 630	Over 630
Over 65	Under 130	130 - 460	Over 460
Data compiled from (Bhasin et al., 2010; Wu et al., 2010; Harman et al., 2001)			

Nanomoles/Litre (Nmol/L):

AGE RANGE	LOW TESTOSTERONE (NMOL/L)	AVERAGE TESTOSTERONE (NMOL/L)	HIGH TESTOSTERONE (NMOL/L)
10 - 19	Under 10.4	10.4 - 41.6	Over 41.6
20 - 29	Under 9.4	9.4 - 37.1	Over 37.1
30 - 39	Under 7.6	7.6 - 31.2	Over 31.2
40 - 49	Under 6.9	6.9 - 29.5	Over 29.5
50 - 59	Under 5.9	5.9 - 25.3	Over 25.3
60 - 69	Under 5.2	5.2 - 21.8	Over 21.8
Over 65	Under 4.5	4.5 - 15.9	Over 15.9
Data compiled from (Bhasin et al., 2010; Wu et al., 2010; Harman et al., 2001)			

If a 24 year old man has 300 Ng/dL Total Testosterone, he is on the lower end of the average range. He is likely to experience symptoms of low Testosterone like: low energy levels; decreased libido and brain fog.

If a 32 year old man has 723 Ng/dL Total Testosterone, he is on the higher end of the average range. He is likely to experience the benefits of Optimal Testosterone such as: high energy levels, increased libido and enhanced focus.

However, in rare situations, some men with high Total Testosterone may experience symptoms of low T. This is because they have low levels of Free Testosterone.

Free Testosterone

"The average range for Free Testosterone is between 5 to 25 Ng/dL", according to the U.S. National Library of Medicine. Use the table to check your Free Testosterone blood test results against the average for your age group:

AGE GROUP	LOW FREE TESTOSTERONE (NMOL/L)	AVERAGE FREE TESTOSTERONE (NMOL/L)	HIGH FREE TESTOSTERONE (NMOL/L)
10-19 years	<0.2	0.2-0.5	>0.5
20-29 years	<0.2	0.2-0.6	>0.6
30-39 years	<0.2	0.2-0.6	>0.6
40-49 years	<0.2	0.2-0.5	>0.5
50-59 years	<0.2	0.2-0.5	>0.5
60-69 years	<0.2	0.2-0.5	>0.5
Over 70 years	<0.2	0.2-0.5	>0.5
Data compiled from (Bhasin et al., 2010; Wu et al., 2010; Harman et al., 2001)			

If a 26 year old man has Free Testosterone at 0.5 Nmol/L, he is on the higher end of the average range. He is likely to experience the benefits of high Testosterone.

If a 23 year old man has Free Testosterone under 0.2 Nmol/L, he has low Free Testosterone. He is likely to experience symptoms of low Testosterone.

If your Free Testosterone levels are low, you will experience low Testosterone symptoms, regardless if your Total Testosterone is high or low. The lower your Total Testosterone, the more severe your symptoms would be. (Vermeulen et al., 2018).

If your Free Testosterone levels are high, you can experience the advantages of High Testosterone, even if Total Testosterone is within the middle of the average range. (Vermeulen et al., 2018)

LOW TESTOSTERONE IS A GLOBAL PANDEMIC

Low Testosterone is a global pandemic:

- Testosterone levels have been declining by 1% per year worldwide since 1980. (Journal of Clinical Endocrinology, 2007)
- The average man in 2023 has 43% lower Testosterone than in 1980. (Journal of Clinical Endocrinology, 2023)
- Over 1.75 million men aged 18 to 30 suffer from low Testosterone in the USA and UK alone (Endocrine Society, 2017)
- 20% of men in the US aged 15 to 39 suffer from low Testosterone (European Association of Urology, 2020)
- Over 40% of men over 40 suffer from low Testosterone. (American Urological Association, 2013)

While symptoms of low Testosterone have been skyrocketing:

- Depression increased by 64% from 2009 to 2019 in young men in the USA (NSDUH, 2019)
- Depression increased by 253.19% from 1999 to 2017 in men aged 17 to 20 in the UK (NHS, 2017)
- Suicides increased by 38.27% from 2000 to 2019 in the US (American Foundation of Suicide Prevention, 2-19)
- Obesity in men doubled from 1988 to 2016 in men aged 20 to 39 in the US (CDC, 2016)
- Obesity increased by 271.4% from 1990 to 2019 in men aged 16 to 44 (NHS, 2019)
- Over 26% of young men suffer from erectile dysfunction (Journal of Sexual Medicine, 2013)

Who is to blame? Low Testosterone.

4 STRATEGIES TO TRIPLE YOUR TESTOSTERONE

The fastest way to increase Testosterone is by targeting the root causes of Low Testosterone. Inside this free eBook, I'll share with you 4 out of 20 proven strategies I've used to triple my Testosterone naturally:

- **Diet** - Reduce systemic inflammation by eating an anti inflammatory diet rich in monounsaturated and saturated fats
- **Supplements** - Fix vitamin deficiencies to reduce oxidative stress
- **Workout** - Workout to build strength and muscle mass. Short term, each workout will elevate Testosterone for up to 24 hours. Long term building muscle is linked to higher Testosterone levels.
- **Fat Loss** - Lose excess body fat using HIIT cardio & reverse dieting. Men of healthy body fat have 50% higher Testosterone than obese men.

Without further ado, let's get started on each strategy in depth:

TESTOSTERONE NUTRITION

Best Diet To Boost Testosterone

The best diet for optimal Testosterone production is the Paleo diet.

Paleo Diet

What Is The Paleo Diet?

The Paleo diet is inspired by the eating habits of our ancient ancestors who lived long before farming was introduced, around 2.5 million to 10,000 years ago.

The central idea is that our bodies may be better suited to digest and absorb nutrients from foods available during this time, as opposed to more modern agricultural and processed foods (Eaton et al., 1997).

I have personally been following the paleo diet for the past 3 years with great results.

What's Included In The Paleo Diet?

Meats:

Lean meats from grass-fed or wild animals are preferred due to their closer nutritional profile to game meats consumed by our ancestors (Cordain et al., 2005).

Lean meats are rich in essential amino acids, necessary for muscle repair and maintenance, and are also an excellent source of bioavailable iron and zinc, minerals crucial for immune function and testosterone production respectively.

Fish and Seafood:

Prioritized for their omega-3 fatty acid content, which reduces chronic inflammation and oxidative stress (Simopoulos, 1991).

Eggs:

Especially those from free range grass fed chickens. These eggs have a better nutrient profile than eggs from caged hens.

Vegetables and Fruits:

Their phytonutrient and antioxidant content can combat oxidative stress and inflammation, fixing the leading cause of low Testosterone (Frassetto et al., 2009).

Nuts and Seeds:

Rich in healthy fats but exclude legumes like peanuts due to potential anti-nutrients (Cordain et al., 2000).

Healthy Fats:

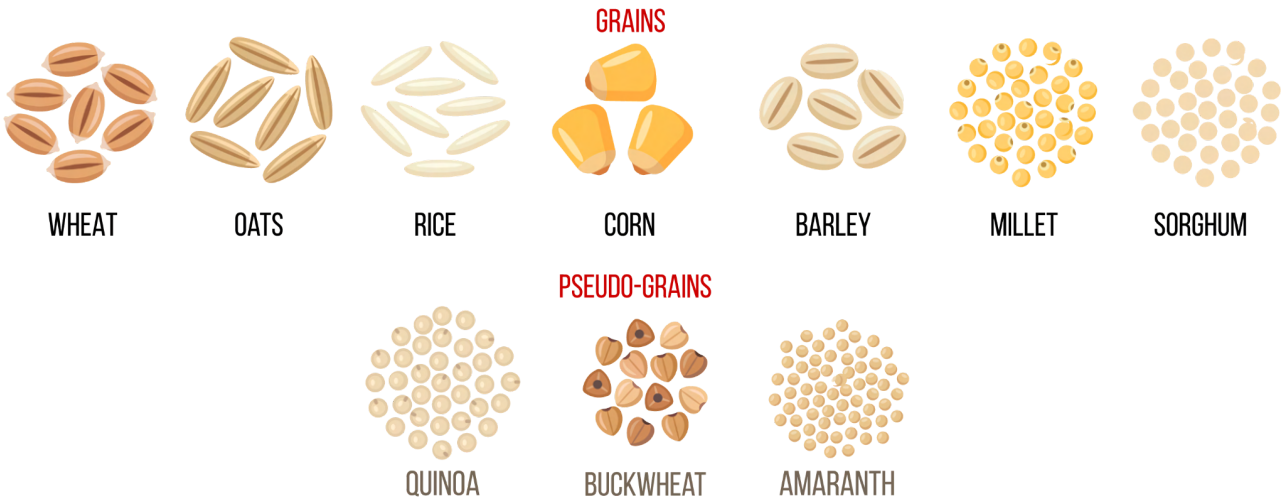
Such as those from avocados, olive oil and coconut oil, which offer metabolic benefits like improved blood sugar regulation and reduced LDL (bad) cholesterol. This reduces risk of obesity, type 2 diabetes, and improves heart health.

Tubers:

Like potatoes, sweet potatoes and yams, as a source of non-grain carbohydrates (O'Keefe & Cordain, 2004).

What Is Excluded Or Minimized In The Paleo Diet?

Grains and Legumes:



Grains like wheat, rye, oats, barley and legumes like beans , lentils and peanuts (which are a type of legume not nut) are prohibited.

These contain anti-nutrients, like lectins, that reduce nutrient absorption, creating vitamin and nutrient deficiencies.

Grains and legumes also damage the gut, contributing to leaky gut and systemic inflammation - the root causes of low Testosterone. (Cordain et al., 2000).

However, some variations of the Paleo diet, often referred to as "Primal" or "Paleo 2.0," allow for certain types of grains like:

- **White Rice:** Often considered more digestible and less problematic than brown rice, since the potentially problematic bran and germ have been removed.

- **Quinoa:** While technically a seed, quinoa often gets categorized with grains. Some argue that it can be included in a Primal diet because it's gluten-free and rich in protein.

- **Sprouted Grains:** The sprouting or fermentation process can reduce the amount of antinutrients like phytic acid, making these grains more digestible for some people.

- **Buckwheat:** Even though it's named 'wheat,' buckwheat is not a type of wheat. It's a gluten-free seed that might be included in some lenient Paleo diets.

Dairy:

Especially modern, processed dairy. However, Paleo accepts fermented or full-fat dairy from grass-fed sources like kefir, greek yogurt, and organic milk from grass fed cows. (Cordain et al., 2000).

Processed Foods and Sugars:

These damage the gut, create chronic inflammation, raise blood sugar levels and create insulin resistance (leading cause of Type 2 diabetes and low Testosterone) (Lustig et al., 2012).

Refined Seed Oils:

Polyunsaturated omega 6 fats like: canola oil (a.k.a rapeseed oil); soybean oil; corn seed oil; sunflower oil and cottonseed oil.

These refined seed oils damage gut health, create systemic inflammation, and reduce Testosterone production (Simopoulos, 2006).

Alcohol

Alcohol damages the lining of the gut. This contributes to intestinal permeability (leaky gut) and systemic inflammation (Fasano, 2012). It also damages the Leydig cells in the testicles, reducing Testosterone production (Vingren et al., 2010).

Paleo Diet Benefits For Testosterone

Optimal Micronutrient Intake:

The Paleo diet promotes the consumption of nutrient-dense foods like lean meats, fish, nuts, seeds, and vegetables. These foods provide essential vitamins and minerals such as vitamin D, zinc, and magnesium, which play a direct role in testosterone production.

Zinc, for example, is vital for the synthesis of testosterone. Its deficiency can lead to reduced testosterone levels (Prasad et al., 1996). In a 1996 study, men who ate a Zinc deficient diet for 20 weeks were able to increase their Testosterone 293% once they fixed their Zinc deficiency by eating Zinc rich foods. (Prasad et al., 1996)

Similarly, vitamin D supports the Leydig cells in the testes, where testosterone is produced (Pilz et al., 2011).

Reduction in Chronic Inflammation:

Chronic inflammation has been linked to decreased testosterone production.
By focusing on anti-inflammatory foods and avoiding common inflammatory triggers like refined sugars, processed vegetable oils, and grains, the Paleo diet reduces chronic inflammation. Omega-3 fatty acids, abundant in fish and certain seeds emphasized in the Paleo diet, have been shown to have anti-inflammatory effects and can positively influence testosterone levels (Ferrucci et al., 2006).

Healthy Body Composition and Enhanced Insulin Sensitivity:

The Paleo diet's emphasis on protein and healthy fats, combined with the reduction of refined carbohydrates, can support fat loss and muscle gain. High intakes of refined carbohydrates can lead to insulin resistance, a state where the body's cells become less responsive to the hormone insulin. This insulin resistance can contribute to fat accumulation, especially in the abdominal area.

By emphasizing foods that promote insulin sensitivity, the Paleo diet can help counteract this. Enhanced insulin sensitivity not only supports fat loss but also aids in muscle synthesis.

Furthermore, there is a well-established relationship between insulin resistance and decreased testosterone levels in men. By improving insulin sensitivity, the Paleo diet indirectly increases Testosterone production (Maggio et al., 2013).

Best Testosterone Boosting Foods

Oysters:

These marine delicacies are renowned for their rich zinc content. Just a single ounce serving of oysters contains about 74 milligrams of zinc.

Considering the importance of zinc for testosterone production, it's unsurprising that adequate intake of this mineral can be beneficial.

Research has shown that even short periods of zinc deficiency can reduce testosterone levels, while zinc supplementation can enhance its production and secretion (Prasad et al., 1996).

Furthermore, oysters contain D-aspartic acid, which is known to elevate testosterone levels (Topo et al., 2009).

Eggs:

Eggs play an indispensable role in supporting testosterone production, and here's how:

Cholesterol's Role in Testosterone Production:

Cholesterol is a precursor to all steroid hormones, including testosterone. It's utilized by the Leydig cells in the testes to synthesize this essential male hormone. Without adequate dietary cholesterol, the body might struggle to produce optimal levels of testosterone. A study by Senthil et al. (2012) underscores this relationship, suggesting that a low-cholesterol diet might diminish free testosterone levels.

Nutrient Density of Egg Yolk:

The yolk is a treasure trove of nutrients. Besides cholesterol, it houses vitamin D, omega-3 fatty acids, and other essential nutrients that foster testosterone production. Vitamin D, in particular, has a strong correlation with testosterone levels. A study involving overweight men revealed that vitamin D supplementation can significantly boost testosterone levels (Pilz et al., 2011). Moreover, the yolk contains other vital minerals and vitamins like vitamin A, E, B vitamins, selenium, and zinc, all of which play roles in optimal endocrine function

Protein and Amino Acids in Egg Whites:

While the yolk tends to get most of the limelight due to its dense nutrient profile, the egg white also deserves mention. It's primarily composed of protein and provides all nine essential amino acids, making it an excellent source of high-quality protein.

These amino acids play a pivotal role in muscle maintenance and growth, which can indirectly support optimal testosterone levels given the strong relationship between muscle mass and this hormone.

Liver (Beef Liver):

Often classified as one of nature's most potent superfoods, liver, especially from beef, is nutritionally dense and boasts an array of vitamins and minerals. Here's how beef liver can be conducive to testosterone production:

Rich in Vitamin D:

Beef liver is a good dietary source of vitamin D. As previously noted, vitamin D is directly associated with testosterone levels. Pilz et al. (2011) have highlighted how vitamin D supplementation can significantly elevate testosterone levels in men.

High in Zinc:

Zinc is a trace element crucial for numerous bodily functions, including testosterone production. One of the manifestations of zinc deficiency is a reduction in serum testosterone levels. In a study conducted on young men, a restrictive diet low in zinc led to a significant decline in testosterone levels within 20 weeks (Prasad et al., 1996).

Beef liver is a commendable source of this essential mineral, supporting not only testosterone synthesis but overall endocrine health.

Presence of Vitamin A:

Retinol, the active form of vitamin A, is abundant in beef liver. Vitamin A plays a pivotal role in reproductive health and testosterone synthesis. A study on male rats found that vitamin A combined with zinc, significantly improved testosterone concentrations and sperm quality (Cinar et al., 2009).

B Vitamins:

Beef liver is also rich in various B vitamins, particularly B12. B vitamins have been associated with improved energy levels, cognitive function, and overall well-being. Although there isn't a direct link between B vitamins and testosterone, they play a supporting role in overall health, which is vital for optimal testosterone production.

Grass-fed Beef:

Beef, especially when sourced from grass-fed animals, is packed with nutrients beneficial for testosterone, including zinc, saturated fat, and omega-3 fatty acids. (Pilz et al., 2011). Opting for grass-fed ensures the meat is devoid of added hormones and antibiotics.

Fenugreek:

This herb is traditionally used in various cuisines and has shown potential in enhancing testosterone. A study discovered that fenugreek supplementation increased both free and total testosterone levels in participants (Steels et al., 2011).

Extra Virgin Olive Oil:

Men who consumed this oil regularly have experienced increases in testosterone levels of up to 17% (Volek et al., 2008). Olive oil is also rich in antioxidants, and its regular intake can improve blood circulation, potentially benefiting overall testosterone production.

Cruciferous Vegetables

Cruciferous vegetables like broccoli, cauliflower and cabbage are rich in compounds called indoles. These help reduce levels of the female hormone Estrogen, the silent killer of Testosterone.

High estrogen levels suppress Testosterone production via negative feedback in the HPTA. By reducing Estrogen levels, we can increase Testosterone synthesis.

A study on rats showcased that the intake of ground broccoli increased the excretion of estradiol by 50%, which could aid in balancing testosterone (Michnovicz et al., 1997).

Leafy Green Vegetables (like spinach and kale):

These are rich in magnesium, a mineral shown to boost testosterone levels. A study found a correlation between magnesium intake and increased testosterone levels in men (Cinar et al., 2011).

Pomegranates:

These fruits have been celebrated as a symbol of fertility and virility.

A study indicated that regular consumption of pomegranate juice could increase testosterone levels by up to 24% (Türk et al., 2008).

Brazil Nuts:

Selenium, a mineral found in Brazil nuts, has been associated with testosterone boosts. Notably, a study discovered that selenium supplementation over short durations could enhance serum testosterone in men (Brooks et al., 2008).

Fish (especially fatty fish like salmon and sardines):

These are rich in omega-3 fatty acids, which are essential for testosterone production. A diet rich in omega-3s has been shown to lead to improved semen quality and serum testosterone concentrations (Safarinejad et al., 2010).

Garlic

Garlic contains a compound called allicin, which has been of interest to researchers for its potential health benefits. In rodent studies, garlic has demonstrated the potential to elevate testosterone levels.

For instance, a study conducted on rats found that those fed a garlic supplement demonstrated a significant increase in testosterone levels when compared to a control group (Omu et al., 1996).

Additionally, garlic's positive effects on heart health, circulation, and its antioxidative properties can indirectly support testosterone levels by promoting overall health (Rahman & Lowe, 2006). Combining garlic with a high-protein diet may further accentuate these testosterone boosting effects, as observed in another rodent study (Omu et al., 1996).

Onions

Onions are rich in antioxidants and other beneficial compounds that have a variety of health benefits.

When it comes to testosterone, there's promising evidence from animal studies. A study involving rats found that onion juice given to the subjects significantly increased their serum total testosterone levels (Khaki et al., 2012).

However, while these results are promising, human studies are limited, and thus more research is needed to confirm the impact of onions on testosterone in humans. Other beneficial effects of onions, such as anti-inflammatory properties, could indirectly support testosterone production by promoting better overall health (Benavides et al., 2007).

Ginger

Ginger, a commonly used spice, has been examined for its potential medicinal properties, including its potential effects on testosterone levels.

A human study involving infertile men found that consumption of ginger significantly increased their luteinizing hormone, which plays a pivotal role in testosterone production.

Moreover, it increased testosterone levels directly, suggesting ginger's potential as a testosterone booster (Khaki et al., 2010).

The antioxidative properties of ginger could be one reason behind its testosterone-boosting effects. Oxidative stress can hinder the production of testosterone, so consuming antioxidants can play a role in maintaining optimal testosterone levels (Mashhadi et al., 2013).

10 Foods Killing Your Testosterone

High Sugar Foods:

Sugar has a huge impact on Testosterone levels. When sugar from sweets, which lack fiber, is consumed, there's a rapid and significant increase in blood sugar levels. This acute spike necessitates a substantial insulin response to drive glucose into cells.

Immediate Effects on Testosterone:

Acute glucose ingestion can lead to a substantial decrease in serum testosterone levels. In a study where 74 men underwent a glucose tolerance test, there was a mean decrease of about 25% in testosterone levels following the ingestion of 75 grams of glucose (Caronia et al., 2013).

Insulin Sensitivity and Testosterone:

Insulin resistance, where cells become less responsive to insulin, is a precursor to type 2 diabetes and is associated with lower testosterone levels. A study among diabetic men found that those with low testosterone were more likely to have insulin resistance (Dhindsa et al., 2004).

Sugar, Fiber, and Blood Sugar Control:

Comparatively, fruits, which contain natural sugars accompanied by fiber, water, and various beneficial compounds, lead to a more moderated blood sugar response. The presence of fiber slows down the absorption of sugars, resulting in a steadier rise in blood sugar levels. This not only aids in managing blood sugar spikes but also reduces the associated rapid insulin surges. A study showed that the consumption of whole fruits leads to improved blood sugar control and reduced risk of type 2 diabetes, compared to the consumption of fruit juices or sweetened beverages (Muraki et al., 2013).

Long-term Effects on Testosterone:

Chronic excessive sugar intake without the modulating effect of fiber can contribute to persistent hyperinsulinemia (constantly elevated insulin levels) and insulin resistance. Over time, this metabolic disruption is strongly associated with reduced testosterone synthesis and secretion. One study found that men with insulin resistance were three times more likely to have a testosterone deficiency (Grossmann, 2011).

Refined Seed Oils:

Refined seed oils have become a staple in many modern diets due to their affordability and versatility in cooking. However, there are increasing concerns regarding their potential negative health effects, particularly on hormone balance and testosterone levels. Here's an in-depth look:

Composition:

Refined seed oils, especially rapeseed oil, corn oil, and soybean oil, are characteristically high in polyunsaturated omega-6 fatty acids. While omega-6 fatty acids are essential for the body, the modern diet often contains them in excess, especially in comparison to omega-3 fatty acids, leading to an imbalanced ratio.

Omega-6 and Inflammation:

Excessive intake of omega-6 fatty acids is associated with increased inflammation in the body. Chronic inflammation can impair testicular function and reduce the secretion of testosterone. The role of inflammation in testosterone reduction is evident in several studies, with one finding that pro-inflammatory cytokines negatively impact Leydig cell function, the cells responsible for testosterone production in the testes (Cai et al., 2018).

Oxidative Stress:

Polyunsaturated fats in these oils are more prone to oxidation than monounsaturated or saturated fats.

When these oils are heated or exposed to light and air, they can oxidize, producing harmful compounds.

Consuming these oxidized fats can induce oxidative stress in the body. As previously mentioned, oxidative stress can harm the Leydig cells, thus affecting testosterone production.

Direct Impact on Testosterone:

The balance and type of dietary fats consumed play a direct role in testosterone levels. A study showed that men who consumed more polyunsaturated fats relative to saturated fats had lower testosterone levels (Hämäläinen et al., 1984).

This supports the observation from the Derouiche et al. (2013) study, where higher intakes of polyunsaturated fats were associated with reduced testosterone levels.

Endocrine Disruption:

Some refined seed oils may contain residues of pesticides and herbicides used during the cultivation of the oilseed crops. These chemicals can act as endocrine disruptors, potentially influencing testosterone levels and other hormones in the body (Rajapakse et al., 2002).

Balance is Key:

It's crucial to recognize that not all fats have the same effect on testosterone levels.

For instance, diets rich in monounsaturated and saturated fats have been associated with higher testosterone levels in some studies (Volek et al., 1997).

This underlines the importance of a balanced fatty acid intake.

Always check food labels before you buy. You will be surprised to see that refined fats are inside many products like ready made meals, sauces and even spreadable butter. This is because they are cheaper to use than high quality monounsaturated fats like olive oil.

This is also why I recommend cooking your meals from scratch, using the highest quality raw ingredients.

Fried Foods

The frying of foods involves submerging them in hot oil, causing a series of complex chemical reactions. The high temperatures during frying can cause the breakdown of fatty acids in the oils, leading to the formation of trans fats.

Furthermore, the prolonged exposure to such high temperatures can cause oils, especially polyunsaturated ones, to oxidize, producing harmful compounds. Oxidized fats are known to cause cellular damage when consumed, due to oxidative stress. This oxidative damage can lead to systemic inflammation, which has been linked to a range of health issues, including hormonal imbalances such as reduced testosterone levels.

Additionally, frying, especially in starchy foods, can produce acrylamide, a potentially harmful compound associated with increased cancer risk and neurotoxic effects.

When fats are oxidized, they produce aldehydes and other reactive compounds that can cause oxidative damage to cells and tissues in the body. Chronic oxidative stress and systemic inflammation are linked to a myriad of health problems and have been shown to negatively impact testosterone production (Maggio et al., 2014).

One study conducted on male rats found that excessive consumption of deep-fried foods led to a decrease in testosterone levels, reduction in testes size, and sperm quality (Zhang et al., 2016). Another study emphasized that diets high in fried foods and trans fats could contribute to reduced testosterone levels and poorer sperm quality in men (Attaman et al., 2012).

Beyond the direct effects on testosterone, consistent consumption of fried foods can contribute to weight gain and obesity. Obesity is a well-documented factor correlated with lower testosterone levels in men (Cohen, 1999).

The adverse impact of fried foods on testosterone might be direct, through the intake of trans fats and other harmful compounds, and indirect, by facilitating obesity.

If possible, avoid fried foods and remove them from your diet completely. For cooking your food, you can: oven cook, boil, stream or grill it. If frying foods is inevitable, ensure healthy oils like coconut oil, olive oil, avocado or mct oil is used.

Processed Foods:

Processed foods have become increasingly prevalent in the modern diet, offering convenience and palatability. However, the long-term health implications of excessive consumption are becoming more evident, especially concerning hormonal balance and testosterone levels. Here's a detailed examination of the relationship:

Additives and Preservatives:

Processed foods often contain a variety of chemical additives and preservatives to extend shelf life, enhance flavor, and improve texture.

Some of these additives, like phthalates, are known endocrine disruptors, which means they can interfere with the body's hormonal balance.

Research has indicated that phthalates, commonly found in food packaging and some processed foods, can adversely impact testosterone levels in both men and boys (Joensen et al., 2012).

Unhealthy Fats:

As mentioned previously, trans fats and excessive omega-6 polyunsaturated fats, both commonly found in processed foods, are linked to reduced testosterone levels. These fats, present in many processed snacks and fried foods, can alter the body's fatty acid balance, promoting inflammation and oxidative stress.

High Sugar and Refined Carbohydrates:

Many processed foods are loaded with refined sugars and carbohydrates, which lack the fiber and nutrients found in whole foods. As a result, they can cause rapid spikes in blood sugar, leading to insulin resistance over time. Insulin resistance and elevated blood sugar are both correlated with reduced testosterone levels (Caronia et al., 2013).

Sodium and Blood Pressure:

Processed foods tend to be high in sodium, which, when consumed excessively, can lead to hypertension or high blood pressure. Chronic hypertension can affect the testes' function and thus, the production of testosterone (Tostes et al., 2011).

Obesity and Testosterone:

A significant consequence of excessive consumption of processed foods is weight gain and obesity. As body fat increases, the body's ability to produce testosterone decreases. Adipose tissue contains the enzyme aromatase, which converts testosterone into estrogen. As body fat levels rise, there's a subsequent increase in this conversion process, leading to a reduction in overall testosterone levels (Cohen, 1999; Giagulli et al., 2015).

Nutrient Imbalances:

Processed foods often lack essential micronutrients and can result in imbalances. Zinc and vitamin D, for instance, are crucial for optimal testosterone production. Regular consumption of nutrient-poor processed foods can lead to deficiencies in these and other vital nutrients, further affecting testosterone levels (Pilz et al., 2011; Prasad et al., 1996).

In conclusion, while processed foods might offer convenience, their potential negative impacts on testosterone and overall health should not be overlooked. Prioritizing whole and nutrient-dense foods over highly processed options is a proactive step towards maintaining hormonal balance and overall health.

Alcohol:

Alcohol, when consumed excessively and frequently, has a wide-ranging impact on the body, affecting various systems, including the endocrine system, which oversees hormone production and regulation.

Estrogen and Beer:

Certain alcoholic drinks, like beer, contain ingredients that can boost estrogen levels. Hops used in brewing beer are a rich source of phytoestrogens. While the occasional beer might not have a significant impact, regular consumption could potentially alter the testosterone to estrogen balance. Elevated estrogen levels in men can result in decreased testosterone production (Eagon et al., 2000).

Oxidative Stress and Leydig Cells:

Alcohol induces oxidative stress throughout the body. The Leydig cells in the testes, responsible for testosterone production, are not immune to the damaging effects of reactive oxygen species produced due to alcohol metabolism. Chronic alcohol consumption can lead to the degeneration of these Leydig cells, subsequently reducing their capacity to produce testosterone. A study in rats demonstrated that oxidative stress in the testes resulted in lower testosterone secretion (Ratna et al., 1994).

Alcohol and Gut Health:

Excessive alcohol intake damages the gut lining, leading to a condition called 'leaky gut'. This can cause inflammation and endotoxemia, where harmful bacteria and their byproducts enter the bloodstream. Chronic inflammation is a known factor in reducing testosterone production (Bishehsari et al., 2017).

Frequency of Alcohol Consumption:

Occasional Drinking:

An occasional drink, say once a week or less, might not have a substantial long-term effect on testosterone levels for most individuals, provided the quantity consumed is moderate.

Regular Drinking:

Daily alcohol consumption, even if moderate, can cumulatively result in suppressed testosterone production. A study examining the effects of regular moderate drinking on testosterone in men found a significant decrease in testosterone levels (Sarkola & Eriksson, 2003).

Binge Drinking:

Binge drinking episodes, even if less frequent, can cause acute drops in testosterone. For instance, the study by Välimäki et al. (1984) mentioned earlier observed an acute decline in testosterone with significant alcohol intake.

Testicular Atrophy:

Chronic and heavy alcohol consumption over extended periods can lead to testicular atrophy, which not only affects testosterone production but also impacts sperm quality. Testicular atrophy results from the direct toxic effects of alcohol on testicular tissue and from disruptions in the hypothalamic-pituitary-gonadal axis (Gianoulakis, 1998).

Soy and Soy Products:

Soy contains phytoestrogens, particularly isoflavones, which have a chemical structure similar to the human hormone estrogen. Some studies have suggested that high intake of soy might reduce testosterone levels. For instance, a study found that men who consumed soy protein powders experienced a reduction in testosterone levels (Hamilton-Reeves et al., 2007). However, findings are mixed, and many studies find no significant effect on testosterone from moderate soy consumption.

Licorice:

Licorice root contains glycyrrhizic acid, which can influence testosterone levels.
A study on healthy men found that daily consumption of licorice significantly reduced testosterone levels within a week (Armanini et al., 2003).

Flaxseed:

Flaxseeds are rich in lignans, which can influence testosterone metabolism. While they have many health benefits, a study on men found that consuming a flaxseed-enriched diet led to a decrease in testosterone levels (Demark-Wahnefried et al., 2008).

Sample Meal Plan

Low Calorie Option (2,000 Calories)

Breakfast: Spinach and Avocado Omelet

- 5 large eggs
- 1 cup spinach, sautéed
- 1/2 avocado
- 1/2 cup cherry tomatoes
- 2 ounces turkey slices

Macronutrients:

Approx. 650 calories, 55 grams protein, 10 grams carbohydrates, 40 grams fat.

Lunch: Grilled Chicken Salad

- 6 ounces grilled chicken breast
- 2 cups mixed salad greens
- 1/2 cup sliced cucumber
- 1/4 cup walnuts
- 1 tablespoon olive oil and lemon dressing

Macronutrients:

Approx. 600 calories, 60 grams protein, 10 grams carbohydrates, 35 grams fat.

Dinner: Lemon Herb Salmon

- 7 ounces baked salmon
- Asparagus spears, steamed
- 1 tablespoon ghee (clarified butter) for cooking
- Lemon and herbs for seasoning

Macronutrients:

Approx. 750 calories, 85 grams protein, 5 grams carbohydrates, 45 grams fat.

Total:

2,000 calories, 200 grams protein, 25 grams carbohydrates, 120 grams fat.

Moderate Calorie Option (2,500 Calories)

Breakfast: Egg and Veggie Scramble

- 4 large eggs
- 1 medium zucchini, chopped
- 1/2 bell pepper, chopped and 1/4 onion, chopped
- 2 ounces turkey bacon
- 1 medium sweet potato, roasted

Macronutrients:

Approx. 750 calories, 60 grams protein, 35 grams carbohydrates, 40 grams fat.

Lunch: Tuna Salad Stuffed Avocado

- 1 can tuna (in water), drained
- 1 large avocado, halved
- 2 tablespoons homemade paleo mayonnaise
- 1 tablespoon chopped celery
- 1 tablespoon chopped red onion

Macronutrients:

Approx. 600 calories, 65 grams protein, 15 grams carbohydrates, 35 grams fat.

Dinner: Paleo Beef Stir Fry

- 6 ounces beef strips
- Mixed stir fry vegetables (broccoli, bell peppers, snap peas)
- 2 tablespoons coconut oil
- Coconut aminos for seasoning
- 1 cup cauliflower rice

Macronutrients:

Approx. 1,150 calories, 75 grams protein, 45 grams carbohydrates, 75 grams fat.

Total:

2,500 calories, 200 grams protein, 95 grams carbohydrates, 150 grams fat.

High Calorie Option (3,000 Calories)

Breakfast: Protein Pancakes with Blueberry Compote

- 1/2 cup almond flour
- 4 large eggs
- 1 banana
- 1 cup blueberries
- 2 ounces almond butter

Macronutrients:

Approx. 1,000 calories, 60 grams protein, 70 grams carbohydrates, 65 grams fat.

Lunch: Shrimp and Veggie Skewers with Sweet Potato Fries

- 8 ounces shrimp, grilled
- Mixed vegetables for skewers (bell peppers, zucchini)
- 2 medium sweet potatoes, cut into fries and roasted
- 2 tablespoons coconut oil for cooking

Macronutrients:

Approx. 950 calories, 65 grams protein, 85 grams carbohydrates, 45 grams fat.

Dinner: Pork Chop with Apple Salsa and Roasted Vegetables

- 8 ounce pork chop, grilled
- 1 apple, chopped (for salsa)
- Mixed herbs and seasoning
- Mixed roasted vegetables (carrots, Brussels sprouts, beets)
- 2 tablespoons olive oil for roasting

Macronutrients:

Approx. 1,050 calories, 75 grams protein, 80 grams carbohydrates, 60 grams fat.

Total:

3,000 calories, 200 grams protein, 235 grams carbohydrates, 170 grams fat.

Ultimate Testosterone Nutrition

Discover over 300 delicious high protein paleo food recipes inside “20 Strategies To Triple Your Testosterone”. These recipes are easy to cook and implement into your daily routine.

They will help you achieve optimal Testosterone levels while decreasing your body fat percentage, building muscle, and improving your overall health.

Download it here from our official website.

TESTOSTERONE SUPPLEMENTS

Supplements are one of the fastest ways to naturally and safely increase your Testosterone levels. The most effective supplements boost Testosterone by targeting the root causes of low Testosterone:

- Excess Inflammation
- Vitamin Deficiencies
- High Cortisol Levels (High Stress Levels)
- High Estrogen Levels
- High Blood Sugar & Insulin Resistance
- Low Free Testosterone

In this chapter, I will share with you 5 of the most effective supplements for raising your Testosterone naturally and safely:

- Testogen
- Tongkat Ali
- Fadogia Agrestis
- Vitamin D
- ZMA

Testogen - Best Testosterone Booster

The best all in one Testosterone Booster I personally use and recommend is Testogen. I have been using it for the past 3 years with great results. It has played a huge role in helping me triple my Testosterone from a low 370 ng/dL to a high 934 ng/dL.

High Quality Ingredients

It contains 11 of the most powerful Testosterone boosting supplements at the effective dosages. The combination of these highly potent ingredients will provide at least a 50% to 60% increase in Testosterone production:

INGREDIENT NAME	DOSAGE	BENEFIT
D Aspartic Acid	2353 mg	• Increases testosterone by 42% in 12 days (Topo et al., 2009). • Can enhance male fertility (D'Aniello et al., 2012). • Boosts Luteinizing Hormone production, a hormone linked to testosterone synthesis.
Boron	8mg	• Boosts free testosterone by 28% in 7 days (Naghii et al., 2011). • Reduces female hormone estrogen by 50%. • Decreases SHBG (protein that reduces free Testosterone) by 33% in 6 hours
Zinc	10mg	• Directly associated with higher testosterone levels (Prasad et al., 1996). • Men deficient in Zinc had 79% lower Testosterone levels than men who were not • Fixing Zinc deficiency increased Testosterone by 293% • Zinc boosts enzyme activity crucial for testosterone production. • Essential for sperm health and motility.
Fenugreek Extract 4:1	40mg	• Increased Testosterone by 46% in 12 week study (Maheshwari et al., 2017) • Boosts libido and maintains healthy testosterone (Steels et al., 2011). • Improves sperm quality (Morgan et al., 2017). • Demonstrated 90% of participants seeing an increase in testosterone (Wilborn et al., 2010). • Reduces high blood sugar (cause of low T)
Vitamin D3	2000 IU	• Elevated total testosterone by 25% within 1 year (Pilz et al., 2011). • Men supplementing Vitamin D3 at 420 IU's gained 1kg of muscle in 1 year without exercise (Sun et al., 2019) • Increases muscle strength
Magnesium	200mg	• Boosts total testosterone by over 24% (Cinar et al., 2011). • Essential for over 300 biochemical reactions in the body. • Powerful antioxidant that reduces inflammation and free radical damage (fixing leading causes of low T) • Reduces anxiety and stress • Enhances sleep quality, beneficial for testosterone synthesis.
Korean Red Ginseng Extract 4:1	40mg	• Enhances erectile function (Jang et al., 2008). • Amplifies energy and stamina. • Known to stimulate libido and promote overall vitality

INGREDIENT NAME	DOSAGE	BENEFIT
Nettle Leaf Extract 4:1	40mg	• Increases free testosterone by binding SHBG. • Reduces SHBG (protein that reduces Free Testosterone) by 67% • Enhances prostate health, crucial for testosterone synthesis.
Vitamin B6	20mg	• Regulates testosterone and other androgen levels. • Increases energy levels • Known to enhance mood and reduce symptoms of depression. • Vital for brain development and function.
Vitamin K	30mcg	• Increased Testosterone levels and sperm count in animal studies (Otsuka et al., 2011). • Works in conjunction with Vitamin D • Essential for bone health and blood clotting. • Supports cardiovascular health.
Bioperine	5mg	• Increases the bioavailability of other compounds by 30% (Badmaev et al., 1999). • Enhances absorption, amplifying effects of other ingredients. • Has potential antioxidant properties.

Testogen also contains NO artificial colors or flavorings, unlike most of the other Testosterone boosters on the market.

What I love about Testogen is that it contains ingredients that raise Testosterone by fixing the root causes of low T. It works by:

- Reducing oxidative stress
- Reducing systemic inflammation
- Fixing vitamin deficiencies
- Reducing high levels of Estrogen (female hormone silently killing Testosterone)
- Reducing high blood sugar & improves insulin sensitivity
- Reducing SHBG (increasing free bioavailable Testosterone)

No other all in one Testosterone booster on the market does that.

My Personal Experience With Testogen

I've been using Testogen for the past 3 years with great results. It has played a huge role in helping me triple my Testosterone from a low 370 ng/dL to a high 934 ng/dL.

Improved Workouts

Within 2 weeks of taking Testogen, all my main lifts in the gym went up by 10lbs (4.5kg). After one month, my chest press and squat personal record went up by 22 lbs (10kg).

My endurance and recovery went through the roof. I was able to work out for harder and longer, and still recover from my workouts. All my workouts are at least 10 to 20 minutes longer since starting Testogen. When I train to failure, I can get at least 5 to 6 more extra reps because of Testogen.

Another plus is the epic skin tearing pumps. The pumps feel stronger and harder than before. When the blood rushes into my arms after a bicep curl and tricep pushdown superset, my arms feel hard as a rock.

Increased Energy & Motivation

Testogen also gives me a mental edge. The brain fog I used to have before is gone. Before Testogen, I struggled a lot with low energy levels and lack of motivation. After a few days of Testogen, the midday slumps disappeared. I found myself bouncing out of bed at 6am, ready to tackle the day with an enthusiasm I hadn't felt in a long time.

Improved Focus & Productivity

My focus and productivity is through the roof. Projects, errands, chores - I'm ticking things off my list much faster. I can now write 3,000 word articles in a day (something which used to take me more than a week). Within the first 3 months of taking Testogen, I had achieved and learnt more than I did the previous 12 months when I had low Testosterone.

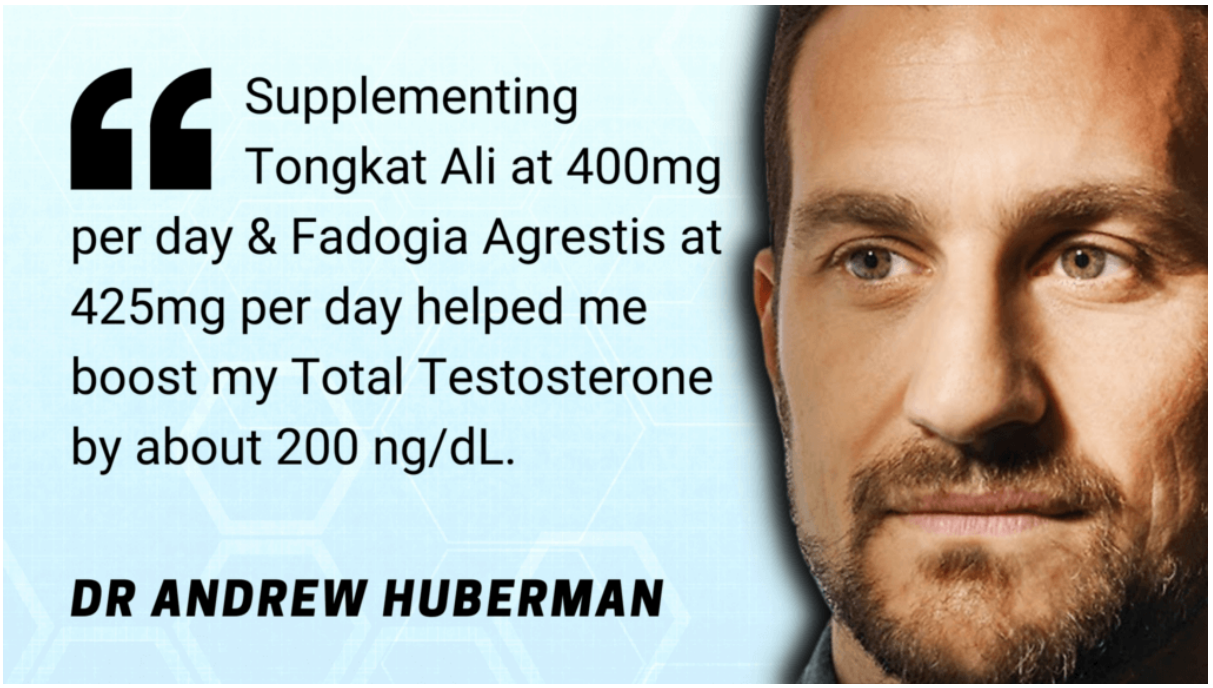
Enhanced Libido

Without delving into too much detail, let's just say my girlfriend became an even bigger advocate for Testogen than I was. Testogen has helped take my relationship from "great" to "amazing".

Where To Get Testogen

If you're ready to skyrocket your natural Testosterone production, you can order Testogen with fast worldwide shipping from their official website by clicking here.

Dr Andrew Huberman Recommends Tongkat Ali And Fadogia Agrestis



Dr. Andrew Huberman, PhD is an award winning professor at Stanford University, as well as the founder of the Huberman Lab podcast – the number #1 ranked health & fitness podcast on Youtube, Spotify and Apple Podcasts.

Andrew Huberman has appeared on the Joe Rogan Experience and Mark Bell's Power Project Podcast, where he infamously recommended Tongkat Ali and Fadogia Agrestis as two of the best testosterone boosting supplements.

Dr Andrew Huberman says:

"Supplementing Tongkat Ali at 400mg per day and Fadogia Agrestis at 425 mg per day helped me increase my Total Testosterone by about 200 ng/dL (33% increase).

"Before taking these supplements, I was hovering somewhere around 600 ng/dL Total Testosterone. These two supplements consistently bring it up into the high 700s and low 800s for me and professional athletes I work with."

Tongkat Ali

"Tongkat Ali at 400 mg/day reduces sex hormone binding globulin and increases Free bioavailable Testosterone – helping you experience the positive effects of Testosterone" says Dr Huberman.

He continues: "You should take 400mg Tongkat Ali once per day in the morning — because it can have a little bit of a stimulant effect and make you more alert. That works well to enhance focus, productivity and morning workouts."

"However, it does need to be taken chronically (long term). It tends to work better as you get into the second and third month of use. And I don't see any reason to cycle it, you can take it continuously."

Benefits Of Tongkat Ali

Raises Free Testosterone By 34% To 46%

Tongkat Ali boosted Free Testosterone by 34% to 46% when taken at 200 to 600 mg per day (PubMed, 2021; PubMed, 2013; PubMed, 2012).

In a 4 year study performed in 320 men with low Total Testosterone, Tongkat Ali at 200mg per day raised Free Testosterone by 46% (PubMed, 2012).

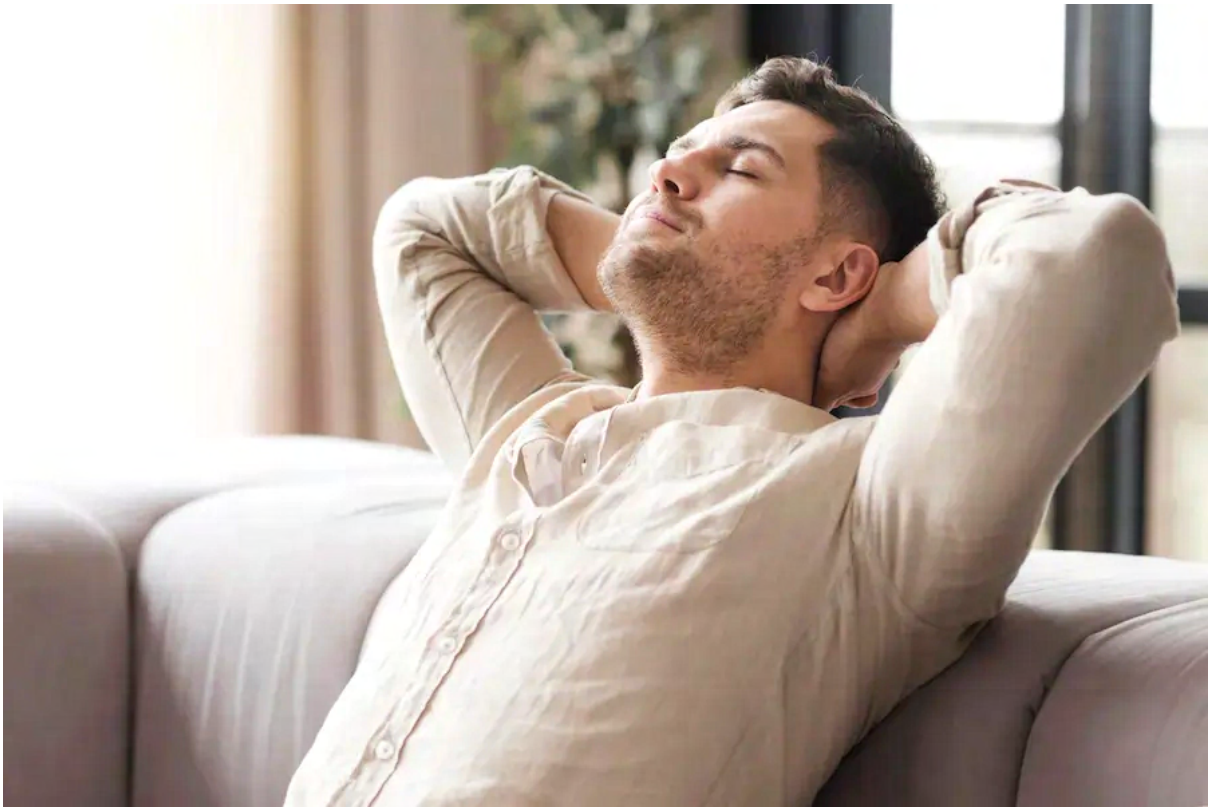
90% of men had normal Testosterone levels after the study was completed (PubMed, 2012).

In a 4 week study in 32 men, Tongkat Ali at 200mg per day increased Free Testosterone by 37% (PubMed, 2013).

In a 2 week study in young male athletes aged 21 to 27, Tongkat Ali at 600mg per day increased Total Testosterone by 15% and Free Testosterone by 34% respectively (NCBI, 2021)

"Tongkat Ali raises Total and Free Testosterone by a larger amount when taken for a longer period of time. Men suffering from low Testosterone will experience a larger Testosterone increase from using Tongkat Ali than healthy men with normal Testosterone levels." says Dr Andrew Huberman.

Reduces Stress Hormone Cortisol By 16%



High Cortisol levels suppress Testosterone production (PubMed, 2005).

Supplementing Tongkat Ali at 200mg per day for 4 weeks lowered Cortisol by 16% – reducing anxiety and stress while ramping up Testosterone production (PubMed, 2012).

The study also found Tongkat decreased anger by 12%.

Read Next: How To Lower Cortisol To Reduce Stress & Boost Testosterone By 37%

Increases Sperm Count By 65.5%

In 2010 study, Tongkat Ali at 200mg per day raised sperm count by 65.5% and increased ejaculation volume by 19.3% (NCBI, 2010)

Improves Libido By 10.8%

Tongkat Ali increased libido by 10.8% at 300mg per day in 6 week study (NCBI, 2012)

Increases Lean Muscle Mass

In a 5 week study in 14 men working out every other day, Tongkat Ali at 100mg per day:

- Increased lean muscle mass by 2.13kg from 52.26KG to 54.39KG (while placebo gained none) (BMJ, 2001)
- Increased arm size by 1.8cm (with no significant increase in placebo) (BMJ, 2001)
- Decreased body fat by 2.86% (while placebo lost 1.5% body fat) (BMJ, 2001)
- Increased 1 rep max by 5kg (while placebo increased by only 2kg) (BMJ, 2001)

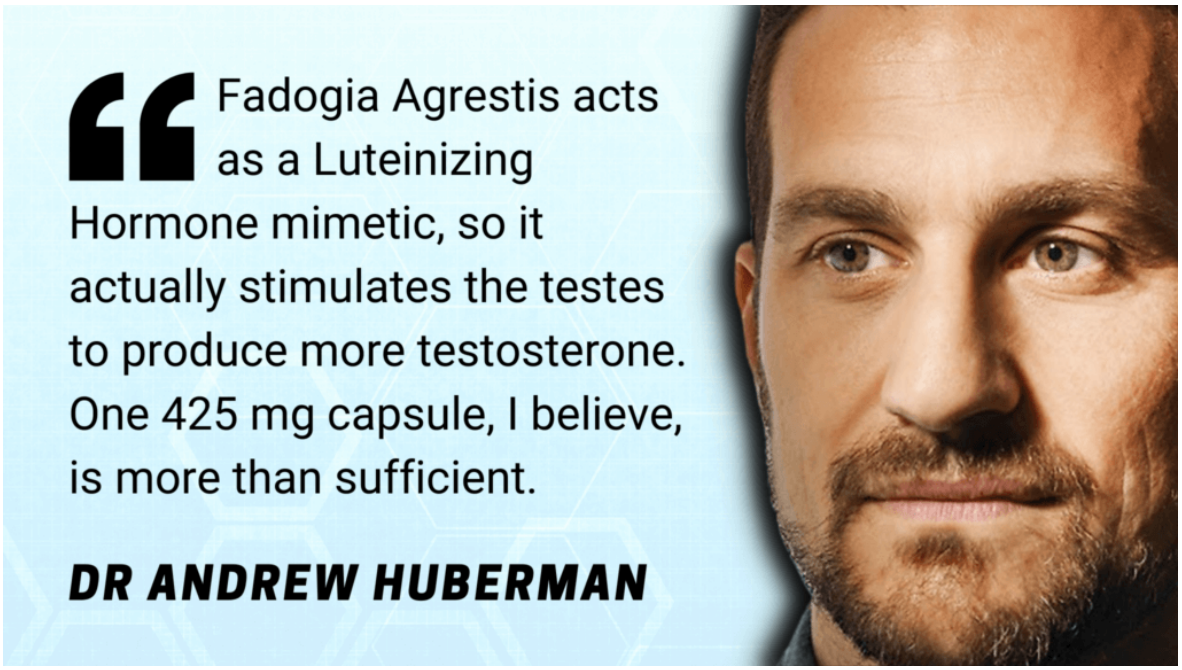
Recommended Dosage

Dr Andrew Huberman recommends taking 400mg per day each morning. However, studies show that anywhere between 300mg to 600mg per day are effective for increasing natural Testosterone production.

Best Tongkat Ali Supplement

The best Tongkat Ali supplement I highly recommend is Nutricost's Tongkat Ali from Amazon, which contains 500mg of Tongkat Ali 200:1 extract per serving with no artificial colors or preservatives.

Fadogia Agrestis



"The other supplement that is quite useful is Fadogia Agrestis. Fadogia mimics the behavior of Luteinizing Hormone, so it actually stimulates the testes to produce more testosterone. One 425 mg capsule, I believe, is more than sufficient." says Huberman.

Fadogia Agrestis is an African bush shrub commonly found in Ghana and Nigeria. Fadogia contains phytochemicals called saponins, alkaloids & flavonoids (plant chemicals rich in antioxidants that have anti-inflammatory properties).

Saponins inside Fadogia decrease inflammation (the root cause of low Testosterone) and increase Luteinizing Hormone levels, stimulating the testes to produce more Testosterone. (NCBI, 2005).

Benefits Of Fadogia Agrestis

Increases Testosterone By 200% to 600%

A 2005 study in male Albino Mice found Fadogia Agrestis supplementation increased testosterone in a dose dependent manner. After only 5 days, Fadogia:

- Doubled testosterone at 18 mg per kg of body weight (PubMed, 2005)
- Raised Testosterone to 600% of baseline at 100mg per kg (PubMed, 2005)

Increases Sex Drive By 370%

Fadogia Agrestis has also been shown to increase sex drive and libido by up to 370% (PubMed, 2005).

Helps To Last 2.5 Times Longer During Sex

Fadogia increased ejaculation latency by 250% – extending the time it takes to ejaculate. Subjects using Fadogia Agrestis lasted 2.5 times longer during sex. (PubMed, 2005)

Increases Testicle Size

The 2005 study also found Fadogia can increase testicular size and weight by 11% to 15% after 28 days (PubMed, 2005).

Fadogia increased Testicle size by increasing lipid peroxidation (oxidative stress & free radical damage to cells in the testes).

The scientists behind the 2005 study were concerned about this finding. However, a 2009 study from the same scientists found Fadogia supplementation did not cause liver or kidney toxicity and was well tolerated in the test subjects (PubMed, 2009).

Recommended Dosage

Dr Andrew Huberman recommends taking 425 mg per day of Fadogia Agrestis.

The 2005 Fadogia study recommended 400 mg to 1000 mg per day of Fadogia.
Fadogia should be cycled & used for short periods of time.

It is important to note no human studies have been conducted in Fadogia Agrestis.

Best Fadogia Agrestis Supplement

The best Fadogia Agrestis supplement I highly recommend is Double Wood's Fadogia Agrestis from Amazon, which contains 600mg of Fadogia Agrestis extract per serving with no artificial colors or preservatives.

Vitamin D3 (Cholecalciferol)

Vitamin D3 plays a crucial role in the production of Testosterone:

- Vitamin D3 Supplementation increases Testosterone levels by 25% at 3,300 IUs per day (PUBMED, 2010)
- Vitamin D3 deficiency is correlated with low Testosterone levels & impaired immune function (PUBMED, 2010)

Vitamin D3 Deficiency Causes Low Testosterone

The body produces Vitamin D3 when exposed to sunlight.

However, the majority of the population has very little sunlight exposure, especially during winter time. In fact, over 42% of the US population is deficient in Vitamin D (Kimberly et al., 2011). Over 24% of men in the UK suffer from low Vitamin D (Lin et al., 2021).

Vitamin D deficiency is linked to low Testosterone levels. Thus, a large percentage of men have Low Testosterone due to Vitamin D deficiency.

Vitamin D3 Boost Testosterone By 25% At 3300 IU's Per Day

In a 1 year study, supplementing on 3,300IUs of Vitamin D3:

- Doubled Vitamin D levels (PUBMED, 2010)
- Raised Testosterone levels by 25%, from 10.7 nmol/l to 13.4 nmol/l on the blood test. (PUBMED, 2010)

This makes Vitamin D3 a powerful Testosterone booster. Higher levels of Testosterone allow your body to build more muscle and burn more fat (PUBMED, 1989).

Additionally, supplementing with 420 IU's of Vitamin D3 increased muscle mass by 0.5KG in 1 year in men who didn't even work out. (PUBMED, 2019)

Recommended Dosage:

To maximize Testosterone: 2,000 to 4,000 IU's Per Day of Vitamin D3.

The safe limit of Vitamin D3 is 10,000 IUs per day.

Make sure to supplement Vitamin K2 alongside Vitamin D3 to prevent side effects of Excess Vitamin D3 levels (excess calcium levels and calcium depositing on soft tissue like muscle).

For Every 2000IUs of Vitamin D3, Take 30 to 50IUs of Vitamin K2:

- 2000 IUs Vitamin D3, take 30 to 50 IU of Vitamin K2
- 4000 IUs of Vitamin D3, take 60 to 100 IU of Vitamin K2

Best Vitamin D3 Supplement:

Testogen is the Vitamin D3 supplement I personally use and recommend – which contains 2,000 IUs of Vitamin D3 carefully balanced with 30IUs of Vitamin K2 per serving.

ZMA

ZMA is a patented combination of:

- 30mg of Zinc,
- 450mg of Magnesium and
- 10.5mg of Vitamin B6

In 2000, Washington State University conducted an 8 week study on the impact of ZMA supplementation on American Football Players. The athletes supplemented themselves on ZMA each night before going to sleep. The study discovered:

- ZMA increased Free Testosterone by 33.4% (ASEP, 2000).
- ZMA increased muscle size & diameter by 11.6% (compared to 4.6% increase in placebo group).
- ZMA increased quadricep & leg press strength by 12.8% to 15.2% (5% more than placebo)
- ZMA increased IGF-1 BY 3.5% (compared TO 21.4% decrease in placebo group). Insulin Like Growth Factor 1 regulates muscle growth & hypertrophy (SPRINGER, 2011).

How ZMA Increases Testosterone Production

Zinc is an essential mineral & antioxidant that plays a key role in more than 300 chemical processes within the body.

Zinc is essential for the production of Testosterone – helping the body to convert cholesterol to Testosterone (NCBI, 2019). Zinc also reduces free radical damage & lowers inflammation (2 causes of Low Testosterone).

In a 2019 study, men supplementing on 30mg of Zinc per day for 20 weeks had 296% higher Testosterone levels than men who were eating a Zinc restricted diet & had Zinc deficiency (NCBI, 2019).

Magnesium supplementation has been sown to significantly increase Testosterone (PUBMED, 2020)
Magnesium is used to produce the most powerful antioxidant in the body, Glutathione. Glutathione significantly reduces inflammation and free radical damage, significantly increasing Testosterone production.

Magnesium deficiency is linked to Low Testosterone. Magnesium deficiency leads to lower Glutathione levels. Low Glutathione is linked to:

- Excess inflammation
- Free radical damage in the body(Source, Source)

High levels of Inflammation and free radical damage are linked to low Testosterone levels.

Magnesium supplementation is essential to maximize Testosterone levels via increasing Glutathione and reducing inflammation.

Best ZMA Supplement

I highly recommend On Nutrition's ZMA formula which you can get from Amazon.com (if you are in the USA) or Amazon.co.uk (if you are in the United Kingdom).

Best Supplements For Optimal Testosterone Production, Muscle Growth & Libido

Discover 20 of the best natural herbal and mineral supplements for Testosterone inside "20 Strategies To Triple Your Testosterone".

Inside, I uncover supplements which work by targeting the root causes of low Testosterone:

- Reducing the stress hormone cortisol
- Lowering excess estrogen (female hormone silently killing Testosterone)
- Reducing systemic inflammation & free radical damage
- Optimizing insulin sensitivity (lowering high blood sugar).

Each supplement will be broken down to the science of how they work, the optimal dosage, and the best places to buy. Where possible, I will include discount codes to help you save at check out.

Download it here from our official website.

RESISTANCE TRAINING BOOSTS TESTOSTERONE BY 40%

Does Working Out Increase Testosterone?

Working out significantly increases Testosterone levels, both short and long term.

Weight lifting and calisthenics have a bigger impact on testosterone levels than endurance training like running and cycling.

Short-term Increase:

Several studies show Testosterone levels increase by 15% to 40% after a workout session. This boost is temporary, typically lasting anywhere from 1 to 24 hours.

Here is a detailed breakdown of these studies:

- **Kraemer et al. (2002)**: One workout session can increase Testosterone by 15% to 40%. This boost is typically transient, returning to baseline within 1 to 2 hours.

- **Raastad et al. (2001):** Over a two-week period of heavy strength training, participants experienced a 15% rise in testosterone post-exercise. The acute increases typically returned to baseline levels within 24 hours.

- **McCall et al. (1999):** A 1999 study found Testosterone increased by 25% to 30% post workout. For this study, the participants followed a bodybuilding style muscle hypertrophy programme.

- **Thompson et al. (1983):** After a 30 minute workout, Testosterone increased by 21.6%.

Working out has also been shown to reduce Estrogen production in men.

Long Term Testosterone Increase

Multiple studies show working out increases Testosterone levels long term:

- **Häkkinen et al. (1988):** Male athletes underwent two years of strength training. Testosterone levels increased by about 20% in the first year, but did not show significant changes in the second year.

- **Ahtiainen et al. (2003):** A 21 week study compared hormonal adaptations during resistance training in untrained and trained men. The untrained men experienced a 17% increase in starting Testosterone levels. However, in trained men, testosterone levels remained relatively unchanged.

Testosterone levels significantly increase in untrained men once they start working out. However, as their body adapts to strength training, Testosterone plateaus.

Does Increasing Muscle Mass Raise Testosterone Levels?

Initial Gains:

For individuals new to resistance training, the body responds more dramatically to the novel stimulus of weight lifting or other resistance exercises. Here's what happens:

Novel Stimulus:

When someone starts resistance training, the body is exposed to stresses it's not accustomed to. This unfamiliarity causes the body to react more strongly, both in terms of muscle repair and hormonal response.

Hormonal Surge:

Testosterone plays a crucial role in muscle repair and growth. For beginners, the sudden increase in muscle damage from workouts prompts the body to release more testosterone to aid in recovery and muscle building. This is why new trainees often experience rapid gains in muscle size and strength, commonly referred to as "newbie gains."

Optimal Environment:

The combination of increased muscle protein synthesis (the process where the body repairs and builds new muscle) and elevated testosterone creates an optimal environment for muscle growth in individuals new to resistance training.

Plateau Effect:

As one becomes more trained, several changes occur that can affect testosterone response:

Adaptation:

The body becomes more efficient at handling the stresses of resistance training. This efficiency means that the same workout that once caused significant muscle damage (and thus a more substantial testosterone response) might not have the same effect after months or years of consistent training.

Diminishing Returns:

As with many biological processes, resistance training operates on a principle of diminishing returns. The most significant gains in muscle size, strength, and testosterone response are often seen early in a training regimen. As one continues to train, the rate of gains slows down, even if the effort remains the same or even increases.

Homeostasis:

The body always seeks equilibrium or homeostasis. After an initial period of adaptation to resistance training, the body's hormonal response, including testosterone, might become more regulated and less variable in response to workouts. This regulation can lead to more stable, but not necessarily continuously elevated, resting testosterone levels.

Long Term Adaptations:

Over time, as an individual continues with resistance training, the body undergoes several chronic adaptations. Here's a closer look at how these adaptations relate to testosterone and muscle growth:

Training Efficiency:

As one becomes more accustomed to resistance training, the body becomes more efficient at both the exercise itself and the recovery process. This efficiency means that while muscle growth and strength gains continue, the rate of these gains often slows down. The body doesn't need to release as much testosterone as it did initially because it's better equipped to handle the stress of the workout.

Hormonal Regulation:

After an extended period of resistance training, the body's hormonal response becomes more regulated. While acute bouts of exercise might still lead to temporary spikes in testosterone, these spikes might be less pronounced than in the early days of training. The body has adapted to the regular training stimulus and doesn't react as dramatically as it once did.

Other Mechanisms at Play:

While testosterone is a crucial hormone for muscle growth, it's not the only factor. Over time, other mechanisms and pathways become more involved in muscle repair and growth. For instance, growth hormone and insulin-like growth factor (IGF-1) also play roles in muscle hypertrophy. As one becomes more trained, the interplay between these hormones and other factors might become more prominent, even if the testosterone response is blunted.

Adaptation And Testosterone Response:

According to a study by Vingren et al. (2010), the body's acute testosterone response to a workout might become blunted with training adaptation. It's a testament to the body's remarkable ability to adapt to constant stimuli.

While beginners might see a sharp rise in testosterone post-workout, seasoned trainees might not experience the same surge, even if they push themselves hard.

However, this doesn't mean they aren't benefiting from the workout. Their bodies have simply become more adept at handling the stress of resistance training.

Training Strategies To Increase Testosterone Production

Focus On Compound Exercises

The bigger the muscle group you train, the larger the Testosterone spike.

This is why:

- Compound movements like squat, bench press and rows provide a large Testosterone increase.
- Isolation exercises like bicep curls and calf raises have no impact on Testosterone

Add compound movements to your workout routine:

- Pull Ups (weighted or bodyweight)
- Push Ups (weighted or bodyweight)
- Dips (weighted or bodyweight)
- Bench Press
- Rows
- Squats
- Deadlift

Combine compound and isolation exercises to build an aesthetic physique and get jacked.

Never Skip Leg Day

Training legs boosts Testosterone more than training any other muscle. This is because legs are the biggest muscle group in your body.

Squats are superior to leg press. They increase Testosterone by 16% more than leg presses. Squats also raise Growth Hormone by 265% more.

Training Frequency

One workout session can elevate post workout:

- Testosterone production for 1 to 24 hours.
- Muscle protein synthesis (the process of building muscle) for 24 to 48 hours.

Working out more frequently can ensure you constantly spike your body's Testosterone production and muscle building processes. Training 3 to 5 times per week will be more effective than training 1 or 2 times weekly.

However, the more frequently you work out, the shorter your workouts have to be. This is to ensure your body has enough time to fully recover between workouts.

Avoid Over Training

Work to stimulate your muscles, not annihilate them. Overtraining:

- Reduces Testosterone and Growth Hormone
- Slows down muscle growth by increasing stress hormone cortisol and reducing protein synthesis.
- Decreases athletic performance and increases risk of injury.

To avoid overtraining:

- Make sure to get 48 to 72 hours of rest before training the same muscle group again. (Grandou et al., 2019)
- Keep workouts short and sweet, 30 minutes to 1 hour long. This prevents a rise in cortisol levels.

Best Workout Routine For Optimal Muscle Growth & Testosterone Production

The best workout routine is the one you can stick to consistently for months and years. Results in fitness are not overnight, but long term via regular workouts and a good diet plan. There are 3 highly effective workout splits for optimal muscle growth and Testosterone:

Whole Body Split:

3 weekly full body workouts with 4 rest days. Ideal for beginners and busy individuals. Optimal results for minimum time spent in the gym.

Upper / Lower Split:

4 weekly workouts with 3 resting days. Ideal for beginners to advanced. If you want high intensity training sessions with killer pumps and short resting times, this is for you.

Push/Pull/Legs (PPL) Split:

6 weekly workouts with 1 rest day. Ideal for beginners to advanced. If you want to live in the gym and can't stand not exercising, this is the split for you.

Free Workout Routine (Full Body)

I have created for you a free full body workout routine. This is ideal for beginners to advance. Beginners should use lighter weight, while more advanced individuals can use a heavier load. The weight used should be between 80 to 90% of your 1 rep max.

Monday

EXERCISE	SETS	REPS
1. Squat	5	5
2. Dumbbell Bench	4	10
3. Dumbbell Row	4	10
4. Seated Dumbbell Press	4	10
5. Lunge	4	10
6. Dumbbell Curl	3	10
7. Standing Barbell Tricep Extension	3	10
8. Calf Raise	3	12
9. Plank	5	20 secs

Wednesday

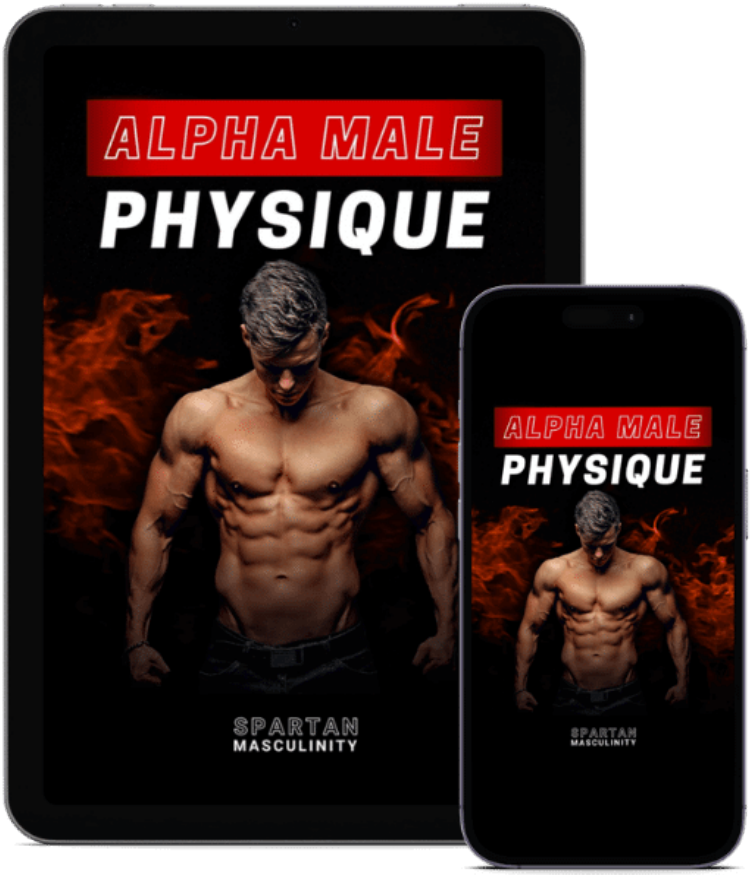
EXERCISE	SETS	REPS
1. Bench Press	5	5
2. Machine Pec Deck	3	12
3. Leg Extension	4	10
4. Leg Curl	4	10
5. Pullup	4	10
6. Seated Lateral Raise	4	10
7. Dumbbell Hammer Curls	3	10
8. Rope Extension	3	10
9. Plank	5	20 secs

Friday

EXERCISE	SETS	REPS
1. Deadlift	5	5
2. Incline Dumbbell Press	4	10
3. Lateral Raise	4	10
4. Pulldown	4	10
5. Leg Press	4	10
6. EZ Bar Curl	3	10
7. Skullcrushers	3	10
8. Dumbbell Shrugs	3	12
9. Plank	5	20 secs

Alpha Male Physique

Discover how to build a greek god physique women can't resist and skyrocket your body's natural Testosterone production inside "20 Strategies To Triple Your Testosterone".



Inside the Alpha Male Physique chapter, you will discover the science of building muscle and losing body fat to help you build the ideal male body.

You will get instant access to indepth workout routines for beginner, intermediate and advanced, as well as full body, upper lower, and push pull legs routines. Both at home and gym based workouts will be provided, to help integrate working out into your daily routine.

Additionally, the chapter contains an exercise glossary. This explains how all exercises should be performed, with the correct form and technique to ensure safety and optimal muscle growth.

Download it here from our official website.

DECREASE BODY FAT TO BOOST TESTOSTERONE BY 50%

Body Fat & Testosterone - Is There A Link?

Optimal Body Fat For Testosterone:

Smaller waist size is linked to higher testosterone levels (NCBI, 2014). The ideal body fat for maximum Testosterone production is 10% to 22% body fat. (NCBI, 2014)

Impact Of Excess Body Fat On Testosterone:

Excess body fat is linked to low testosterone (NCBI, 2014). Obese men have a Body Mass Index over 25. Obese men have 50% less testosterone than lean men (NCBI, 2014).

Fat cells increase the activity of an enzyme called aromatase, which converts testosterone to the female hormone estrogen. Having extra fat cells means more testosterone gets converted to estrogen. High estrogen levels suppress Testosterone production via negative feedback (NCBI, 2014).

High estrogen levels also increase body fat and make it more difficult to lose stomach fat. Furthermore, high estrogen causes water retention, mood swings (making men act overly emotional and more feminine), gynecomastia (man boobs) and ED (erectile dysfunction).

Extra body fat increases SHBG (inactive Testosterone), lowering Free Testosterone (active bioavailable Testosterone) and increasing Estrogen levels (FASEB, 2016)

Fat cells also trigger chronic inflammation in the body – suppressing

Testosterone.(Physiology, 2018; PubMed, 2008).

High body fat increases the stress hormone cortisol:

- Reducing testosterone
- Increasing catabolism (muscle break down, reducing muscle mass)
- Slowing down metabolism (reducing how many calories you burn per day, making it harder to burn fat) (NCBI, 2021)

Read Next: How To Lower The Stress Hormone Cortisol

By decreasing our overall body fat percentage to optimal range (between 10% to 22% body fat) our bodies will produce less Estrogen, have less inflammation, and have improved insulin sensitivity - which will increase Testosterone production. (NCBI, 2014)

Impact Of Being Too Lean (Under 10% Body Fat) On Testosterone

However, being too lean (under 10% body fat) puts stress on the body - reducing testosterone production, lowering sperm count, depleting strength, energy, impairing workout recovery & may increase risk of cardiac (heart) issues (Men's Journal, 2021).

This is because the body needs an adequate amount of body fat to perform day to day functions.

Understanding Calories, BMR & TDEE

In order to lose body fat, we need to understand:

What Are Calories?

Food contains energy. The amount of energy inside food is measured in calories.
Per 1 gram:

- Carbohydrates contain 4.5 calories/gram
- Protein contains 4.5 calories/gram
- Fats contain 9 calories/gram

Our body burns calories to produce energy.

Basal Metabolic Rate (BMR)

How many calories your body burns per day by simply existing and performing life-sustaining function is called your Basal Metabolic Rate.

These functions include all the involuntary processes in your body, such as breathing, digesting food, pumping blood, brain activity, and much more.

Your basal metabolic rate excludes energy burnt through exercise or energy acquired from eating food.

Total Daily Energy Expenditure (TDEE)

Your total daily energy expenditure (TDEE) is how many calories you burn per day.

This includes your BMR, as well as caloric intake from food and calorie expenditure through exercise.

Use our free calorie calculator to work out how many calories you burn per day.

Calories In Versus Calories Out (CICO)

ENERGY BALANCE	DEFINITION
Caloric Surplus	A caloric surplus is where the number of calories that we consume is higher than the number of calories we burn. The surplus calories our body doesn't use is stored as body fat (adipose tissue). Body fat is stored energy. Our body mass increases in a caloric surplus.
Caloric Maintenance	Caloric maintenance is when the number of calories that we consume is the same as the number of calories we burn. Our body mass will stay the same in caloric maintenance.
Caloric Deficit	Caloric deficit is where we burn more calories than we consume. Our body has to break down fat tissue to release stored energy to meet our increased energy demands. Our body mass decreases in a caloric deficit.

Strategies For Effective Fat Loss

To ensure fat loss, we must be in a state of caloric deficit. We can achieve caloric deficit by:

- Reducing caloric intake from food
- Exercising regularly to increase how many calories you burn
- Combination of caloric restriction and regular exercise

Reduce Caloric Intake From Food

Eat At A Small Caloric Deficit

Eating at a small caloric deficit of 200 to 500 calories can ensure sustainable fat loss without loss of muscle mass.

However, eating at a larger caloric deficit can also result in loss of muscle mass alongside fat loss – which will overall lead to a worse body composition.

Additionally, a large caloric deficit can slow down metabolism, reducing your overall basal metabolic rate and how many calories you burn.

Eat Adequate Protein

To prevent loss of muscle mass during a caloric deficit, it is paramount to eat 1.6 to 2 grams of protein per kg of body weight and to regularly practice resistance training.

Reverse Dieting

To prevent fat loss slowing down during a caloric deficit, we can utilize Reverse Dieting:

- Gradually reducing the calories we consume from maintenance (e.g, by 100 calories a week until we reach 500 calories per day caloric deficit)
- Gradually increase the calories we consume back to maintenance level (by 100 calories a week until we reach maintenance, to prevent rebound fat gain).

Utilizing reverse dieting helps prevent the slowing of metabolism and fat loss during calorie reduction, while also preventing fat gain as caloric intake is increased.

Derek from More Plates More Dates has a fantastic in depth guide on Reverse Dieting.

Increase Calories Burnt From Exercise

By exercising more regularly, we can burn more calories per day.
The most effective forms of exercise are:

- Resistance Training
- LISS (Low Intensity Steady State)
- HIIT (High Intensity Interval Training)

Resistance Training

Train 3 to 5 days per week for muscle growth. Increasing muscle mass raises your basal metabolic rate (BMR) and total daily energy expenditure (TDEE), helping you burn more calories per day. An one hour workout can burn anywhere from 200 to 400 calories, depending on the intensity and chosen exercises. If you train 5 days per week, you can burn an extra 1,000 to 2,000 calories.

To enhance fat loss in your workouts, focus on the following:

- Compound Exercises
- Weighted Calisthenics & Bodyweight Movements
- Unilateral Movements
- Reducing Rest Time

Compound Exercises

Compound exercises burn significantly more calories than isolation exercises.

Compound movements train multiple muscles at once, while isolation movements train only 1 muscle at a time. For example:

- A pull up (compound) will burn more calories than a lat pulldown (isolation).
- Bench press (compound) will burn more calories than a chest fly (isolation).
- An L sit (compound) will burn more calories than abdominal crunches (isolation).

Activating more muscle groups means higher energy demand and more calories burnt. Activating fewer muscle groups means lower energy demand and less calories burnt.

Weighted Calisthenics & Bodyweight Movements

Calisthenics exercises (both weighted and bodyweight) activate more muscle groups than traditional weight lifting exercises. This increases energy demand and burns more calories.

Dips and barbell bench press are both highly effective exercises to increase chest development. However, dips will burn more calories than barbell bench press.

Dips activate your chest, shoulders, triceps, abs, traps and stabilizer muscles throughout your whole body. In contrast, barbell bench press is more targeted, activating primarily the chest, triceps, front deltoid and shoulder stabilizer muscles.

Weighted calisthenics will burn the most calories. It will increase calorie expenditure more than standard body weight movements. For example, weighted dips will burn more calories than bodyweight dips. Weighted pull ups will burn more calories than bodyweight pull ups.

Calisthenics (both weighted and bodyweight) will make it easier to maintain a calorie deficit. Since you burn more calories, you can afford to increase your calorie intake while still being in a deficit. This makes dieting more sustainable.

I am NOT suggesting you remove free weight and machine exercises from your routine.
I am suggesting you add weighted calisthenics movements to your existing routine to help you burn more calories and speed up fat loss.

Unilateral Movements

There are two primary types of movements: Bilateral and Unilateral.

Bilateral exercises involve both sides of your body working together, such as a barbell row. These movements typically allow you to lift heavier weights since both sides are contributing to the effort.

Unilateral exercises, target one side of your body at a time, like single-arm dumbbell rows. These exercises require more stabilization and engagement from smaller stabilizing muscles to maintain balance and control. By activating more muscle groups, they burn more calories.

Unilateral movements help you burn more calories than bilateral movements.

Unilateral exercises require double the effort of bilateral movements. To complete 12 reps of a one arm dumbbell row, you must perform 12 reps with each arm, totaling 24 reps per set. Meanwhile, a barbell row would have been only 12 reps per set. The higher workload increases energy expenditure, burning more calories.

Furthermore, unilateral movements fix strength imbalances and promote symmetrical muscular development. By targeting each side of the body independently, these exercises prevent the dominant side from taking over. This ensures that each side of your body contributes equally to the effort.

For optimal fat loss, incorporate unilateral movements into your routine.

Reduce Resting Time Between Sets

Reducing resting time between exercises or sets can contribute to increased calorie burning during your workout.

When you decrease the rest intervals, your heart rate remains elevated, and your body's energy expenditure remains higher.

This continuous effort requires more energy to support both the muscular activity and the sustained cardiovascular response.

Additionally, shorter rest periods can enhance the intensity of your workout, leading to a greater demand for oxygen and energy.

This can trigger an "afterburn" effect known as excess post-exercise oxygen consumption (EPOC). After the workout, your body works to restore its oxygen levels, which involves burning additional calories even during the post-workout recovery period.

However, it's essential to strike a balance. While shorter rest periods can contribute to increased calorie burn and cardiovascular fitness, they might also affect your strength and performance during lifting.

Finding a rest interval that aligns with your fitness goals, workout intensity, and recovery needs is key to achieving the best results while minimizing the risk of overexertion or compromised form.

For muscle growth, resting around 1 to 2 minutes between sets is common. This interval provides sufficient time for recovery without letting your muscles cool down excessively.

To enhance endurance and fat loss, shorter rest intervals of around 30 to 60 seconds can be beneficial. This approach helps maintain an elevated heart rate and metabolic demand, promoting calorie burn.

LISS (Low Intensity Steady State Cardio)

Low-Intensity Steady State (LISS) cardio involves performing cardiovascular exercises at a gentle pace for an extended duration. LISS is characterized by its low impact on the body and its ability to enhance endurance and fat oxidation. It contrasts with high-intensity workouts and is often chosen for its sustainability and recovery benefits. Examples of LISS exercises include walking, cycling, and swimming.

Walking

Walking is the most accessible form of LISS. It is suitable for all fitness levels and it promotes consistent calorie burning without excessive strain on joints and muscles. It is ideal for rest days from intense workouts at the gym.

A one hour walk burns between 210 and 360 calories for most people.

Walking one hour per day, 5 days per week, will burn an extra 1,050 to 1,800 calories weekly.That's a fat loss of:

- 0.14kg to 0.23kg per week (0.3 lbs to 0.51 lbs per week)
- 0.56kg to 0.92kg per month (1.2 lbs to 2.04 lbs per month)
- 1.68kg to 2.76kg in 3 months (3.6 to 6.12 lbs in 3 months)

If you walk 2 hours per day, 5 days per week, you burn an extra 2,100 to 3,600 calories per week. That's a fat loss of:

- 0.28 kg to 0.46 kg per week (0.3 lbs to 0.51 lbs per week).
- 1.12 kg to 1.84 kg per month (2.4 lbs to 4.08 lbs per month).
- 3.36 kg to 5.52 kg in 3 months (7.2 to 12.24 lbs in 3 months).

Walking is the simplest way to lose fat. Everyone can do it, it is easy to implement into your daily routine, and it can be done everyday.

Unlike HIIT (High Intensity Interval Training), walking doesn't lead to DOMS (Delayed Onset Muscle Soreness). In fact, walking enhances workout recovery. It increases blood circulation, which aids in delivering oxygen and nutrients to muscles that need repair after a workout. This helps in reducing muscle soreness and promoting healing.

I recommend building up to 10,000 steps per day of walking. I personally walk 10,000 to 20,000 steps per day, which helps me burn anywhere from 500 to 1,000 calories.

The best time to walk is after a meal, as this enhances digestion and improves insulin sensitivity.

HIIT Training (High Intensity Interval Training)

HIIT (High Intensity Interval Training) are short and intense cardiovascular workouts. Examples of HIIT include:

- Sprinting
- Alternating Between Sprinting And Jogging
- Cycling on Stationary Bike at Maximum Speed
- Rope Jumping
- Basketball

Utilizing training HIIT (High Intensity Interval Training) will:

- Preserve Muscle
- Boost Metabolism
- Increase Fat Loss
- Save Time

Preserves Muscle

Unlike traditional steady state cardio like jogging (which makes us lose muscle), HIIT can preserve muscle mass and increase protein synthesis.

HIIT training utilizes both aerobic and anaerobic training.

Aerobic training increases your body's demand for oxygen, improving endurance and stamina, while anaerobic training builds and maintains muscle mass.

Studies have shown that HIIT increases HGH (Human Growth Hormone) by 450% 24 hours after a HIIT workout

HGH increases recovery and muscle repair from workouts, and encourages the body to build and maintain lean muscle mass.

Boosts Metabolism And Fat Loss

Intense exercise and HIIT training increases the body's demand of oxygen during exercise, and 24 to 48 hours after.

This is called the "afterburn" effect (or EPOC).

The more oxygen your body uses, the more fat it burns.

As a result, HIIT increases your metabolism for 24 to 48 hours after exercise.

Saves Time

Studies show three 20 minute HIIT sessions burn the same amount of calories as five 60 minutes sessions of traditional steady state cardio (like jogging).

Simply put, 1 hour of HIIT burns the same amount of calories as 5 hours of jogging.

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