

The Mojo Multiplier Blueprint Increase Testosterone Naturally

Become The Best Version Of You Week Two: Human Engine & Hormone Cascade

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In this module...

- 7 key hormones
 - Testosterone
 - Oestrogen (US = Estrogen)
 - Human Growth Hormone (HGH)
 - Insulin
 - Leptin
 - Cortisol
 - Ghrelin



Recap from last week

- ESTROGEN - where it all went wrong
 - Sperm counts down, man boob operations up
 - Testosterone down, estrogen up
- Sources Of Estrogen
 - Food supply
 - Water supply
 - Cosmetics, deodorants, shower gels, shampoos, conditioners
 - Fumes we breathe
 - Plastics
- Psychology For Success
 - Pain & Pleasure
 - Need to avoid pain, desire to gain pleasure
 - Fat Loss Motivation; Know Your Reasons, Achieve Your Outcome



Recap from last week

- Daily cleanse alkalise and energise with Lemon water
 - Helps to regulate hormones including testosterone
- Did you watch GMO OMG?
 - You'll be very weary about what you eat from now onwards
- Go Organic!
- Be mindful of your drinking water



Hormone Cascade - Testosterone

- Testosterone
 - Principal male sex hormone although not uniquely male.
 - Males produce testosterone in the testes, females produce small amounts of testosterone in the ovaries. Both produce small amounts in the adrenal glands
- Necessary for various sexual functions, as well as protein synthesis and muscular development.
- Testosterone Development
 - Males begin to develop testosterone while still foetus. Testosterone is responsible for the development of the male genitalia in the womb, and is necessary for the further growth of the penis and testes during puberty.
 - Secondary sex characteristics such as the growth of facial hair, pubic hair and a deepening voice also depend on testosterone.



Hormone Cascade - Testosterone

- Growth of Body
 - Testosterone helps males grow taller and more muscular during puberty.
 - Testosterone also helps maintain muscle and bone strength in adulthood, and can have an effect on hair growth.
- Sex Drive
 - Testosterone assists the testes in producing sperm, and helps keep a man's sex drive alive and well.
- If low: men can experience a decreased desire to have sex, low sperm count, impotence or erectile dysfunction, inadequate erections and poor sexual performance, mood disturbances, increased body fat, loss of muscle tone, osteoporosis, difficulty with concentration, memory loss and sleep difficulties - as well as increased breast size.
- Note: Not all sexual problems, however, are due to lack of testosterone. Circulation problems for example can be just as responsible for erectile dysfunction as testosterone deficiency.



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Hormone Cascade - Testosterone

- If low: men can experience
 - Decreased desire to have sex
 - Low sperm count
 - Impotence or erectile dysfunction
 - Poor sexual performance
 - Mood disturbances - low energy, lack of concentration, lack of confidence and /or self-esteem
 - Increased body fat
 - Loss of muscle tone
 - Osteoporosis,
 - Memory loss
 - Sleep difficulties
 - Increased breast size.
- Note: Not all sexual problems, however, are due to lack of testosterone. Circulation problems for example can be just as responsible for erectile dysfunction as testosterone deficiency.



Hormone Cascade - Estrogen

- Dominant female hormone - promotes the development of female secondary sexual characteristics, such as breasts, and are also involved in the thickening of the vagina and other aspects of regulating the menstrual cycle.
 - Estrogen is produced by the ovaries and in smaller amounts by the adrenal cortex, testes and fetoplacental unit.
 - In short, estrogen is pro fat storage and covers 3 types of estriol, estradiol, and estrone
- In males, estrogen regulates certain functions of the reproductive system important to the maturation of sperm and may be necessary for a healthy libido.
 - Estrogen is present in low concentrations in blood, but can be extraordinarily high in semen



Hormone Cascade - Estrogen

- While estrogen plays an important role in males, taking it in externally (through poor food choices; added hormones, GMO, herbicides, herbicides and pesticides), certain water supplies, plastics, cosmetics, deodorants and shower gels, estrogen plays havoc with we males
- Think natural - we shouldn't be consuming any estrogen. We produce it ourselves by being smart with food choices. When we're not smart with food choices, we take in "bad estrogens" and that's when we experience problems



Hormone Cascade - Estrogen

- As I've harped on about before, estrogen is present in fat so the more fat you have, the higher your estrogen will be.
- Belly fat contains the enzyme aromatase and this converts testosterone into two forms of estrogen; estrone and estradiol.
- Burn belly fat and you'll reduce estrogen and increase testosterone!!



Hormone Cascade - Human Growth Hormone

- Fountain Of Youth - slows down ageing
- Produced by the anterior pituitary gland under the stimulation of the hypothalamus (like LH, the testosterone precursor). The effects on our system are tremendous:
 - HGH promotes and increases the synthesis of new protein tissues, such as in muscle recovery or repair. This is the way new muscle is built.
- Recent research suggests its involvement in the metabolism of body fat and its conversion to energy sources.
 - Tests were conducted in obese people, and medical use in treating obesity was proven beyond a doubt. Some pros have used GH as a way of maintaining and increasing lean mass while dieting for years.
- It improves the sleeping pattern, makes for fewer unintended awakenings and betters REM-stage sleep.



Hormone Cascade - Human Growth Hormone

- HGH produces more energy
- It may improve sexual performance
- It builds stronger bones
- Improves the quality and duration of heart and kidneys



Hormone Cascade - Human Growth Hormone

- *TRAINING*

- Intense workouts, energy-consuming events, and long periods of physical exhaustion are keys in releasing more; these catabolic states require extra protein synthesis—and in the case of energy-consumption, fat metabolization to make up for glycogen depletion.
- This is no doubt the most potent kind of GH release, as it's targeted to meet the demands of the bodybuilder.



Hormone Cascade - Human Growth Hormone

- REST
 - 75 percent of your total daily HGH output is produced while sleeping, and most of that in REM sleep. Sleep is so essential!!
 - Also, the regularity of your sleeping pattern could promote more REM cycles and result in more hormonal output. So keeping steady hours of rest is beneficial.



Hormone Cascade - Human Growth Hormone

- **NUTRITION**

- Probably the most important
- Natural GH begins with the most basic of nutrients: amino acids.
- For aminos to have optimal effect, you need to make sure that 15-20 percent of your diet consists of clean fats.
 - These induce cholesterol, the storage of the base hormone in the body that leads to the manufacture of most hormones.
 - E.g Eggs, avocados, olive oil, coconut oil, nuts, seeds, fatty fish
- Other dietary sources of nutrients to promote GH are Vitamin C (ascorbic acid), Vitamin B3, and most antioxidants.



Hormone Cascade - Insulin

- Insulin
 - Once you gain control of this hormone, everything else will fall into place - quite a claim you may be thinking!!
 - When Insulin goes up - testosterone goes down
 - When insulin goes up, you store fat (typically)
 - When you store fat, your testosterone goes down
 - When you burn fat, your testosterone goes up
 - When insulin goes up and down and up and down, this leads to insulin tolerance (insulin resistance) which leads to type 2 diabetes and obesity, high blood pressure, inflammation, heart disease & more



Insulin

- Insulin's main job is to transport nutrients out of the bloodstream and into the muscle, liver and fat cell storage deposits.
 - Most of the time, our liver and muscle stores are full as we live an inactive life. Only after an intensive workout, is insulin going transport nutrients to muscle stores
 - The excessive presence of insulin in the blood stream inhibits the release of stored body fat for the body's energy source
 - As hunter gatherers, we'd use fat deposit stores for energy. But now, we've bypassed this whole process and we burn carbohydrates for energy, instead of fat.
 - Simply put: You cannot reduce body fat on a diet that stimulates high levels of insulin production. Period!!
 - Grains contain anti nutrients that promote inflammation and hamper digestion and immune function

Insulin

- When you digest carbohydrates that are high GI and sugar, your blood sugars spike (very fast). Your pancreas then secretes insulin to extract the extra sugar (glucose) from your blood (otherwise it's toxic). It converts this to fat unless you've just done an intensive work out - in which case, the glucose will be deposited into liver or muscle glycogen stores.
- When the glucose and other nutrients are deposited in the muscle glycogen stores (after an intensive workout) this is called muscle protein synthesis = GOOD.
- Most, if not all other times when you get an insulin spike, you'll store fat = BAD



Insulin

- How do most of us start the day?
- “Healthy” wholegrain breakfast cereals or bread and something else
 - Grains (including whole grains) are high GI and therefore cause a high blood sugar response leading to insulin resistance and inflammation
- Grains - we’re humans, not birds - Mark Sisson (Primal Blueprint)
 - Two thirds of human population are not equipped to digest grain-based foods
 - Gluten is being dubbed a poison for our gut, leading to problems such as Celiac, IBS, inflammation.
 - In the US, this is exacerbated by the fact that lots of grains are subject to GMO and Round Up - the horrific herbicide mentioned last week
 - An increasing number of people are being diagnosed with celiac
 - An intolerance to wheat

Insulin

- One of the fastest ways to burn fat, and thus lower estrogen and increase testosterone, is to remove grains from your diet.
- At first, you'll perceive this as a nuisance (or version of pain), then you'll quickly realise that you drop fat super fast and your energy will quickly rise
- Replace breakfast cereal with a 3 organic egg omelette and with onions, mushrooms, broccoli, spinach and any other wonderfully tasty ingredient. At lunch, have a sweet potato with a form of protein and fresh veggies/salad and the same in the evening. Get creative!
- Think eggs, think protein, think vegetables (raw is best), think sweet potatoes, think quinoa, think organic!!

Leptin

- This hormone is produced by body fat.
- It tells the brain to decrease appetite, increase metabolic rate and increase physical activity.
- As you accumulate more fat, you secrete more leptin. This causes more fat to be burned.
- BUT if you become leptin resistant, your brain doesn't hear your fat telling it that it's already full.
- Leptin resistance is almost always present in obesity because it's a precondition of significant fat gain. It's impossible to gain more than a few pounds without being leptin resistant.
- Leptin resistance and inflammation set the stage for impaired fat and glucose metabolism, which in turn cause insulin resistance - the defining characteristic of metabolic syndrome and T2DM.

Leptin Resistance

- Leptin-resistant is a result of the same general mechanism that you become insulin-resistant - by continuous overexposure to high levels of the hormone.
- If you eat a diet that is high in sugar, grains, and processed foods - the same type of diet that will also increase inflammation in your body - as the sugar gets metabolized in your fat cells, the fat releases surges in leptin.
- Over time, if your body is exposed to too much leptin, it will become resistant, just as your body can become resistant to insulin.
- The only known way to re-establish proper leptin (and insulin) signalling is to prevent those surges, and the only known way to do that is via diet.
 - As such, diet can have a more profound effect on your health than any other known modality of medical treatment.
- A strategic whole food diet, with fresh vegetables (organic!!) and fruits (organic!!) and good fats and avoids blood sugar spikes will enhance insulin and leptin sensitivity so that your brain can once again hear the feedback signals from these hormones.

Cortisol

- Hormone released from your adrenal gland in response to physical—and mental—stress.
- Primary functions are anti-stress and anti-inflammatory, meaning that it causes the body to suppress its immune response and stop responding to a problem or pain stimulus
 - Pharmaceutical cortisol derivatives are used to control strong allergic reactions, arthritis, and other inflammatory conditions. The dangers of chronically-elevated cortisol are obvious in the careful way these drugs are dosed, and by the short duration of treatments utilizing them.
- In the short-term, increases in cortisol are also associated with decreases in protein synthesis. The reason behind this is that one of cortisol's actions is to provide alternate fuels for the body when there is not enough glucose. This occurs during starvation or fasting, but also during intense exercise. Cortisol mediates muscle breakdown so that the amino acids in muscle tissue can be used to create sugar, via gluconeogenesis.
 - In other words, cortisol can break down muscle tissue which means a breakdown in testosterone and a decrease of your metabolism
- The human body cannot afford to waste energy while under duress, so it only makes sense that if cortisol stimulates the breakdown of muscle, it would also inhibit protein synthesis

Cortisol

- Cortisol is often dubbed "the belly fat hormone," but the truth is that cortisol has its greatest impact on visceral fat, which is the fat which surrounds your organs—not the fat that covers your abs.
- Cortisol fluctuates a lot over time. Chronic levels of cortisol will break down muscle tissue and cause fat storage, but short-term elevations typically don't cause a problem - such as after an intensive workout, be it high intensity or lifting weights. Studies have shown that it can actually benefit.
- Note: Endurance training for long periods of time can have a negative impact on testosterone levels and muscle breakdown since long distance cardio means cortisol the levels are elevated for longer periods of time
- What's the answer? A mix of short bursts if high intensity, lifting weights and regular steady paced cardio and not for too long - typically for around 30 minutes.

Ghrelin

- Your hunger hormone
- Ghrelin is secreted in early foetal development and promotes lung growth.
- Ghrelin is important for a process called neurotropy, which refers to the brain's ability to adapt to new environments and learn new processes.
 - Studies suggest that ghrelin enters the hippocampus of the brain from the blood and alters the connections between nerves and cells to enhance learning and memory.
 - Learning is most effective throughout the day and when the stomach is empty, which is when ghrelin levels are higher.
- Ghrelin has been shown to play a role in preventing depression and anxiety. Mice deficient in ghrelin have also been shown to exhibit social avoidance as an effect.

Ghrelin

- Ghrelin plays a role in sleep, with more hours of sleep achieved the lower the ghrelin level is.
- Ghrelin stimulates the release of growth hormone from the pituitary gland.
- Ghrelin is one of the main hormones to stimulate hunger. Ghrelin levels increase before meals and decrease after meals
- Ghrelin and its receptors are also found in the heart and in the aorta.
- Ghrelin has also been shown to inhibit insulin secretion in some studies.

ACTION STEPS

- Read Mojo Multiplier, the book
- Read Fat Loss Motivation: Know Your Reasons, Achieve Your Outcome
 - Do the exercises just mentioned!!
- Cleanse, Alkalize & Energize
 - Start now, from day one, to drink lemon and water every morning - half a litre to a litre of water with half a fresh lemon
 - This cleanses the liver - your fat metabolising organ and supports it in balancing hormones



ACTION STEPS

- Go Organic!
- Be mindful of your drinking water
- Watch GMO OMG - on Netflix / Amazon
- Email me at support@mojomultiplier.com if you have any questions.

