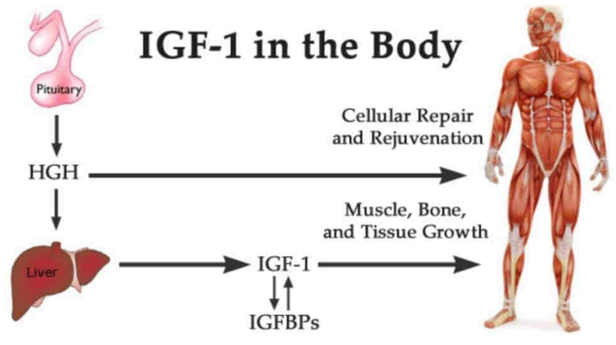
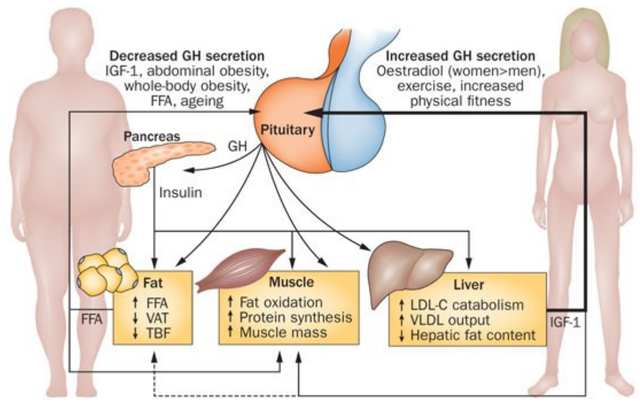
Hormonal Optimization

Lets talk about hormones and how we can optimize them to delay growth plate closure and grow vertically, this is a complex topic and there is much more to come!





Hormones That Directly Impact Height

1. **Growth Hormone (GH)**
   - Secreted by the pituitary gland, GH stimulates the growth of bones and cartilage by promoting the production of insulin-like growth factor-1 (IGF-1).
   - Plays a critical role in longitudinal bone growth during childhood and adolescence.
2. **Insulin-like Growth Factor-1 (IGF-1)**
   - A hormone stimulated by GH, IGF-1 promotes chondrocyte (cartilage cell) proliferation and hypertrophy in the growth plates of bones, directly influencing height.
3. **Thyroid Hormones (T3 and T4)**
   - Regulate metabolism and are essential for normal skeletal development and growth.
   - A deficiency can result in stunted growth, while excessive levels may lead to premature growth plate closure.
4. **Sex Hormones (Estrogen and Testosterone)**
   - Estrogen: Plays a role in the growth spurt during puberty but also triggers growth plate fusion, ending height potential.
   - Testosterone: Promotes bone growth and density; indirectly converts to estrogen in the body, affecting growth plate closure.
5. **Parathyroid Hormone (PTH)**
   - Regulates calcium and phosphorus levels in the blood, influencing bone health and development.
6. **Fibroblast Growth Factors (FGFs)**
   - FGFs like FGF21 are involved in regulating cartilage and bone formation.
7. **Cortisol**
   - High levels of cortisol (stress hormone) can inhibit growth by suppressing GH secretion and interfering with bone formation.

Hormones That Indirectly Impact Height

1. **Insulin**
   - Supports IGF-1 production and facilitates the uptake of nutrients like glucose and amino acids necessary for growth.
   - Helps maintain an anabolic state essential for bone development.
2. **Vitamin D (Technically a Hormone)**
   - Regulates calcium absorption and bone mineralization.
   - Indirectly supports skeletal growth and overall bone health.
3. **Leptin**
   - Produced by fat cells, leptin influences bone growth by signaling energy availability.
   - May interact with GH/IGF-1 pathways.
4. **Adiponectin**
   - A hormone secreted by fat cells, it indirectly affects height by modulating metabolic processes related to bone growth.
5. **Prolactin**
   - Plays a minor role by interacting with IGF-1 and contributing to bone health and growth indirectly.
6. **Melatonin**
   - Regulates sleep cycles, which influence the secretion of growth hormone during deep sleep phases.
7. **Aldosterone**
   - Regulates sodium and potassium balance, impacting overall cellular and bone health indirectly.
8. **Calcitonin**
   - Works in opposition to parathyroid hormone by promoting calcium deposition in bones, indirectly supporting bone strength.
9. **Glucocorticoids**
   - Though cortisol is mentioned directly, glucocorticoids in general can inhibit growth by suppressing bone formation and counteracting GH effects.

Direct hormones like GH, IGF-1, thyroid hormones, and sex hormones are primary regulators of height through their direct impact on growth plates and bone elongation. Indirect hormones like insulin, vitamin D, and leptin support this process by maintaining the necessary environment and resources for growth. Understanding these hormones' interplay is crucial for addressing growth issues and optimizing height potential.

But how do we actually optimize each individual hormone. Let's get to it.

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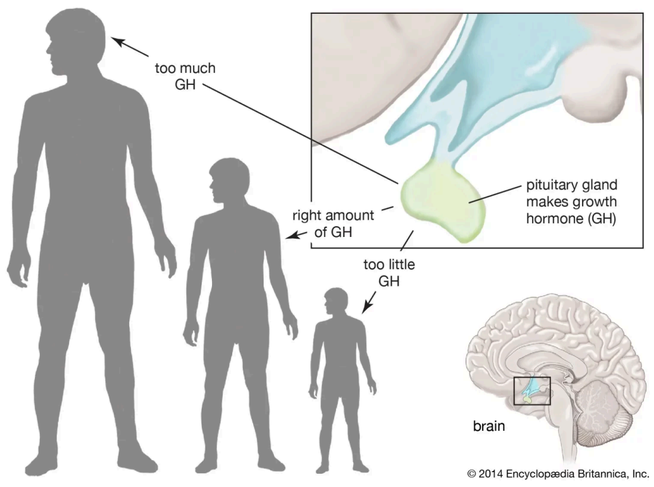
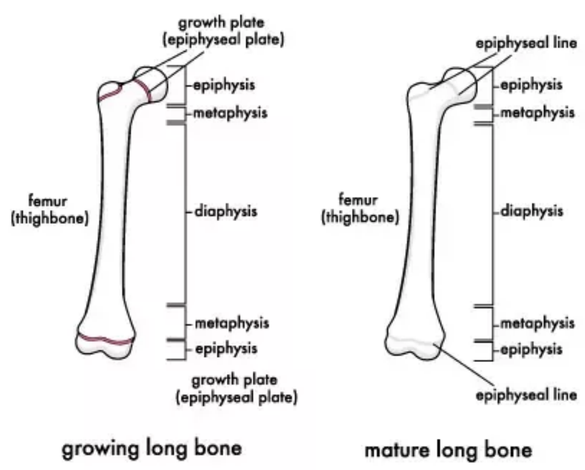




OPTIMIZING GROWTH HORMONE (GH). IGF1, and HGH

1. Lifestyle Practices

1.1. Prioritize Deep Sleep (Especially During the First Half of the Night)

- GH is predominantly released during deep sleep stages, especially in the early part of the night. To enhance this:
  - Sleep in complete darkness to boost melatonin, which indirectly supports GH.
  - Use blue-light-blocking glasses or red light therapy before bed to regulate circadian rhythms.
  - Follow a consistent sleep schedule to optimize your body's natural GH rhythm.

1.2. High-Intensity Exercise (e.g., Sprinting)

- Intense, short-duration exercises like sprints or heavy resistance training significantly boost GH levels.
  - Sprint for 20–30 seconds at maximum effort, followed by 1–2 minutes of rest. Repeat for 4–8 rounds.
  - Incorporate compound lifts like deadlifts and squats into your workout routine.

1.3. Cold Exposure

- Cold showers, ice baths, or cryotherapy sessions can stimulate GH release by creating a stress response.
  - Start with 30–60 seconds of cold exposure after a warm shower and gradually increase the duration.

1.4. Sun Exposure (Sunning Your Testicles)

- Sunlight on the body, particularly sensitive areas like the testicles, is believed to increase testosterone and potentially boost related anabolic hormones like GH.
  - Expose the skin to 10–15 minutes of direct sunlight daily while avoiding burns.

1.5. Intermittent Fasting

- Periods of fasting (16:8 or longer) naturally increase GH levels as the body shifts into a repair-focused state.
  - Combine fasting with exercise for synergistic effects.

1.6. Magnesium Oil Application (Including the Testicles)

- Magnesium supports restful sleep and aids in GH release. Applying magnesium oil to the skin or directly to sensitive areas may improve absorption and boost hormonal balance.

2. Animal-Based Diet and Nutrition

2.1. Prioritize Protein and Amino Acids

- GH relies on amino acids like **arginine**, **glutamine**, and **ornithine** for optimal secretion.
  - Consume high-protein animal-based foods like grass-fed beef, organ meats, eggs, and fish.
  - Include bone broth for collagen and glycine, which support sleep and recovery.

2.2. Include Cholesterol-Rich Foods

- Cholesterol is the precursor for steroid hormones, which interact with GH.
  - Eat pasture-raised eggs, grass-fed butter, and fatty cuts of meat to support hormonal health.

2.3. Incorporate Gelatin and Collagen

- Gelatin from animal sources (e.g., slow-cooked meat or bone broth) contains glycine, which promotes sleep and recovery, indirectly supporting GH.

2.4. Raw Dairy Products

- Raw milk, cheese, and yogurt provide complete proteins, fats, and bioavailable calcium, supporting bone growth and repair.

2.5. Liver and Organ Meats

- Rich in micronutrients like vitamin A, zinc, and selenium, which enhance GH and testosterone production.

2.6. Avoid Sugar Before Bed

- Insulin spikes from sugar intake suppress GH secretion. Instead, opt for slow-digesting animal-based proteins or fats before sleep.

3. Supplementation and Micronutrient Support

3.1. Glycine and Arginine

- Supplement with these amino acids before bed to increase GH release during sleep.

3.2. Zinc and Magnesium

- Zinc boosts testosterone, while magnesium supports sleep and recovery. Combined, they enhance overall hormonal health.

3.3. Vitamin D

- Adequate levels are critical for hormonal optimization. Get 20–30 minutes of midday sun exposure daily or supplement with 5,000 IU of vitamin D3.

3.4. Colostrum or Raw Milk

- Rich in growth factors, colostrum mimics natural hormonal signals that stimulate growth and repair.

4. Unique and Biohacking Practices

4.1. Red Light Therapy (On the Testicles or Body)

- Red and near-infrared light increase mitochondrial activity and boost testosterone and GH secretion.
  - Use a red light panel for 10–15 minutes daily on the torso or targeted areas.

4.2. Dry Fasting

- An advanced form of fasting where no food or water is consumed for 12–24 hours. It amplifies autophagy and GH production due to the body’s stress response.

4.3. Weighted Stretching and Hanging

- GH secretion can be influenced by mechanical stress on bones and joints.

- Perform exercises like dead hangs from a pull-up bar or weighted stretches for 1-3 minutes to stimulate spine and joints

4.4. Hyperbaric Oxygen Therapy (HBOT)

- Increases oxygen saturation in tissues, promoting recovery and stimulating GH indirectly.

4.5. Deep Breathing and Breath Holds

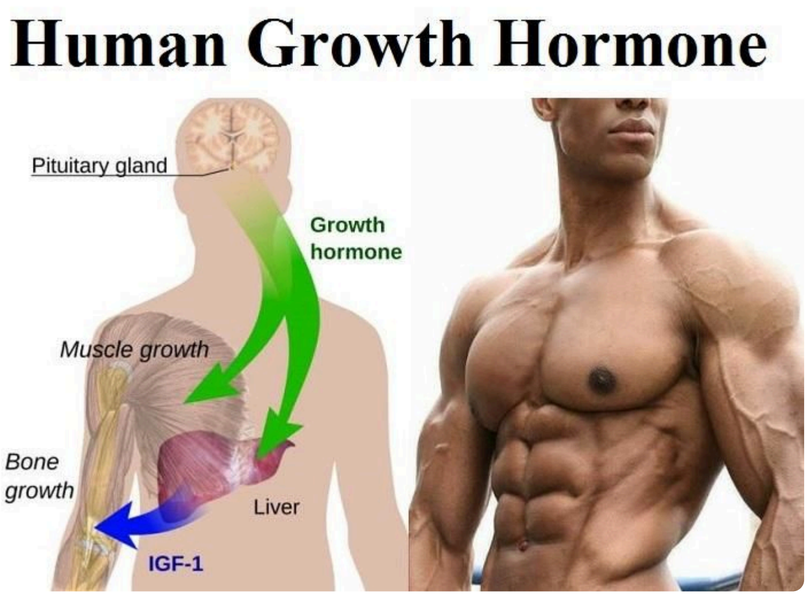
- Controlled breathing techniques, like those in the Wim Hof Method, stimulate the autonomic nervous system and potentially increase GH through hypoxia-induced stress.

5. Avoidance of GH Suppressors

- **Chronic Stress**: Elevated cortisol levels blunt GH secretion. Manage stress through meditation, mindfulness, or yoga.
- **Late-Night Eating**: Eating large meals, especially carb-heavy, late at night suppresses GH release during sleep.
- **Alcohol**: Reduces sleep quality and blunts GH secretion. Limit consumption or avoid it entirely.

Sample Daily Plan for GH Optimization

1. **Morning**:
   - Sun exposure for 15 minutes (sunning testicles if possible).
   - Perform sprints or high-intensity exercise.
2. **Midday**:
   - Consume a protein-rich animal-based meal (e.g., steak, eggs, liver).
   - Practice light stretching or cold exposure.
3. **Evening**:
   - Apply magnesium oil (optional).
   - Consume a light meal rich in collagen or bone broth.
   - Use red light therapy on the body or testicles.
4. **Pre-Bed**:
   - Take glycine and magnesium supplements.
   - Avoid screens for one hour before sleep.



Comprehensive Guide to Optimizing Thyroid Hormones (T3 and T4)

Thyroid hormones (T3 – triiodothyronine and T4 – thyroxine) regulate metabolism, energy levels, growth, and overall vitality. Maintaining optimal levels requires a holistic approach that addresses diet, lifestyle, environmental factors, and unique biohacks. Below is a detailed guide to enhancing thyroid health, especially through animal-based and unconventional practices.

1. Dietary Strategies

1.1. Avoid Goitrogens

- Goitrogens are substances found in certain foods that interfere with thyroid hormone production by inhibiting iodine uptake.
  - **Foods to Limit or Avoid**: Cruciferous vegetables (broccoli, kale, cabbage), soy, and millet.
  - Cooking reduces goitrogenic activity, so if consumed, ensure these foods are cooked thoroughly.

1.2. Consume Selenium-Rich Foods

- Selenium is essential for converting T4 into the active T3 and protecting the thyroid from oxidative damage.
  - **Best Sources**: Brazil nuts (sparingly), pasture-raised eggs, grass-fed liver, sardines, and wild-caught fish.

1.3. Increase Iodine Intake

- Iodine is the building block of thyroid hormones.
  - **Best Sources**: Seaweed (kelp, dulse), wild-caught shellfish, and iodine-enriched mineral salts like Celtic or Himalayan salt.

1.4. Embrace Raw Animal Fats

- Raw animal fats (like suet or raw butter) help detoxify the liver by binding to and excreting fat-soluble toxins. A healthy liver is crucial for proper thyroid hormone conversion.
  - **Best Sources**: Grass-fed raw butter, tallow, and suet.
  - Pair with a liver-supportive supplement like TUDCA for enhanced bile flow and detoxification.

1.5. Incorporate High-Quality Proteins

- Proteins provide amino acids like tyrosine, which is critical for thyroid hormone production
  - **Best Sources**: Grass-fed beef, lamb, free-range chicken, organ meats, and gelatin.

1.6. Mineral Water for Electrolyte Balance

- High-quality mineral water replenishes magnesium, calcium, and potassium, which support enzymatic reactions involved in thyroid function.
  - **Examples**: Gerolsteiner, San Pellegrino, or other spring waters rich in minerals.

2. Lifestyle Practices

2.1. Sunlight and Vitamin D

- Sunlight boosts vitamin D, which regulates thyroid function by influencing the immune system and calcium metabolism.
  - Spend 15–30 minutes daily in direct sunlight, ideally during the morning or midday.
  - Expose as much skin as possible, and include grounding (walking barefoot on natural surfaces) for added benefits.

2.2. Grounding (Earthing)

- Walking barefoot on grass, soil, or sand neutralizes free radicals and reduces inflammation, indirectly benefiting thyroid health.

2.3. Sleep Optimization

- Poor sleep disrupts hormonal balance, including T3 and T4 levels.
  - Sleep in a cool, dark environment to enhance restorative processes and support thyroid hormone production.
  - Avoid artificial blue light for 1–2 hours before bed.

2.4. Stress Management

- Chronic stress elevates cortisol, which suppresses TSH (thyroid-stimulating hormone) and impairs T3 production.
  - Practices like meditation, deep breathing, or yoga can mitigate stress.
  - Adaptogenic herbs like ashwagandha may support the stress response and thyroid function.

3. Detoxification Strategies

3.1. Raw Animal Fats for Heavy Metal Detox

- Raw animal fats bind to toxins like mercury and lead, helping the liver excrete these heavy metals. This reduces the toxic burden on the thyroid.
  - Regular consumption of raw butter or suet supports this process.

3.2. TUDCA (Tauroursodeoxycholic Acid)

- A bile acid supplement that enhances liver detoxification, promoting the conversion of T4 to T3.
  - Combine with raw fats and liver-supportive herbs like milk thistle.

3.3. Infrared Sauna or Sweating Practices

- Promotes the excretion of heavy metals and toxins through sweat, reducing their interference with thyroid function.

4. Supplementation and Micronutrient Support

4.1. Selenium

- Essential for protecting the thyroid from oxidative stress and enabling T3 conversion.
  - A single Brazil nut daily often suffices, or consider selenium supplements (100–200 mcg/day).

4.2. Iodine

- Start low and slow with iodine supplementation to avoid overstimulating the thyroid. Pair with selenium for safety.
  - **Forms**: Lugol’s iodine or nascent iodine drops.

4.3. Zinc and Copper Balance

- Zinc supports thyroid hormone production, while copper balances zinc to prevent deficiencies.
  - Found in oysters, beef liver, and other shellfish.

4.4. Magnesium

- Crucial for enzymatic reactions involved in hormone synthesis and conversion.
  - Apply transdermal magnesium oil or consume magnesium-rich foods like leafy greens and nuts.

4.5. Adaptogenic Herbs

- Ashwagandha: Helps lower cortisol and regulate thyroid hormones.
  - Rhodiola: Supports stress resilience and thyroid function.

5. Unique and Unconventional Biohacks

5.1. Red Light Therapy on the Thyroid

- Applying red or near-infrared to the throat area stimulates mitochondrial activity and can improve thyroid function
  - Use a red light panel for 5–10 minutes daily, focusing on the neck.

5.2. Ice Therapy for Inflammation

- Apply a cold compress to the thyroid gland to reduce inflammation and promote healing.

5.3. Bone Broth Fasting

- Short-term fasts with nutrient-dense bone broth provide minerals and amino acids essential for thyroid health while reducing inflammation.

5.4. Heavy Metal Detoxification Baths

- Epsom salt baths or clay detox baths draw toxins out of the body.
  - Add magnesium flakes or bentonite clay to warm water and soak for 20 minutes.

6. Avoid Common Thyroid Stressors

- **Fluoride**: Found in tap water and toothpaste, fluoride competes with iodine and disrupts thyroid function. Use fluoride-free toothpaste and filtered water.
- **Soy Products**: Contain isoflavones that inhibit thyroid function and block iodine absorption.
- **PUFAs (Polyunsaturated Fatty Acids)**: Limit omega-6-heavy oils like canola and sunflower, which increase inflammation and oxidative stress. Favor saturated fats from animal sources.

Sample Daily Plan for Thyroid Optimization

Morning:

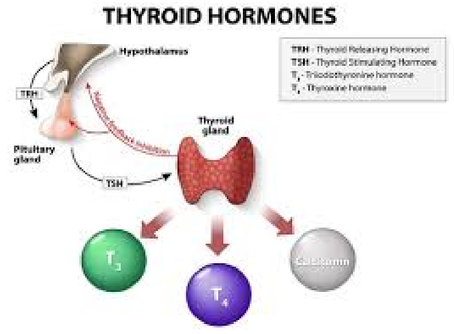
- Sunbathe for 20 minutes, practice grounding.
- Eat a nutrient-dense breakfast with pasture-raised eggs, raw butter, and a small serving of seaweed for iodine.

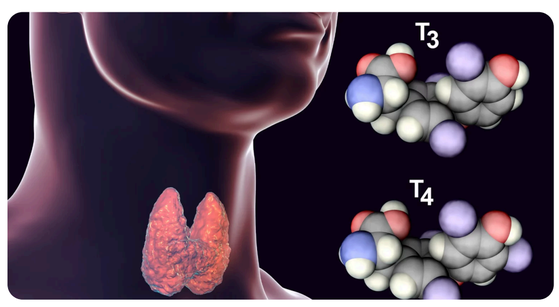
Midday:

- Consume a high-protein animal-based meal with selenium-rich foods (e.g., sardines, organ meats).
- Take a TUDCA supplement with raw fats (e.g., suet or raw cream).

Evening:

- Have a light dinner of bone broth and grass-fed meat.
- Use red light therapy on the thyroid area and apply magnesium oil.
- Avoid goitrogens and fluoride in water or products.





GABA (Gamma-Aminobutyric Acid) plays a crucial role in regulating the central nervous system, particularly in terms of balancing excitation and inhibition. Its influence on focus, relaxation, and stress reduction directly impacts many aspects of physical and mental health, including the modulation of sex hormones, particularly testosterone and DHT (dihydrotestosterone), the primary male androgen.

Here's a breakdown of how GABA influences sex hormones, particularly within the context of male physiology and hormonal expression:

1. GABA's Role in Modulating the Hypothalamic-Pituitary-Gonadal Axis (HPG Axis)

The **HPG axis** is the primary hormonal pathway responsible for regulating reproductive function, including the secretion of sex hormones like testosterone and estrogen. GABA plays a significant role in regulating this axis, particularly through its action on the **hypothalamus** and **pituitary gland**.

- **GABA and the Hypothalamus**: The hypothalamus releases **gonadotropin-releasing hormone (GnRH)**, which signals the pituitary gland to release **luteinizing hormone (LH)** and **follicle-stimulating hormone (FSH)**—the two primary hormones responsible for stimulating the testes to produce testosterone in men. GABA can modulate the secretion of GnRH, either enhancing or inhibiting its release based on the body's need for balance.
- **GABA's Inhibitory Effect on LH and FSH**: GABA has a general inhibitory effect on the central nervous system (CNS). When GABA is present in sufficient amounts, it may reduce the over-activation of the hypothalamus, leading to a more controlled, stable release of LH and FSH. This helps regulate **testosterone production**, preventing excessive stimulation of the testes and maintaining a healthy level of male hormones.

Since Dopamine is responsible for us feeling an reward after completing a task.

GABA is what makes sure we are laser focused on one MAIN TASK (primary reward)

non-negotiables to keep GABA high:
– light morning movement
– proper tongue posture
– l-theanine
– glycine and taurine

– magnesium glycinate (oral)
– magnesium chloride (topical)
– herbal stack (valerian, lemon balm, mistletoe, lavender, chamomile)
– grounding

Many people seem to underestimate how much of a sexual characteristic GABA actually is, a male dimorphic feature one could argue even.

DHT (the more potent male hormone) it’s metabolites are very VERY GABA agonistic.

> **Metabolites** of DHT have been found to act as **neurosteroids** with their own AR-independent biological activity.[19] **3α-Androstanediol** is a potent **positive allosteric modulator** of the **$GABA_A$ receptor**, while **3β-androstanediol** is a potent and **selective** agonist of the **estrogen receptor** (ER) subtype **ERβ**.[19] These metabolites may play important roles in the **central** effects of DHT and by extension testosterone, including their **antidepressant**, **anxiolytic**, **rewarding**/**hedonic**, **anti-stress**, and **pro-cognitive** effects.[19][20]

We’ve covered ALL direct hormones- now lets cover cortisol, an indirect hormone.

Comprehensive Guide to Optimizing Cortisol Levels (Animal-Based Focus)

Cortisol is often referred to as the “stress hormone” because it plays a key role in the body’s response to stress. It is produced by the adrenal glands and helps regulate important functions such as metabolism, immune response, and circadian rhythm. While cortisol is necessary for survival and overall health, chronic high levels can lead to negative health outcomes, including fatigue, immune suppression, weight gain, and hormonal imbalances. Therefore, optimizing cortisol levels is critical for maintaining balance and peak performance in both mental and physical health.

Here’s a complete guide to optimizing cortisol levels with strategies beyond what was previously mentioned, focusing on an animal-based approach.

1. Diet and Nutrition for Cortisol Optimization

1.1. Balanced Macronutrient Intake

- **Protein**: Eating adequate protein helps stabilize blood sugar levels and reduce cortisol secretion.
  - Focus on high-quality animal-based protein sources such as grass-fed meats, wild-caught fish, and pastured eggs.
- **Healthy Fats**: Fat is essential for hormone production, including cortisol, and helps mitigate the negative effects of stress on the body.
  - Include animal-based sources of healthy fats, such as grass-fed butter, ghee, and fatty cuts of meat like ribeye steaks or lamb.

1.2. Saturated Fats for Hormonal Health

- Saturated fats are crucial for hormone production, including cortisol and other sex hormones.
  - Incorporate animal-based sources of saturated fats, like grass-fed butter, tallow, and fatty cuts of meat, to support adrenal health and cortisol production.

1.3. Avoid Blood Sugar Spikes

- **High glycemic index foods** can cause blood sugar to spike and then drop, triggering a cortisol response to stabilize it.
  - Avoid sugary snacks and processed carbohydrates. Focus on stabilizing blood sugar with protein and fats.

1.4. Bone Broth for Healing and Cortisol Reduction

- Bone broth, rich in amino acids like **glycine** and **proline**, has been shown to support the adrenals and reduce inflammation. These amino acids can also help to stabilize cortisol levels and improve overall adrenal function.

2. Sleep and Circadian Rhythm Optimization

2.1. Prioritize Consistent Sleep

- Sleep and cortisol have an inverse relationship. Cortisol naturally peaks in the morning and declines in the evening.
  - Aim for 7–9 hours of sleep each night.
  - Maintain a regular sleep schedule, going to bed and waking up at the same time every day to optimize your circadian rhythm.

2.2. Morning Light Exposure

- Exposure to sunlight, especially early in the morning, helps regulate your circadian rhythm, which directly affects cortisol production.
  - Get at least 15-30 minutes of sunlight in the first hour after waking up, preferably without sunglasses to expose your eyes to natural light.

2.3 Sleep Environment Optimization

- A dark, quiet, and cool environment promotes better sleep quality, reducing cortisol levels associated with poor sleep.
  - Use blackout curtains to block out light.
  - Keep your room temperature cool (around 65°F/18°C).
  - Use earplugs or white noise machines if noise is an issue.

2.4. Sleep Hygiene Practices

- Avoid stimulating activities such as heavy exercise, eating large meals, or consuming caffeine and alcohol 3–4 hours before bed.
- Engage in calming activities like reading, meditation, or gentle stretching in the evening to prepare your body for restful sleep.

3. Physical Activity and Exercise

3.1. Moderate-Intensity Exercise

- Chronic overtraining or high-intensity exercise without proper recovery can increase cortisol levels.
  - Engage in moderate-intensity activities such as walking, swimming, cycling, or yoga for stress reduction without spiking cortisol excessively.

3.2. High-Intensity Interval Training (HIIT)

- Short bursts of HIIT (about 20-30 minutes) can improve cardiovascular health and support fat loss without causing prolonged cortisol elevation.
  - This type of exercise helps optimize the body's ability to manage stress, enhancing the adaptive response to cortisol.

3.3. Resistance Training

- Weightlifting and resistance exercises can stimulate the release of growth hormone and testosterone, which help mitigate cortisol's negative effects.
  - Focus on full-body, compound movements that stimulate large muscle groups and avoid excessively long or intense workout sessions that may elevate cortisol too much.

3.4. Rest and Active Recovery

- Make sure to incorporate rest days and low-intensity exercise (such as walking or stretching) into your routine to allow the body to recover and prevent prolonged cortisol elevation due to overtraining.

4.4. Social Connection and Laughter

- Positive social interactions and laughter are powerful cortisol-reducing tools.
  - Engage in fun, light-hearted activities with friends, family, or loved ones. Laughter stimulates the release of endorphins, which counteract cortisol's effects.

5. Supplements and Natural Interventions

5.1. Phosphatidylserine

- Phosphatidylserine is a phospholipid that has been shown to reduce cortisol levels, particularly in response to physical and psychological stress.
  - Supplementing with 100–300 mg of phosphatidylserine per day can help reduce cortisol without affecting physical performance.

5.2. Vitamin C

- Vitamin C is essential for adrenal health and can help lower cortisol levels during periods of high stress.
  - Take a daily dose of around 500 mg to 1,000 mg to support adrenal function and reduce cortisol secretion.

5.3. Omega-3 Fatty Acids

- Omega-3s (from fish oil or grass-fed animal sources) help reduce inflammation and have a balancing effect on cortisol levels.
  - Supplement with 1–2 grams of high-quality fish oil daily to support optimal cortisol regulation.

5.4. L-Theanine

- L-theanine, found in green tea, has calming effects on the nervous system and can reduce cortisol levels during times of stress.
  - Take 100–200 mg of L-theanine to promote relaxation and reduce cortisol production during high-stress periods.

5.5. Probiotics

- Gut health plays a key role in regulating the stress response. Imbalances in gut bacteria can lead to elevated cortisol and impaired stress recovery.
  - Consider supplementing with high-quality probiotics, particularly those containing strains like **Lactobacillus** and **Bifidobacterium**, to support gut-brain communication and stress resilience.

6. Environmental Factors

6.1. Reducing EMF Exposure

- **Excessive exposure to electromagnetic fields (EMFs) from cell phones, Wi-Fi, and other electronics can increase cortisol production and impair sleep.**
  - Minimize EMF exposure by turning off electronics at night, using airplane mode on your phone, or investing in EMF-blocking devices.

6.2. Nature and Fresh Air

- Spending time in nature, especially in forests or near bodies of water, has been shown to reduce cortisol and promote relaxation.
  - Aim for at least 30 minutes of nature exposure daily, which can significantly reduce stress levels and balance cortisol.

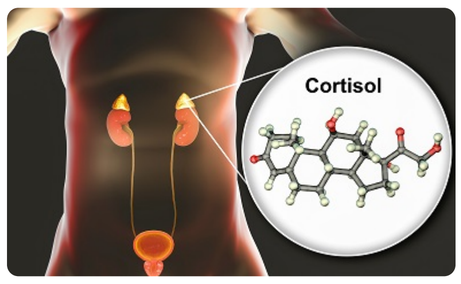
Testosterone pretty much does nothing to actually masculinize you except for growing muscle.

probably a reason why girls are not really into the amount of muscle bodybuilders have, it doesn't really reflect the masculine essence of a man at all.

you inject Testosterone in your veins and become more anxious, doesn't really sound like something masculine

DHT is the ultimate androgen, which actually makes you more 'masculine' and it's also what protects a man against stress, literally inhibiting your body from releasing Cortisol.

It also makes you chase a 'primary reward' and be less distracted by 'smaller' things, like scrolling Tiktok or jacking off.



Fat tissue (or Adipose tissue) is one of the biggest enemies towards height growth, this is because Adipose tissue contains the enzymes Aromatase, and this enzyme manipulates your endocrine system significantly.

<u>Aromatase converts Testosterone into Estrogen which leads to both:</u>
– Lowered Testosterone
– Increased Estrogen

Some background information for people that are unaware:

Effects of Testosterone on height:

Testosterone indirectly increases IGF-1 levels by stimulating the pituitary gland to produce GH, Testosterone then also makes the cells more sensitive to IGF-1.

Testosterone has been shown to directly increase the amount of Osteoblasts in your body. Osteoblasts are the cells that lay down bone.

Testosterone promotes proliferation of Chondrocytes in the Epiphyseal plates (growth plates)

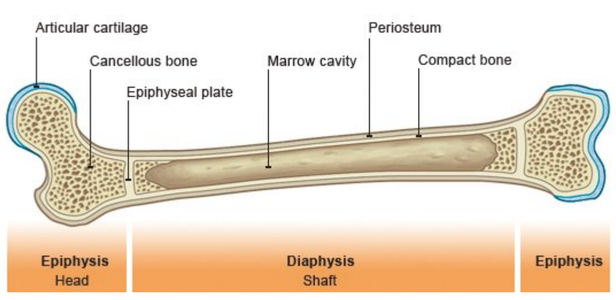
Effect of Estrogen on height:

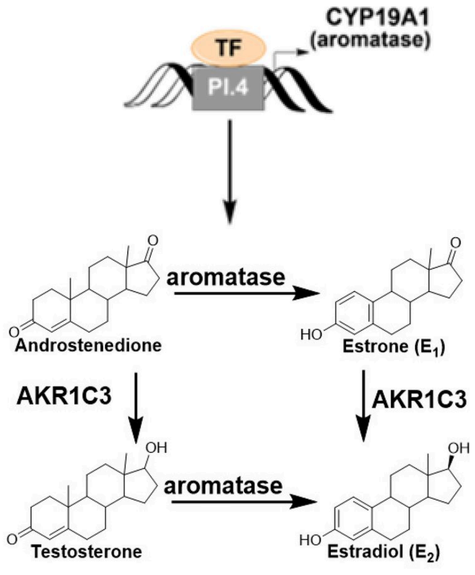
Estrogen reduces the production of IGF-1 and also reduces it's expression, especially in bone.

But even worse, Estrogen causes ossification of the Epiphyseal plates, turning the cartilage into bone, this is catastrophic to your height growth journey because your Epiphyseal plates are your growth plates and once they have fully turned into bone, it will be hard to gain height from these plates in the future.

What is the solution?

To lower Aromatase levels you need to lose excess body fat, just lose the fat and you will already see improvements in health.





ncreasing the amounts of neurotransmitter GABA in our brain will increase your height.

GABA is an inhibitory neurotransmitter that not only increases certain growth factors such as IGF-1, which stimulates your body to create more bone, but also encourages reaching a state of deep sleep while you are sleeping.
deep sleep while you are sleeping.

GABA has been shown to promote growth in Zebrafish Larvae by Inducing IGF-1 Expression via GABAA and GABAB Receptors. GABA has also been long known for being able to increase HGH in humans by 400%, and an increase in HGH almost always causes an increase in IGF-1.

https://pubmed.ncbi.nlm.nih.gov/23075553/

(IGF-1 is perhaps the most potent chemical to enhance height growth)

Perhaps more interesting is GABA it's effect on your sleep and how it triggers a state of deep sleep.

In this stage your body will heal and grow more as opposed to REM sleep. GABA triggers this state of deep sleep by lowering the brainwaves, the lower the brainwaves during sleep, the deeper and more healing the sleep is.

During deep sleep you don't dream.

Ways to increase GABA:
– topical application of Magnesium Chloride
– Gelatin consumption (due to Glycine content)
– Seafood consumption (Shellfish and raw tuna/swordfish for Taurine)
– Drink tea (Lavender, Chamomile, Valerian etc. [remember to cycle!])
– Phenibut (DANGEROUS, ADDICTIVE, TEMPORARY and insanely effective)

when used alongside antihypertensive drugs [24]. Oral GABA's potential to affect stress and sleep was examined through various studies. One of which indicated an increased heart rate variability (HRV) and parasympathetic activity, suggesting stress reduction [25]. Another study looked at GABA's ability to affect brain wave patterns and reported increasing alpha and decreasing beta waves suggesting relaxation [26]. In addition, cortisol, and chromogranin A (CgA) level reduction in GABA consumers indicates potential stress reduction, and reduced sleep latency. It is