

For Men Only

Before You Try Testosterone Replacement

The Synergy Matrix™ Guide to Male Hormone Optimization

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The information contained in this book is based upon the research and the personal and professional experience of the author. It is not intended as a substitute for consulting with your physician or other healthcare provider. Any attempt to diagnose or treat an illness should be done under the direction of a healthcare professional.

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Balancing testosterone is not just a key part of anti-aging for men. It is right at the heart of addressing numerous physiologic changes that are central to aging in men. Inadequate levels of this key hormone are associated with memory dysfunction, demineralization of bone, reduced libido, erectile dysfunction, decline of muscle mass, and depression, just to list a few, well researched examples.

If you can achieve and maintain optimized testosterone levels, the overall benefits of an anti-aging program will come into much clearer focus. Just how this can be done, while controlling costs, is the subject of this chapter.

In fact, Male Menopause - an emerging term for the signs and symptoms of low testosterone in men - is no longer a controversial term. It is an accepted fact that all men cross a threshold in their 40's or early 50's at the latest, after which their testosterone levels become significantly lowered, compared with earlier years.

Some men become aware of the symptoms of this on their own, and some have these symptoms pointed out by a concerned loved one, but whether we are cognizant of it or not, after age 45, most of us men will exhibit signs and symptoms of lower levels of this key hormone.

What is less commonly known, is that levels of "free testosterone" decline even earlier. Most testosterone in men is attached to a circulating protein called Sex Hormone Binding Globulin (SHBG for short). SHBG keeps most of a man's testosterone from having any effect at all. In fact, SHBG-bound testosterone is as good as no testosterone at all.

Unfortunately, levels of SHBG start climbing when men turn 30! By age 40, regardless of "total testosterone" levels, most men have significantly lower levels of "free" or unbound testosterone. Sometimes, men in this age group suspect low testosterone levels, and ask their family doctor about it.

Again, unfortunately, when these men have their testosterone levels checked, their well-intentioned doctors often check only "total testosterone," which includes the SHBG-bound hormone. Thus, these folks are told "everything checked out OK," and they go home scratching their heads, wondering about the true cause of their symptoms.

We will cover this in more detail, in the chapter on Sensible Lab Testing, for those who are interested. Suffice it to say, the best test for men who want to get to the bottom of hormone-related symptoms, is the Free Testosterone test.

The upshot of all this is that "free" testosterone levels inevitably decline in men, and this decline will produce predictable changes in a man's body, which generally become obvious after age 40. The question is, what can be done about it? Can this problem be safely dealt with?

Equally germane to our discussion is, what can be done to safely address this problem, that is affordable and simple to incorporate into a busy lifestyle?

Given the range of serious symptoms of testosterone deficiency, It is no wonder that so many men opt for direct testosterone replacement, which quickly and satisfyingly reverses the effects we outlined, above.

Statistics are hard to come by on this emerging therapy, but it is clear that thousands of men, every month are opting for testosterone supplementation. Most of these men opt for direct replacement of testosterone, using a gel product (AndroGel), Testosterone Cypionate injections, which are given every other week, or more rarely, oral forms (for instance, a dissolving lozenge made by a compounding pharmacist).

All of these forms of testosterone replacement are effective at restoring youthful levels of this key hormone for a time; however, cost, side effects, and ease of use vary widely, depending on the form of replacement chosen.

Furthermore, what is acceptable to one man, in terms of cost of therapy, as well as comfort and convenience issues, may not be to another. Some men swear by testosterone injections, given in the gluteal muscle, twice a month.

Other men would swear AT anyone who told them that they needed to have a shot in the rear end, twice a month. I know I wouldn't have kind words for that person, though I might leave out the expletives.

Whether these common methods of testosterone replacement are acceptable in terms of cost or comfort, there is a huge, hidden issue that most men are not told about; a mountain-sized downside to every single form of testosterone replacement.

This downside is why many men find that testosterone replacement is incredibly therapeutic for a few months, but that the effect quickly wanes, and they find themselves feeling worse than when they started. There is a simple reason for this; an achilles heel to simple testosterone supplementation, that even your doctor may not be aware of.

I say that from direct experience. I am amazed at how many physicians are not aware of this key downside to direct replacement of testosterone, since it happens to virtually every man who takes testosterone supplements.

Furthermore, these doctors learned the physiology that explains the problem, back in medical school. The problem is, it may not be fresh in their minds, and in their zeal to quickly help a patient with low testosterone-related symptoms, it is easy to overlook.

What is this downside, and how can it be avoided, cost-effectively, while still getting back the youthful levels of this key hormone, and the libido boosting, energy enhancing, mood improving effects it brings?

Fortunately, there is a far better way to boost testosterone to youthful levels, safely and efficiently, over the long term, and do it more cheaply than the painful shots, without the messy creams or expensive gels, and most importantly, without the achilles heel that makes those supplements at best, temporary fixes.

This is an amazing anti-aging secret, and it is vastly under-utilized. Once you know this secret, you will be in the uber-league of high-end anti-aging patients. And, you won't be paying through the nose. You will in fact be saving money.

Amazingly, it can not only save a man money, but this method it is far more "physiologic," meaning that it elevates testosterone by working with our own, built-in hormone making machinery, and more importantly, with our own built-in

regulatory machinery. This is, as you will soon see, key.

First, some quick background is in order. In a man's body, testosterone is made in tiny, little "bursts," about every ten minutes. There was a joke that made the rounds for awhile, that scientists discovered that men really did have "periods," and not only that, we had them "every 10 minutes."

It's true, but not very funny, so that joke fell by the wayside. But the importance for our purposes is this: our bodies expect testosterone, not in big slugs, once a day, or worse, every two weeks; rather, we expect a little "whiff," every 10 minutes.

The more we understand hormone physiology, the clearer it becomes that the way a hormone is released - the schedule if you will - is key to the proper functioning of that hormone in the body. This is proving to be the case with every hormone we study. It's as if the body needs just the right amount, on just the right schedule.

If we want to do an effective job of replacing a hormone, we need to heed the bodies wisdom, not just about the amount; we need to get the timing right, as well.

Sure, we have made great strides, even with hormone replacement that is delivered on a vastly different schedule from what we were built for, but imagine how much better the effects might be, if we followed the wisdom of the body more closely?

Now usually, in order to emulate this kind of release pattern closely, in the area of hormone replacement, would require a very costly, temperamental, automatic release system, like an Insulin pump. Fortunately, when it comes to testosterone, the body already has the mechanism in place; all we lack is two, simple pieces.

These missing piece are in fact, quite easy to provide, using a once daily supplement, that can be created by any compounding pharmacist (please see the section on compounding pharmacies for details), far more cheaply than expensive, patented gels, or testosterone injections.

The first ingredient is one that you may already be familiar with: DHEA, or dehydroepiandrosterone. This remarkable substance is itself a hormone, or more appropriately, a "pro-hormone," with myriad direct and indirect functions in the

body. It's made in the adrenal glands.

A pro-hormone, such as DHEA is a substance produced by the body, and sent into circulation to be the building block for other hormones. In this case, the one we are most concerned with is of course, Testosterone, but DHEA can metabolize into other hormones, notably androstenedione and estrogen, among others.

When taken orally in an appropriate dose, DHEA is well absorbed, and levels of this key substance quickly rise to youthful levels. By itself, DHEA seems to produce many, very powerful benefits, such as improved mood, and even reductions in symptoms of depression. Clinical studies confirm this.

Some of these studies have shown improved memory and attentionality. Recently, good studies are suggesting that it has the ability to reduce manifestations of the dreaded "Metabolic Syndrome," in men.

And other studies have shown a clear reduction in blockage of the carotid arteries, which should be helpful in preventing strokes over the long run.

It also raises levels of Testosterone in men, but by itself it doesn't do this very well. Why? Because in the process of raising levels of androstenedione and testosterone, DHEA also ends up increasing the level of estrogen in men, and this is key.

This is the Achilles Heel of direct testosterone replacement as well. Testosterone can be converted by the body into estrogen, and it is, to a great extent, reversing many if not all of the hoped for benefits of testosterone supplementation.

DHEA is so beneficial, and generally devoid of side effects, that if Testosterone replacement were as simple as taking DHEA by itself, nearly every man over 50 would already be taking advantage of this ultra-cheap method of increasing testosterone.

What is the big deal about estrogen in men? Why not just put up with a little (or a lot), of extra estrogen? If it weren't a big deal, we could just take testosterone, or even easier, over the counter, cheap as dirt, DHEA capsules, and be done with it.

But it is a very big deal.

To a degree, men need estrogen. But, just like women need only very tiny amounts of testosterone, likewise, men need very small amounts of estrogen for peak health. Too much can have very unpleasant side effects, such as mood changes, depression, fluid retention, loss of libido, and more.

What is worse, evidence is mounting that elevated estrogen may be an important factor in the development of prostate cancer, as well as Benign Prostatic Hypertrophy. So, keeping estrogen in a tight range is key for a range of reasons.

If men simply take a DHEA supplement, studies show that they WILL develop higher estrogen levels, in a very short period of time. Some men will develop extremely high levels. The DHEA will have some positive effects, but these will be offset by the "aromatase factor." It's an unfortunate fact of male physiology.

Fortunately, as it turns out, we men can take advantage of a little known, biochemical tweak, to prevent this unwanted conversion of DHEA to Estrogen. By combining DHEA with a very tiny amount of a prescription drug normally used in women, we men can have our DHEA, and the resulting testosterone boost, without the troublesome side effect of increased estrogen.

There are actually several drugs that can suit this purpose, but I think that one in particular is superior; namely Femara (Letrozole is the generic name). This drug has been quite beneficial in women who suffer from some forms of cancer that are stimulated by estrogen.

Femara works by blocking the activity of an enzyme - Aromatase - that performs the conversion of androstendione and testosterone to estrogen. As men age, the activity of this enzyme actually tends to increase, creating a gradual feminization effect in men.

This feminizing effect caused by increasing levels of aromatase, gets even worse when we take extra testosterone, just as you would expect. That's why so many men feel great just after starting testosterone, then feel increasingly bad, after being on it for awhile.

It's not that they aren't getting any benefit from the extra testosterone. The problem is that they end up with extremely high estrogen levels. How high? I recall a male

patient whose initial estrogen level was HIGHER than many of my female patients!

This man felt really, really bad. All the time. His well meaning doctor had put him on testosterone, but he ended up getting more - and less - than he bargained for. After getting things back into balance, his testosterone AND estrogen were both at optimal levels.

By blocking the effect of aromatase with Femara, DHEA can do its job of increasing testosterone and androstenedione, without elevating estrogen levels.

Amazingly it turns out that the amount of Femara needed to perform this job is miniscule, which is a good thing, because on its own, Femara is not cheap (retail: 20-30.00 per pill).

But, all we need is about 25-50mcg per day. That's just 25-50 millionths of a gram. Since Femara comes in 2.5mg pills, all we need is 1/100 of a pill per day, or a little over 3 and 1/2 pills per year, to do the job!

DHEA costs pennies a dose, and we only need 3 to 4 tablets of Femara for a whole year's worth of testosterone optimization. Most men need one of these combinations: either DHEA 50mg with Femara 25mcg, or DHEA 100mg with Femara 50mcg. One capsule is taken, daily, preferably at the same time of day.

Typically, a compounding pharmacist will make these capsules for about 1.20 apiece. That's 100 for about 120.00. Many will do it cheaper than that. I have heard it go as low as 0.75 per capsule, with larger orders. The dose is one capsule per day.

Do not make the mistake of letting your doctor prescribe whole, or fractional Femara tablets, taken once a week. That is a big mistake in my opinion. Instead of a smooth, carefully controlled long-term inhibition of aromatase, you will have an irregular, up and down roller coaster situation; some days you will be taking way too much Femara, and some days none at all.

This is where compounding pharmacists shine; through their expertise, Femara can ideally dosed for men, even though one tablet normally has 100 times more than

we need. This way, instead of a roller coaster, it's smooth, predictable sailing (forgive the mixed metaphor, please).

This combination will set you back about 40.00 per month. Compare that with \$150-300 per month for testosterone injections, and up to \$350 per month for Androgel, and you can see why this is a cost breakthrough, as well as a physiological breakthrough!

Remember, this method of optimizing testosterone is not just cheaper, there are many reasons to think that it is just plain better. No shots. No messy gels or creams, and none of the potential liver problems associated with oral Testosterone supplementation.

Best of all, Testosterone is made around the clock, in the every-ten-minute pulses our bodies are accustomed to. How does it translate into the real world? Very well. I have yet to hear of a man preferring any other method, once they have tried this method.

This combination is vastly superior, in every way, to the other methods, based on real-world clinical outcomes, as well as meeting comprehensive physiological goals.

Subjectively, it elevates energy and mood, increases stamina, improves memory and focus, boosts the immune system, enhances libido, and improves sexual satisfaction. Most of all, it produces an indefinable sense of wellbeing that has to be experienced.

Moreover, the numbers don't lie. On this combination, by simply adjusting the dose of the two components, I have never seen a male patient fail to achieve truly optimized testosterone AND estrogen levels.

This is my number one tip for men, who have been feeling like "something is missing," but they are not sure just what it is. Have your doctor check your hormone levels. If your Testosterone is below normal, or below the 50th percentile, ask about trying this method.

Furthermore, if you are already on testosterone supplementation, but you have not had your estrogen levels checked, I recommend you do so. If they are elevated, ask your doctor about trying this method, instead of your usual testosterone supplement. I predict you will not go back to your old regimen.

If you and your doctor agree that this method is appropriate, your doctor simply needs to write a prescription as follows:

"DHEA _____mg (start with 25-50mg) and Femara _____mcg (start with 25mcg), to be compounded in capsules"

Sig: Take one capsule daily

Dispense Qty _____

My suggestion is to start with 30 capsules, use it for a month, then have testosterone and estrogen rechecked, to make sure you have hit the target. For estrogen, that target would be 20-40 pg/ml. For Total Testosterone I suggest, 600-750ng/dl, and 15-25 pg/ml for free testosterone.

If your total, or free testosterone is still below the 50th percentile, your doctor will need to write a new prescription. If you started out at DHEA 25mg and Femara 25mcg, I recommend going to DHEA 50mg and Femara 50mcg. It is unusual for higher doses to be needed, but some patients will need to go as high as DHEA 100mg and Femara 100mcg.

Besides monitoring your testosterone, your doctor should now be monitoring your total estrogen level, as well, to make sure it stays in the 20-40 pg/ml range. If it is too high, the dose of Femara will need to be increased. If it's too low, it will need to be reduced.

It is not complicated, and generally, one adjustment will get both hormones into an appropriate range. Once that happens, it is prudent to have levels checked every 6 months to a year. You probably will not need to have the dose adjusted again, but it is prudent to monitor these levels.

Will this really make a difference? Absolutely. For a man, having both testosterone AND estrogen levels in the "sweet spot," is an unmistakable experience. It feels "right." With optimized levels of both hormones, the changes are unequivocal;

mental clarity, greatly improved energy, body fat reduction, reduced recovery time after exercise, better erections, dramatically improved libido, just to name a few.

More importantly, this simple, once-a-day capsule, when dosed appropriately, keeps estrogen optimized, rather than just "lowered." This is key, as men need some estrogen to stay in peak health. We need it for bone integrity, as well as maintenance of healthy cholesterol balance.

Many men never have their estrogen levels checked, EVER. This is unfortunate, as we now know that this "overlooked" hormone (as far as men are concerned), is of extreme importance for men who care about their overall wellness, and want to prevent disease. I believe that the control of excess estrogen production in men will become common practice in the future.

Furthermore, it allows men to optimize DHEA levels, without the downside - the huge estrogen boost - that would otherwise occur in most men. This is key, because while testosterone is important for men, DHEA is vitally important, as well, and simply supplementing testosterone will not provide the extra DHEA that men need to protect vital systems from aging.

The combination of DHEA and Letrozole can do just this balancing act, and do it very cost-effectively. This represents a huge breakthrough for anti-aging in men, in my opinion. How much do I believe in this? I take it, myself.

What are the downsides or possible dangers of this strategy? If managed correctly, based on the available data, this strategy should provide levels of testosterone that are within the optimum part of the normal range for men.

Since we are not trying to elevate testosterone to abnormal levels, there should be no risk related to overly elevated levels of this, key hormone. Remember, the goal in anti-aging is optimization - keeping things within a range associated with peak health.

Additionally, as long as care is taken to assure that estrogen is not lowered too much (below 20pg/ml), this combination therapy should reduce the risks associated with aging-related estrogen elevation such as prostate enlargement, and even

prostate cancer, while still keeping enough estrogen around to maintain optimal bone health, and other key functions.

Thus, based on known functions and effects of testosterone and estrogen, this therapy should lower risk of serious diseases that are common in aging men. This is of course the goal of anti-aging medicine: a more youthful body AND diminished disease risk.

Ask your anti-aging doctor about it. If they are not familiar with this or are uncomfortable prescribing it, you simply need to use our tips on finding a qualified anti-aging doctor as a consultant - not to replace your family doctor, but rather to complement their care in the area of hormone optimization and anti-aging.

Chances are, there is a progressive, knowledgeable physician near you, who can provide you with this breakthrough therapy, which truly exemplifies, powerful, effective and cost-effective anti-aging medicine.