



# MODERN MANHOOD IN DECLINE:

Why It's Happening and  
What to Do About It

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# MODERN MANHOOD IN DECLINE: WHY IT'S HAPPENING AND WHAT TO DO ABOUT IT

Energy. Strength. Vitality. Drive. These are among the defining physiological traits that typify what it means to be a man.

The ideal physical archetype of this is a young man in the prime of his life – his youthful vigor bearing an invisible, yet potent, “spark” from which his manly persona is revealed in all of its glory.

We call this spark testosterone – that mystical “life force” residing inside every man’s body from birth that manifests as masculinity. It’s something uniquely special to the male species that many men take for granted until it’s no longer there like it once was – and the symptoms of its absence can be very drastic.

Energy quickly turns into fatigue. Muscle mass softens into fat. Vitality gets supplanted with malaise. Before you know it, all of that normal male drive has spiraled downwards into what can only be described as apathy.

All of these negative changes and more represent the exact opposite of how a man wants to, or is supposed to feel, regardless of his age.

But more and more men – including those in middle age, and even younger – are now experiencing unnatural declines in testosterone, a condition known in the textbooks as andropause. It’s an unprecedented crisis that’s reaching epidemic proportions. It affects men both young and old, from all walks of life.

The end result for many men is the systematic loss of their health, wellbeing, and livelihoods.

Perhaps you’re one such man in this predicament and you’ve been asking yourself: Why is this happening to me, and what can I do about it? Or maybe you’re a woman who’s concerned about the men in your life and simply want to know what you can do, if anything, to help them.

Whatever the case may be, pay attention to what you’re about to learn—because the good news is that there are solutions to help reverse this disturbing trend.



## AN EPIDEMIC OF LOW TESTOSTERONE IS DESTROYING THE MALE SPECIES

One important thing you need to understand is that a man's physical health directly mirrors his hormonal health. If he seems to be losing muscle mass while gaining fat, for instance, especially around his midsection, is constantly tired and easily fatigued, has trouble focusing or concentrating on the task at hand, or is easily irritated and quick to become agitated or upset, chances are his testosterone levels are out of whack.

Many non-physical character "flaws" are also linked to hormonal imbalance. A man with optimal testosterone levels who normally demonstrates confidence, loyalty, and determination, as a few examples, can actually become fearful, cowardly, and indecisive when his testosterone levels begin to teeter into deficiency territory.

While this isn't always the case, the fact of the matter is that almost everything that defines a man in terms of his life and character directly stems from his testosterone levels, and whether or not they're in the optimal range.

Testosterone is quite literally the fuel that affords a man the essence of his manhood, which encompasses his unique character traits, abilities, and strengths, both physically and mentally. It's how he's able to achieve greatness in life, as it's how he's able to achieve the wherewithal to overcome the many trials he's sure to encounter along the way.

Without testosterone, a man would quickly find himself up a creek without the proverbial paddle. Just ask an elderly man to recall the days of his youth and he'll probably reminisce with fondness about all of the things that he was able to do "way back when" that he can no longer do now because his testosterone levels have declined.

As goes a man's testosterone, in other words, so goes the man himself. This is why it's critically important to understand what's going on with this vital hormone in today's men. While it's completely normal for a man's testosterone levels to gradually taper off the older he gets – this being one of the many consequences of natural aging – it shouldn't be drastic or premature.

And yet this is where many modern men now find themselves: the victims of a widespread epidemic of "Low T," as the drug companies are now calling it – a crisis of modern manhood that now affects literally millions of men.



## THE STANDARD AMERICAN DIET IS ANTI-TESTOSTERONE

When it comes right down to it, modern men have it tougher than probably any other past generation, because testosterone is under assault like never before. Average testosterone levels today have reached historic lows, and the causes are many – including poor lifestyle and diet, along with exogenous (external) exposure to endocrine-disrupting chemicals.

It's a well-known fact that men today are generally weaker and more fatigued relative to those from their fathers' generation. Research published in *The Journal of Clinical Endocrinology and Metabolism* found that average testosterone levels in men are now dropping by about one percent per year, with no end in sight. Since the 1980s, testosterone levels in adult men have dropped “substantially,” this report found, with evidence showing double-digit declines in testosterone with the advent of each new generation of men!<sup>1</sup>

Almost every metric and indicator of male health, in fact, points to major and ongoing declines in everything associated with testosterone and manhood – including decreased sperm count, smaller muscle mass, weakened grip, and lowered lifespan.

But why is this the case?

One of the biggest culprits behind this ongoing testosterone crisis is poor eating habits, as men today no longer eat the way that our ancestors once did – and boy, does it show! Back

in the early days of Colonial America, for instance, families thrived on home-cooked, made-from-scratch meals comprised of traditionally-prepared breads and baked goods, pastured meats, organic fruits, and vegetables – many of which were pickled and fermented to unlock their densely packed nutrients – sprouted nuts, and various other traditional, life-giving foods.<sup>2</sup>

Contrast this with the standard American diet of today and it becomes clear why we're in this mess. The average man today consumes food that is highly processed and overly refined, contaminated with disease-causing crop chemicals, and nutritionally “dead,” for all intents and purposes.

Modern food in general also tends to be loaded with processed sugar, preservatives, and other additives that are highly detrimental to male hormones – and interestingly, none of which were part of the traditional diets of old. The result of all this is that many modern men are nutritionally starved, meaning their bodies aren't getting the nutrients they need to stay healthy, strong, and fit.

According to the Office of Disease Prevention and Health Promotion (ODPHP), roughly 75% of Americans fail to regularly consume healthy foods like fresh fruits, vegetables, lean, organic protein, and healthy fats. Instead, far too many people are addicted to “junk” food, which is directly associated with high rates of obesity and heart disease. Furthermore, most Americans also exceed the recommendations for added sugars, saturated fats, and sodium.<sup>3</sup> This is obviously not a good scenario, especially for men.



## Excess Sugar Consumption Leads to Testosterone Loss

Sugar is particularly offensive to masculinity. Studies show that excess glucose intake is directly correlated with decreases in testosterone. One study published by researchers from Massachusetts General Hospital in Boston found that every 75-gram “dose” of sugar – an amount less than what’s found in two cans of soda pop – causes a 25% drop in testosterone for up to two hours after consumption.<sup>4</sup>

Additional tests conducted on these same men revealed that 15% of them experienced so drastic a drop in testosterone from soda consumption that they would have clinically qualified for testosterone replacement therapy (TRT)! That’s how bad sugar is for the male body.



When we’re talking about sugar here, we mean the monosaccharide variety, aka “simple” sugars like those found in processed foods, candy, soda pop, and even some types of fruit. Excess consumption of these types of sugars causes the body to produce more of a hormone known as insulin, which in turn causes testosterone levels to plummet. Sugar also causes the body to produce less luteinizing hormone (LH), a “master” hormone that’s responsible for producing both testosterone and human growth hormone (hGH).<sup>5</sup>

If this scenario of excess sugar consumption goes on for long enough, the body can actually stop producing insulin altogether – a condition known as type 2 diabetes, one that spells major hormone disaster. Not only do blood sugar levels go through the roof as a result of diabetes, but testosterone levels reach even more disastrous lows.

To give you an idea of how prevalent this scenario is, the U.S. Centers for Disease Control and Prevention (CDC) says that just over a quarter of all Americans now either have diabetes or a precursor condition known as prediabetes, which is basically the onset of this testosterone-killing nightmare.<sup>6</sup>

None of this is normal, as evidenced by research presented at The Endocrine Society’s 94th Annual Meeting in Houston, Texas. A team of doctors and researchers presented undeniable scientific evidence showing that, contrary to what many people have been led to believe, low testosterone isn’t natural – even in men who are getting up there in years. And much of the problem can be traced back to poor diet and lifestyle habits.<sup>7</sup>

What this suggests is that men do have a choice in whether or not they succumb to losing their life essence. Just because men age doesn’t mean that they have to lose all of their testosterone – but it all comes down to making the right choices. Deciding not to consume excess sugar, which contains no nutrients and plenty of “empty” calories, represents one of them.



## Soy: One of Testosterone's Worst Enemies

Perhaps even worse for men than sugar is soy, a popular legume with many derivatives that's found in all sorts of modern foods. Think ingredients like soybean oil, soy protein, and soy lecithin. If you take a closer look at ingredient labels, you'll find one or more of these in almost everything processed these days.

For a number of years, soy was touted as a "healthy" alternative to dairy (soy milk), meat (tofu, tempeh), and animal fat (soybean oil). But lately, science has been singing a different tune. A growing body of evidence suggests that soy is perhaps one of the worst foods that a man can put inside his body, at least as far as testosterone levels are concerned.

That's because soy is filled with powerful phytoestrogenic compounds that mimic the effects of natural estrogen – which for men means that they counteract the actions of testosterone. Not all phytoestrogens are inherently bad, but the ones in processed soy products have been shown in a multitude of scientific studies to be exceptionally powerful.

Not only has soy been shown to damage the endocrine system, both in men and women, but it can also set it up for long-term failure the more it's consumed. And the effects in men as opposed to women seem to be noticeably more damaging.

While small amounts of phytoestrogens in other plant-based foods have been shown in some studies to possibly help prevent certain health conditions such as osteoporosis and heart disease, their potential to cause harm is substantially greater – especially in the quantities found in soy.

A review of published data on the subject that was featured in the journal *Frontiers in Neuroendocrinology* notes that the phytoestrogens found in soy products represents some of the worst forms of endocrine disruptors in the modern food supply because of how dras-

tically they interfere with the body's normal production and expression of hormones.<sup>8</sup>

To put this into perspective, phytoestrogens are often used in hormone supplements as a natural alternative to estrogen-replacement therapy for postmenopausal women – that's how powerful they are! And soybeans contain some of the highest known levels of these plant-based estrogenic compounds.

This is obviously problematic for men, as any extra estrogen in the system typically means a lower testosterone to estrogen ratio, or even less testosterone – but this isn't even the worst of it.



Research out of the University of Connecticut found that after just two weeks of consuming soy protein beverages (as opposed to whey protein, a more common muscle-building supplement), male athletes experienced major declines in testosterone levels as well as dramatic spikes in cortisol. Cortisol is a “stress” hormone made in the body that competes with and destroys testosterone, and that typically manifests physically as excess belly fat.<sup>9</sup>

Animal studies further suggest that consuming soy products regularly is enough to cause “testosterone deprivation” in mammals. In other words, the phytoestrogens in soy protein act as feminizing anti-androgens that not only deplete male hormones, but also inhibit a man's body from producing more of them. Not good!

Soy products, in general, counteract the necessary androgenic expression inside a man's body that would otherwise provide him with sustained energy, mental focus, and sustained muscle mass. This is why many athletes and bodybuilders refuse to touch the stuff. To drive this point home, research out of the University of North Carolina at Chapel Hill (UNC) found that men who consume soy products regularly tend to develop female characteristics in the longer term. Such characteristics including unnatural nipple discharge, breast enlargement, and hot flashes.

Beyond this, testosterone deprivation can cause other serious problems for men such as immune dysfunction, irregular sleeping patterns, low libido, impaired growth and development, and low thyroid function.



## THE PROBLEM WITH PESTICIDES, PLASTICS, AND PHARMACEUTICALS

The obvious solution is to stay away from sugar and soy, and to instead consume only healthy foods. But what does this mean in the age of prolific crop chemicals? The unfortunate reality is that many foods that appear healthy actually aren't when you take a closer look at what's really in them.

Unless they're organically grown without the use of synthetic pesticides, herbicides, and insecticides, even the prettiest produce can be a toxic hazard for men. Like the phytoestrogens naturally found in soy, the estrogen-like chemicals found in crop chemicals like glyphosate (Roundup), for instance, are known to invade the body and interfere with the endocrine system, inhibiting the normal production of both male and female hormones.

Even longer after these food crops are picked, processed, and stocked on store shelves, their skins and flesh can still be teeming with damaging and highly toxic chemicals that are known to take a major toll on male hormones.

In a paper published in the *Medical Journal of Australia*, Dr. Mitch Harman, MD, an endocrinologist from the University of Arizona, explains how endocrine-disrupting substances are now so widespread throughout the modern food supply that humans are now being assaulted by them practically from the moment they exit the womb (and even before)!<sup>10</sup> This relentless "xenobiotic attack," as he calls it, can cause major disruptions in male hormonal and reproductive functionality, impairing or otherwise damaging a man's normal biological development.

This is why many forward-thinking health professionals recommend that their patients avoid conventional produce and factory-farmed meat at all costs, and instead stick with organic and pasture-raised alternatives, which helps to minimize chemical exposure. It's also a good idea not to spray your lawn or garden beds with weed killers, insecticides, and other chemical-based pest control solutions, as residues from these products are highly persistent. It's easier than you might think for these poisons to end up inside your home, and ultimately inside your body, when tracked in by foot or by household pets.

Many household cleaning products are similarly high-risk, as they more often than not contain additives that mimic, supplant, or otherwise handicap natural hormones from doing their job. According to the Environmental Working Group (EWG), the worst chemical offenders that cause this type of endocrine disruption include: <sup>11</sup>

## ENDOCRINE DISRUPTING CHEMICALS:



### **Bisphenol-A (BPA)**

A plasticizing chemical found in plastic bottles and containers, the lining of food cans, thermal paper receipts, and even paper money bills, BPA pretends to be estrogen when it gets inside the body. At least 93% of Americans are said to now have BPA inside their bodies, which studies suggest can lead to reproductive problems, obesity, heart disease, and cancer.

### **Dioxin**

Many industrial processes like the burning of coal and fuel, metal smelting, and chemical manufacturing produce a byproduct known as dioxin that directly interferes with hormone signaling throughout the body. Avoiding dioxin entirely is virtually impossible, but minimizing exposure can be as simple as avoiding conventional produce and meat products, and steering clear of products that contain bleach. This includes laundry bleach, bleached coffee filters, and other bleached paper products like paper towels, napkins, and toilet paper.

### **Atrazine**

Most conventional corn is sprayed with this prolific chemical pesticide, which seeps into groundwater and, in many cases, ends up flowing from people's taps who live near areas where it's used. Scarily, researchers have found that exposure to even low levels of this compound can turn male frogs into females that produce eggs. Consuming only organic produce and water that's undergone advanced filtration can help to minimize exposure.

### **Phthalates**

Plastic food bags, plastic containers, and anything that contains PVC – including many shower curtain liners – are generally loaded with this damaging, endocrine-disrupting chemical (EDC). This common plastics chemical is known to trigger “programmed” cell death in testicular cells and inhibit sperm production. Steering clear of plastic products in general, as well as any product that contains “fragrance” as a listed ingredient (which typically indicates the presence of synthetic scent compounds as opposed to natural essential oils) is critical for men looking to optimize their testosterone stores.

### **Perchlorate**

This byproduct of rocket fuel is increasingly turning up in conventional produce and dairy products. When it gets inside the body, perchlorate competes with the trace mineral iodine for residence inside the thyroid gland. When it's successful in this endeavor, perchlorate inhibits the body from producing necessary thyroid hormones. Because perchlorate often times ends up seeping into drinking water supplies, it's important to drink only purified (or natural spring) water as opposed to unfiltered tap water.

### **Fire retardants**

Many consumer products that contain fabrics and foams – think couches and chairs, mattresses, and carpets – are sprayed with fire-retardant chemicals like polybrominated diphenyl ethers. These can imitate thyroid hormones in our bodies and disrupt their activity, leading to lower IQ and other health problems. Though difficult to avoid, fire retardants are no longer present in products made by the following companies: Room & Board, IKEA, Crate and Barrel, West Elm, and Pottery Barn.<sup>12</sup> You can also avoid the pitfalls of chemical carpeting by using only hardwood or other solid-surface flooring materials in your home.



### **Lead**

In animals, lead has been found to lower sex hormone levels. Research has also shown that lead can disrupt the hormone signaling that regulates the body's major stress response system, known as the HPA axis.

If you live in an older home, there could be lead in your piping or paint that needs to be removed through remediation and/or upgrades. If your tap water is fluoridated, there's also a pretty good chance that lead levels are higher right from your tap due to fluoride-induced corrosion of city pipes. Updating whatever you can in your home is strongly advised, as is running your drinking water through an advanced filtration system that removes both lead and fluoride.

### **Arsenic**

This metalloid compound disrupts the glucocorticoid system of the body, which is responsible for regulating the way that sugars and carbohydrates are transformed into energy. The end result can manifest as weight gain, protein wasting, immunosuppression, insulin resistance, osteoporosis, growth retardation, and high blood pressure. Some of the most common sources of arsenic include contaminated, non-organic brown rice (primarily from the Southern U.S.),<sup>13</sup> wine, and bottled juice.

### **Mercury**

Whether it's found in dirty fish (beware of eating too much sushi!), air pollution, or vaccines, mercury is never a good thing for a man's body. The best way to minimize mercury exposure is to skip vaccines when possible (which contain a whole slew of toxic chemicals besides just mercury) and eat only clean fish, including pole-caught albacore tuna, wild-caught salmon

from Alaska, farmed oysters, wild-caught Pacific sardines, farmed rainbow trout, farmed mussels, arctic char, U.S. farmed barramundi, wild-caught West Coast Dungeness crab, and wild Atlantic long fin squid.<sup>14</sup>

### **Perfluorinated chemicals (PFCs)**

When cooking at home, it's absolutely critical that you avoid the use of non-stick pots and pans. Their easy-to-clean surfaces, as convenient as they might be, are brimming with endocrine-disrupting PFCs that have been shown to damage vital organs, decrease sperm quality, and negatively alter thyroid function. Cookware made with glass, enameled cast iron, stainless steel, and stoneware are safer options.

### **Organophosphate pesticides**

Did we mention that eating only organic and certified chemical-free produce is critical for men? Here's another reason why: organophosphates impede testosterone's ability to communicate with cells, thus neutralizing its presence throughout a man's body.

### **Glycol ethers**

Many household cleaning products, paints, and even cosmetics contain chemicals like glycol ethers that the European Union says "may damage fertility or the unborn child" and which have been linked to blood abnormalities and lower sperm counts. The Dow Chemical Company produces the vast majority of these solvent substances, a great many of which can be avoided simply by tossing all of your store-bought cleaning solutions that contain ingredients you can't even pronounce, and replacing them with natural alternatives like vinegar and baking soda (for multi-purpose cleaning), hydrogen peroxide, and lemon juice.<sup>15</sup>

Another ubiquitous class of testosterone-destroying “micropollutant” that many people overlook is pharmaceutical drugs. Even when a man isn’t actively taking them (think hormonal birth control pills) their residues often persist in waste water. Even after post-treatment processing, these drugs end up contaminating oceans, lakes, rivers, and streams. Even very low-dose exposure to these chemical compounds can wreak havoc on a man’s hormonal system.

The best solution would be for water systems nationwide to upgrade their purification technologies to capture all of these chemical stragglers before they end up back in the environment. Until that happens, however, the next best option is simply to avoid the use of pharmaceuticals if you can help it, and only drink filtered water.

And once again, avoiding conventional produce – a common theme throughout this report – is also a good idea, as sewage treatment “sludge” containing pharmaceutical residues is often applied to non-organic food crops as “fertilizer.”

Even common painkillers like ibuprofen (Advil) and aspirin (Bayer) can be problematic for male health. Evidence from both laboratory tests and human clinical trials suggests that non-steroidal anti-inflammatory drugs, or NSAIDs, which many people use daily to relieve pain, directly interfere with testosterone production in the male testes.<sup>16</sup>





## STRESS IS A MALE KILLER

Learning to keep track of all these “dos” and “don’ts” when it comes to avoiding endocrine disruptors can seem daunting – but it’s certainly a battle worth fighting. Over time you’ll get the hang of it and it’ll no longer feel like a chore, but rather a normal part of your daily routine.

In the meantime, try not to let it become too much of a burden to the point that you’re constantly worrying or anxious about everything, as stress is another major cause of testosterone depletion.

Every time your body becomes stressed, that cortisol hormone that we spoke about earlier kicks into high gear. This “fight or flight” molecule is like Kryptonite to testosterone – expressing itself in all of the worst ways during periods of high stress to impair healthy hormone levels and balances.

While testosterone is anabolic in nature, meaning it helps to stimulate protein synthesis, muscle growth, and other manly processes in the body, cortisol is catabolic, meaning it causes muscles to break down, fat to accumulate (especially around the belly), immune function to decrease, and testosterone levels to plummet.

It’s true that the human body requires healthy amounts of cortisol for rudimentary functions like blood sugar balance and metabolic homeostasis. But the large amounts of cortisol that are released into the bloodstream in response to stress produce the exact opposite effect, causing a man’s body to basically go awry. Many men respond to this whirlwind of stress by binging on alcohol or “comfort” food as a short-term fix. Sadly, these “feel good” solutions only make the problem worse.

When researchers from the University of Texas at Austin (UT) evaluated the relationship between cortisol and testosterone, they found that, in many ways, the two hormones are diametrically opposite in the way that they influence bodily processes and behaviors. As cortisol levels go up, testosterone levels tend to go down – this hormonal balancing act moving back and forth like a seesaw as testosterone and cortisol fight with one another to maintain control over a man’s dominant and competitive behaviors.<sup>17</sup>

Keep in mind that stress places an enormous burden on the body's resources, taxing them to the max in order to escape the perceived "emergency" situation that brought it about in the first place. This drains a man's body of testosterone, leaving him depleted of what he needs to perform physically, mentally, and sexually.

This leaves very little leftover for engaging in the types of behaviors that are encouraged by testosterone, which include things like competition and aggression, intense physical labor, and sexual activity. In other words, the more stress you're under, the more your body has to compensate by producing cortisol – leaving nothing left for testosterone. This tends to diminish a man's competitive and aggressive nature, as well as sap his energy levels.



The longer this goes on, the more serious the consequences. Think loss of libido and impotence.

That's why learning to stop and smell the roses – basically slowing down and simplifying your life – is so important for men's health. By becoming less stressed, a man will see his testosterone stores increase, hormone imbalances reverse, and cortisol levels decline.

So, the next question you're probably asking is: How do I become less stressed?

If we're talking about managing psychological stress, it generally starts with reorienting your life, and possibly even your mindset. A healthy balance of work, leisure, and sleep is absolutely crucial for a man's long-term wellbeing – but how many men actually embrace this concept on a daily basis?

It's common for many modern men to take on too much in their lives, whether it be in their work, their responsibilities at home, or even in their thought processes. Remembering to take time to relax and experience reprieve from the day-to-day grind is just as important as working hard.

## Lifting Heavy Things and Staying Active Can Dramatically Lower Cortisol

Don't take any of this advice as implying that it's good to just lie around and be lazy. On the contrary, too much sedentary behavior actually communicates to the body that testosterone is no longer needed, to which it responds by basically shutting down production – not completely, of course, but enough to be noticeable.

To keep the flame burning, men have to stay active. Lifting heavy things in the gym, playing sports, or even just doing yard work are all great ways to help optimize male hormones. In other words, nothing combats out-of-control cortisol like working those body muscles; but you have to do it the right way.

Too much aerobic exercise (i.e. running long distances for long periods of time) can actually cause cortisol levels in men to skyrocket – which as we covered earlier causes testosterone to decrease. Anaerobic exercise (i.e. high-intensity strength training workouts) on the other hand, is a much better approach for men to maximize their manly potential.

Think short, rigorous workouts several times per week that involve giving it everything you've got – interspersed with proper rest, of course – because that's the time when muscles get the chance to rebuild, and when testosterone stores replenish themselves.

To be clear, cardio is still important, just not for long periods of time. Instead of marathons or running endlessly on treadmills, work up a sweat and get that heart rate moving by doing wind sprints and high-speed laps in the pool. Again, the focus is high-intensity interval training, or HIIT – meaning quick bursts of intense anaerobic exercise with less intense



### THREE OF THE MOST EFFECTIVE WAYS TO HELP MINIMIZE STRESS:

- Getting at least seven (and preferably nine) hours of sleep per night. Research shows that more than 20% of adults who fail to get enough sleep feel more stress every day than well-rested adults. It's even worse for adults with higher than average stress levels, nearly 50% of whom say they feel more stressed when they don't get enough sleep.<sup>18</sup>
- Taking time to do the things you love. Whether it's playing golf, watching sports, working in the wood shop, taking a bike ride, or even just taking a nap, leisure time is equally as important as sleep time. If you don't already have one, find a hobby (or two) and do it regularly. You'll feel better, think better, and even your heart will pump better.<sup>19</sup>
- Keeping your work at work. Research out of Penn State University shows that most men are actually more stressed at home than they are at work – often because they don't know how to leave their work back at the office. Men generally aren't hardwired to multitask, and yet many of them attempt to do just that when they go off the clock.<sup>20</sup>

recovery periods, as opposed to lengthy endurance training.

Research shows that engaging in 20 minutes of HIIT three times per week is far more beneficial than engaging in 30 minutes of steady-state aerobic exercise three times per week, as far as testosterone is concerned. Not only does a HIIT approach to working out result in a nearly seven times greater reduction in body fat compared to aerobic cardio exercise, but it also leads to rapid muscle gain (while aerobic cardio tends to promote muscle loss).<sup>21</sup>

If you're already a highly stressed individual, you'll probably want to start out slow and build your way up to this, as too much HIIT too quickly can actually cause further testosterone depletion. Once or twice a week is a good starting point, and you can work your way up from there. Better yet, find a qualified trainer to work with who can custom-craft a routine for you based on your specific age, body type, and health status.

Once you get going, you're sure to see not only gains in muscle mass and testosterone, but also decreases in stress. This was demonstrated in research out of the University of Maryland School of Public Health, in which students who participated in just three sessions of moderate-level exercise experienced noticeably less anxiety and stress upon viewing a series of unpleasant images compared to students who remained sedentary.<sup>22</sup>

Think of it like a positive feedback loop: the more you work out and get healthy, the less stressed you'll be. And the less stressed you are, the more able you'll be to work out and continue forging your manliness.





## CONSUMING HEALTHY FATS: ONE OF THE KEYS TO TESTOSTERONE OPTIMIZATION

Keep in mind that working out is only as effective for your physical and emotional health as the foods you eat. Nutrition actually represents up to 80% of the equation as far as body composition and hormone balance are concerned, which is why it's critical to set dietary goals that work towards this end.

Besides consuming plenty of protein to complement your high-intensity workouts, it's perhaps even more important to consume the right types of healthy fats that will help your body metabolize more androgenic nutrients and produce more testosterone.

So, let's take a closer look at the three main types of dietary fats to see how they stack up (from most supportive to least supportive of testosterone optimization):

### **1. Saturated fatty acids (SFAs)**

Despite being vilified by many mainstream health professionals, saturated fats are actually quite beneficial for men. Their single-bonded carbon atoms mean they remain solid at room temperature, which makes them easy to identify – and they're arguably the premiere form of fat because they increase the body's production of cholesterol.

At first glance, this might sound like a bad thing. But the truth is that cholesterol functions as the building block of every single steroid, sex, and adrenal hormone in the body, not to mention the protective "cell wall" around every cell in our body.

The Leydig cells that live inside a man's testicles actually require cholesterol as "fuel" to produce testosterone. The brain also uses cholesterol to maintain neurological health.

Some of the best sources of saturated fat include pasture-centered animal fats (lard, butter), coconut oil, palm kernel oil, and cocoa butter.

## 2. Monounsaturated fatty acids (MUFAs)

MUFAs are also beneficial, though they're classified as unsaturated – meaning they remain in liquid form at room temperature. Their double-bonded carbon atoms contain plenty of hormone-supportive vitamin E, which numerous studies suggest work alongside SFAs to provide a powerful support system for androgen production inside the body, particularly when combined with HIIT.<sup>23</sup>

Some of the best sources of MUFAs include extra-virgin olive oil (EVOO), avocados, palm oil, pasture-centered chicken fat, beef tallow, and cocoa butter.

## 3. Polyunsaturated fatty acids (PUFAs)

PUFAs are what you might call "bad" fats because they tend to produce the opposite effect of SFAs and MUFAs. PUFAs oxidize and turn rancid very easily when exposed to oxygen (unlike SFAs and MUFAs) and are generally anti-androgenic.

Consuming too much of them can cause the body to become inflamed, damage the arterial system, and place enormous strain on the endocrine system – primarily because they contain a very imbalanced ratio of omega-6 fatty acids to omega-3 fatty acids.<sup>24</sup>

Most so-called "vegetable" oils fall into the PUFA category, and include names like soybean, corn, canola, and cottonseed oils.



Although small quantities of naturally-occurring trans fats are made in the gut of some animals, artificial trans fats are created in an industrial process that uses high pressure and chemicals to add hydrogen to liquid vegetable oils to make them more solid. The resulting products are known as “partially hydrogenated oils.”

In 2013, the U.S. Food and Drug Administration (FDA) made a preliminary determination that partially hydrogenated oils are no longer Generally Recognized as Safe (GRAS) in human food. In other words, trans fats are never good to consume, and should always be avoided as they contribute nothing beneficial whatsoever to human health.



## Dietary Fats and Oils With Healthy Ratios of SFAs to MUFAs

While some would argue that SFAs have a slight edge over MUFAs when it comes to their pro-androgenic potential, the collective of science suggests that both are important for proper hormone balance. Like many other nutrients found in nature, consuming both types of fats creates a synergy in which the benefits of each are amplified by the presence of the other.

Here's a breakdown of dietary fats with healthy ratios of SFAs to MUFAs, beginning with those containing the highest levels of SFAs (in grams per tablespoon, or g/Tbsp).<sup>25</sup>

- **Coconut oil** – SFAs: 11.8g, MUFAs: 0.8g, PUFAs: 0.2g, TFs: 0.0g
- **Palm kernel oil** – SFAs: 11.1g, MUFAs: 1.6g, PUFAs: 0.2g, TFs: 0.0g
- **Cocoa butter** – SFAs: 8.1g, MUFAs: 4.5g, PUFAs: 0.4g, TFs: 0.0g
- **Butter** – SFAs: 7.2g, MUFAs: 3.3g, PUFAs: 0.5g, TFs: 0.0g
- **Palm oil** – SFAs: 6.7g, MUFAs: 5.0g, PUFAs: 1.2g, TFs: 0.0g
- **Beef tallow** – SF As: 6.4g, MUFAs: 5.4g, PUFAs: 0.5g, TFs: 0.0g
- **Lard (pork fat)** – SFAs: 5.0g, MUFAs: 5.8g, PUFAs: 1.4g, TFs: 0.0g
- **Chicken fat** – SFAs: 3.8g, MUFAs: 5.7g, PUFAs: 2.6g, TFs: 0.0g
- **Olive oil** – SFAs: 1.8g, MUFAs: 10.0g, PUFAs: 1.2g, TFs: 0.0g

These represent some of the best types of fat you can put inside your body, with those at the top of the list being more dominant in SFAs, and those at the bottom of the list leaning more towards MUFAs. As you'll notice, all of these fats are also very low in PUFAs, which makes them ideal for human consumption.



## Dietary Oils With High/Unhealthy Levels of PUFAs

On the other hand, the vegetable oils most commonly found in processed and fast foods lean in the direction of having primarily PUFAs, meaning they're among the worst types of fats you can eat.

The breakdown is as follows (in descending order from those with the highest levels of PUFAs to those with the least):

- **Flaxseed oil** – SFAs: 1.3g, MUFAs: 2.5g, PUFAs: 10.2g, TFs: 0.0g
- **Sunflower oil** – SFAs: 1.4g, MUFAs: 2.7g, PUFAs: 8.9g, TFs: 0.0g
- **Corn oil** – SFAs: 1.7g, MUFAs: 3.3g, PUFAs: 8.0g, TFs: 0.0g
- **Soybean oil** – SFAs: 2.0g, MUFAs: 3.2g, PUFAs: 7.8g, TFs: 0.0g
- **Cottonseed oil** – SFAs: 3.5g, MUFAs: 2.4g, PUFAs: 7.0g, TFs: 0.0g
- **Sesame oil** – SFAs: 1.9g, MUFAs: 5.4g, PUFAs: 5.6g, TFs: 0.0g
- **Peanut oil** – SFAs: 2.3g, MUFAs: 6.2g, PUFAs: 4.3g, TFs: 0.0g
- **Canola oil** – SFAs: 0.9g, MUFAs: 8.2g, PUFAs: 4.1g, TFs: 0.0g
- **Margarine (tub)** – SFAs: 2.0g, MUFAs: 5.2g, PUFAs: 3.8g, TFs: 0.5g
- **Vegetable shortening** – SFAs: 3.2g, MUFAs: 5.7g, PUFAs: 3.3g, TFs: 1.7g
- **Margarine (stick)** – SFAs: 1.6g, MUFAs: 4.2g, PUFAs: 2.4g, TFs: 3.0g
- **Safflower oil** – SFAs: 0.8g, MUFAs: 10.2g, PUFAs: 2.0g, TFs: 0.0g

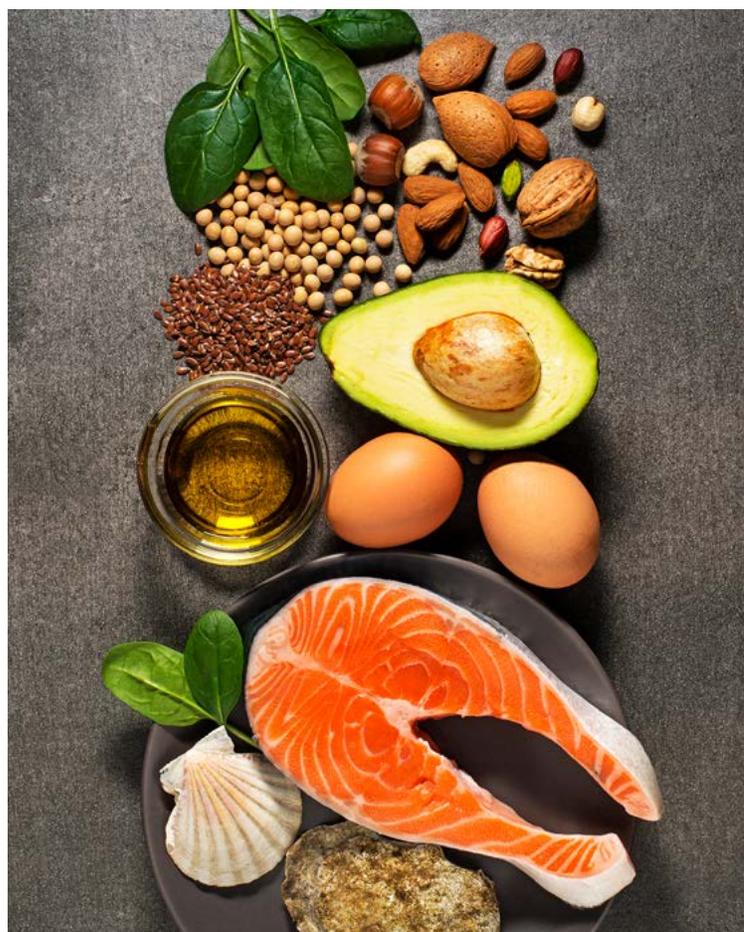
It's generally a good idea to stick with fats and oils from the first list that have higher levels of SFAs and MUFAs, and lower levels of PUFAs.

At the same time, you'll want to be careful to avoid fats and oils from the second list as much as possible, especially those derived from genetically engineered (GE) sources, including

corn, soybean, cottonseed, and canola oils, as well as all forms of margarine, which contain highly toxic trans fats.

Omega-6 fats aren't all bad, by the way. The healthier PUFA fats and oils (which include flaxseed, sunflower, and peanut) indeed contain constituents like linoleic acid, alpha-linolenic acid, and gamma-linolenic acid that contribute to the overall hormone-balancing effects of fats in general.<sup>26</sup>

It's just that most modern diets are over-saturated with omega-6 fats, and deficient in corresponding omega-3 fats. Back in the 1980s, the average ratio of omega-6 to omega-3 fats in a person's diet was around 4:1. Today, that ratio gap has increased to as high as 20:1. The ideal ratio is 1:1, or 1:2 at the most, which for most people means cutting way back on fats and oils in the PUFA category and replacing them with oils in the SFA and MUFA categories.<sup>27</sup>



# REV UP THOSE HORMONES WITH NATURAL SUNLIGHT AND VITAMIN D

Another benefit of the cholesterol found in saturated fats is that it helps the body to produce more vitamin D. Contrary to what many people believe, vitamin D is actually a type of steroid hormone, not a vitamin – and the body needs it to produce other hormones, like testosterone.

Cholesterol is also one of the catalysts that helps synthesize vitamin D in the body after it's placed there by natural sunlight (which is the best source of vitamin D) supplements, or food.

After the liver finalizes this conversion process, vitamin D is unleashed throughout the body, where it helps to boost immunity, regulate calcium absorption, and aid in the production of both male and female hormones, among other important tasks.

However, none of this would be possible without the presence of saturated fats, preferably those from animal sources, many of which contain their own natural stores of vitamin D from when the animals it came from roamed about in the open air.

Humans need to expose themselves to the sun. When they don't, or when they slather on the sunscreen, their hormones are put at risk. Ultraviolet B (UVB) radiation from natural sunlight interacts with 7-dehydrocholesterol (7-DHC) in the skin to produce bioavailable vitamin D, a “master” hormone of sorts that performs a number of important tasks throughout the body.

Vitamin D is one of the key ingredients for maintaining a healthy reproductive system, as it helps to improve fertility, sperm production, and overall sexual function in men.

You might say that vitamin D and testosterone are joined at the hip, as multiple studies suggest that men with the highest levels of vitamin D also tend to have high levels of testosterone.<sup>28 29</sup> Conversely, low testosterone is directly associated with low vitamin D status.<sup>30</sup>

In one study from back in 1939, men who exposed their chest areas to natural sunlight for just five days saw dramatic increases in testosterone of around 120%. This increase rose



to about 200% when these same men exposed their genitals to UV radiation for the same amount of time.<sup>31</sup>

This same paper found that exposure to UV light actually communicates to the brain to release more luteinizing hormone (LH), which in effect triggers testicular Leydig cells in the testicles to generate more testosterone.<sup>32</sup>

When natural sunlight isn't an option (such as in the winter months), the next best way to obtain vitamin D is through ultraviolet light therapy, or what you might call "beneficial tanning." UV therapy "walls" and "beds" for the home offer a safe and easy way to get your vitamin D during the colder months when the sun is at too low of a tilt to effectively deliver vitamin D – and when it's just too darn cold to go outside without a coat!

Vitamin D3 (cholecalciferol) supplements are also beneficial when neither of these options are available, though it's critical to take vitamin D3 in conjunction with "cofactor" nutrients like magnesium, zinc, vitamin K2, boron, vitamin A, and calcium. These cofactors help to ensure that vitamin D is properly "activated" in order for the body to take full advantage of it.<sup>33</sup>



# BOOSTING TESTOSTERONE: THE HERBAL APPROACH

Adaptogenic herbs represent another powerful weapon in a man's testosterone-boosting arsenal. Like their name suggests, these natural, body-balancing substances help the body to adapt to whatever challenges it faces, whether it be stress, toxins, or underlying hormonal imbalances.

Adaptogens have been used for many centuries to naturally support homeostasis in humans, and many men today are discovering that they're a great choice for giving their manhood a little extra boost.

A few great herbal options include:

## **Ashwagandha**

This powerful adaptogenic herb has been shown to help restore male balance. Like other adaptogens, it doesn't do this by forcefully raising or lowering hormones, but rather by "re-tuning" the body to harmoniously achieve a healthy hormonal balance all on its own.

Research suggests that taking ashwagandha in conjunction with a healthy diet and lifestyle can help to improve recovery time post-workout. It can also improve a man's testosterone profile while increasing his sperm count, sperm mobility, and semen volume. Other added benefits include increased energy, more muscle mass, and better overall feelings of wellbeing.<sup>34</sup>

## **Butea Superba**

Also known as Red Kwao Krua, *Butea superba* is another powerful adaptogen with definitive adaptogenic properties. This herb is widely recognized throughout Asia as having aphrodisiac properties as well, in part due to its high levels of phytoandrogens.





Many people are aware of the existence of phytoestrogens, which are common in many plant-based foods and herbs. But *Butea superba* is one of the few supportive herbal remedies with pronounced masculinizing properties – particularly in the way that it’s been shown to boost the body’s production of dihydrotestosterone (DHT).

Though it often gets a bad rap for supposedly causing hair loss and increasing a man’s risk of prostate cancer, DHT is the “king” of all testosterone hormones. It’s the most powerful androgen inside a man’s body, and the template from which all other forms of testosterone come to bear.

One human trial found that men who supplemented with 1,000 milligrams per day (mg/day) of *Butea superba* for three months saw substantial increases in their testosterone levels,<sup>35</sup> while a similar case study found that a man who took the herb for several weeks saw dramatic increases in his DHT levels.<sup>36</sup>

### **Mucuna Pruriens**

Also known as velvet bean, *Mucuna pruriens* is another adaptogenic herb with a strong reputation in Ayurvedic (traditional Indian) medicine. It contains high levels of an amino acid known as L-dopa (levodopa) that functions as a precursor for the neurotransmitter dopamine, the chemical “messenger” that carries signals between brain cells.

L-dopa is completely natural, unlike its synthetic counterparts. What makes it so amazing is the fact that it has the ability to safely and effectively cross the blood-brain barrier and stimulate the hypothalamus and pituitary glands to produce more human growth hormone (hGH). In men, hGH performs all sorts of manly functions like activating androgen receptors, increasing testosterone levels, and boosting sperm quality and volume.

One of the first human studies to evaluate the effects of *Mucuna pruriens* found that men who took just five grams daily of the herb's seed powder for three months saw dramatic increases in sperm volume, along with huge reductions in cortisol levels.<sup>37</sup>

In a similar study using the same three-month dosage timeframe, men taking *Mucuna pruriens* saw increased levels of testosterone, luteinizing hormone (LH), and dopamine, as well as decreases in prolactin (a hormone that suppresses the release of LH).<sup>38</sup>

### **Epimedium**

Some refer to this herb as horny goat weed – a funny name that gets the point across as to what it does. *Epimedium* is highly complementary to other adaptogenic herbs because of its well-established libido-boosting properties.

For more than 2,000 years, practitioners of Traditional Chinese Medicine (TCM) have administered teas and extracts containing *Epimedium* as a way to increase blood flow and boost nitric oxide production in their patients – both effects being critical for optimal male performance.<sup>39</sup>



# T-PLEXX:

## HOW TO SUPPORT HEALTHY TESTOSTERONE FOR GOOD

You've just discovered why there's a modern epidemic of low testosterone affecting millions of men today.

And how "Low-T" steals away your masculine strength, energy, and virility.

But now you know how to turn that around by changing your diet, avoiding toxins, reducing stress levels and more – thanks to our eye-opening report.

Now you know how to regain all the power of a man in his prime... conquering challenges, achieving greatness, and enjoying youthful sexual desire and performance.

However, as you've learned, it's not easy. The list of feminizing toxins is long and they're everywhere. And while eating right, exercising the right way, reducing stress and getting enough sunlight are all important health goals to pursue, it's not always possible to do it all.

It's almost impossible to avoid dangerous foods like soy, bad fats, and sugar completely. It's tough to exercise regularly with so many competing demands on your time. Getting enough sunlight is a great idea, but sometimes you're stuck inside whether you like it or not. And you may not always remember to find a way to decompress from all the stress in your life.

But here's good news...

You can easily tackle testosterone levels with **T-Plexx** from **Organixx**. This unique formula has 13 targeted, all natural ingredients that work with your body's own endocrine system to support healthy levels of testosterone permanently.

Even better... T-Plexx is "turbo-charged" with fulvic and humic acid, increasing the bioavailability of these healing nutrients and carrying them to where your body needs them most. **T-Plexx** is the most advanced, most bioavailable, and by far most effective testosterone repair supplement for men available anywhere.

To regain your masculine strength, virility, and stamina, try **T-Plexx** today. Each bottle comes with our iron-clad 100% ONE-YEAR Money-Back Guarantee. If you're not happy with the results, just call us for a full refund. No questions asked.



TO LEARN MORE ABOUT  
**T-Plexx™**  
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Up to 22% Savings • FREE Shipping • One Year Money-Back Guarantee



## OUR VISION AND UNIQUE DEDICATION TO YOU

There is some very important and exciting news you need to know: a deep and fast-growing body of research is now showing that regardless of your genetic makeup, you have the ability - a tremendous ability - to positively shift your “gene expression” through proper nutrition and other health choices you make.

In other words, even at the genetic level, you CAN take control of your own health.

This is what the science of “epigenetics” is all about.

And here at Organixx, empowering you to take that control and make a profoundly positive impact on your health is the driving force behind everything we do.

Toward that end, it is our mission to provide you with a complete line-up of the world’s purest and most effective nutritional supplements that can truly make a powerful difference in your health and well-being.

Furthermore, we’re dedicated to providing these supplements to you at the fairest possible price. Yes, to ensure maximum effectiveness and safety we use only the world’s purest and best natural ingredients, and we employ very careful and exacting production processes, so our base costs are higher than “industry averages.” However, our price to you reflects markups that are far lower than industry averages, because we genuinely want as many people as possible to benefit from these best-in-class supplements!

The choices you make really do play THE key role in helping you live a long, healthy, and high-quality life. At Organixx, we’re committed to providing you with the world’s best supplements, and the most beneficial health insights, so you can continue to make the best health decisions for yourself.

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