Muscle growth and protein synthesis

BIOHACKS & TIPS (OCT 2025)

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1. CHAPTER 1 – Calorie deficit

Calorie deficiency is the basis of any weight loss process. Essentially, you need to consume fewer calories than you burn, but without drastically reducing your intake. A moderate deficit is sustainable and helps maintain muscle mass.

The goal: weight loss or fat loss?

The first essential step is to clarify the goal: do you want to lose weight (including lean mass), or do you want to reduce your body fat percentage? This distinction influences strategy.

Knowing your own metabolism

It's helpful to know your metabolic rate. This can be estimated with the help of body analyzers such as Tanita or InBody, which offer:

- **BMR** (Basal Metabolic Rate)
- **DCI** (Daily Caloric Intake – total daily caloric intake, including mental and physical activity)

Both are expressed in kilocalories and, beyond the numbers, the quality of the nutritional elements in the diet has a major impact on the effectiveness of a calorie deficit.

Ketogenic diet and control of energy sources

I prefer implementing calorie deficit through a **ketogenic diet** because it restricts foods high in carbohydrates and starches (which quickly convert to glucose) while supporting fat burning as the primary source of fuel.

Biohack – Exogenous Ketone

An effective hack for rapid entry into ketosis is the consumption of **exogenous ketones** – products that induce increased levels of ketones in the blood, indirectly stimulating the conversion of fat into energy (BHB) through the liver, even in the absence of a deeply nutritional ketosis.

Body recomposition: fat loss + muscle growth

Although classically the increase in muscle mass implies a **caloric surplus**, body recomposition is possible under certain conditions – especially:

- **For beginners in training**
- **In people with a high body fat percentage**
- **In those who rigorously monitor nutrition and training**

Biohack: High-quality essential amino acids

Muscle hypertrophy is possible even in calorie deficit if the intake of **essential amino acids (EAAs)** is optimal. In particular:

- **Leucine, Isoleucine, Valine (BCAAs)**
- **Lysine** (to support protein synthesis)

These elements are found in the Thot Nutrition project, which uses amino acids of **the highest purity**, with dimensions under 500 Colorblinds and orthomolecular structure, optimizing the absorption rate and cellular use. More details are available at: www.thotnutrition.com

Ketogenic Diet + Technology

Pairing the ketogenic diet with **continuous monitoring of physiological parameters** (glucose, ketones, HRV, etc.) provides personalized feedback, helping to calibrate nutritional interventions based on your own response, not the statistical average.

Myth: Converting fat to muscle mass

Contrary to popular belief, fat **does not turn directly** into muscle. The process is dual:

- **Fat is oxidized** under calorie deficit conditions.
- **Muscle mass is built** through resistance training and optimal protein intake.

Two components are essential for this process:

1. **Raw material** – amino acids, the quality of which determines the efficiency of muscle building
2. **Biochemical control** – the anabolic signal generated by training + the availability of amino acids

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Keys to the success of body recomposition

- **Progressive training**: isometry, weights, calisthenics
- **High protein intake**: 1.6–2.2 g/kg body weight
- **Moderate calorie deficit**: for the preservation of muscle mass
- **Optimal recovery**: sleep, stress reduction, natural adaptogens

Body recomposition is not just a nutritional strategy. It's a dance between deficit, training, recovery and biochemistry – and when it's correctly calibrated, the results are extraordinary.

2. Chapter 2 – High protein intake: the role of direct amino acids

1. The essential role of protein in the body recomposition process

Protein is a fundamental macromolecule for supporting the body's vital functions, and in the context of body recomposition (decrease in body fat and maintenance or increase of muscle mass), its importance becomes strategic. Her main roles include:

- **Maintaining muscle mass**: in conditions of calorie deficit, an adequate protein intake prevents muscle catabolism, favoring fat loss at the expense of losing lean mass.
- **Regulation of satiety**: Protein stimulates satiety hormones (GLP-1, PYY) and lowers ghrelin levels, reducing appetite.
- **Boosting metabolism**: The digestion and metabolism of protein has a higher thermogenic effect (around 20-30%) compared to fats and carbohydrates.

2. Whole proteins vs. direct amino acids – key physiological differences

Whole proteins in the diet (eggs, meat, dairy, legumes) are composed of chains of amino acids that must first be digested, absorbed, transported and metabolically processed. This process is slow and depends on the health of the digestive tract, the associated foods and the timing of ingestion.

Direct amino acids ("free form" EAAs), such as those provided through Thot Nutrition, are absorbed directly into the circulation and can stimulate muscle protein synthesis (MPS) more quickly, without requiring extensive digestion.

3. Scientific evidence: superior efficiency of free amino acids

- One study (Borsheim et al., 2002) showed that a dose of just 6g EAA boosted MPS more effectively than 20g of whole protein.
- Another study (Smith et al., 2018, Frontiers in Nutrition) concluded that free amino acids have a **higher bioavailability** and a **significantly higher utilization rate**.
- EAA supplementation has been shown to be 3-6x more anabolic, per gram, compared to standard whey isolate (Churchward-Venne, 2016).

4. Practical-strategic application in the context of calorie deficit

In a scarcity scenario, when resources are limited, the body becomes more sensitive to nutrient composition. This is where the advantage of direct amino acids comes in:

- It stimulates protein synthesis **without adding significant calories**.
- They prevent muscle catabolism **in the absence of a generous caloric intake**.
- They can be used strategically pre/post-workout or in intermittent fasting windows.

5. Conclusion: a validated biohack

The use of free essential amino acids is a sophisticated "biohack" backed by scientific evidence. This strategy allows the optimization of muscle protein synthesis even under

conditions of limited energy resources and can be an important lever in body recomposition programs. For users, the advantage is twofold: maximizing results and minimizing digestion/metabolizing time. For Thot Nutrition, this is the essential value proposition. This method saves precious time. Sometimes even 4 times faster in special nutrition and training conditions, which stimulates and sustains the spirit of growth and body and mental health.

3. CHAPTER 3 – The role of protein: maintaining muscle mass, regulating hunger and supporting metabolism

Protein is the foundation of cell reconstruction. As part of a body recomposition strategy, it plays a double role: it preserves muscle mass in times of calorie deficit and contributes to the regulation of hunger, having a significant thermogenic effect on metabolism.

1. Preserving muscle mass in calorie deficit

When the body is in deficit, it seeks to extract energy from its reserves. Without adequate protein intake, the body can degrade muscle mass to support vital functions. Therefore:

- The recommended daily intake for protein in the context of deficiency is **1.6–2.2 g/kg body weight**.
- Essential amino acids play a crucial role in protecting and rebuilding muscle fibers. Properly nourished and stimulated accordingly, our bodies can perform "wonders".

2. Regulating the feeling of hunger

Protein is the most satiating macronutrient, due to its effect on key appetite hormones:

- **Increases** the secretion of GLP-1 and PYY (satiety hormones);
- **Reduces** levels of ghrelin (the hunger hormone);
- It delays gastric emptying, inducing a feeling of prolonged satiety.

These effects contribute to reduced appetite and better adherence to diet.

3. Thermogenic effect of protein on metabolism

The protein digestion process is more metabolically complex:

- Protein has a **thermal effect** of about **20–30%** (compared to 5–10% for carbohydrates and 0–3% for fats);
- This means that a significant part of the energy contained in protein is consumed for its digestion, absorption and metabolism;
- Thus, protein contributes to maintaining an **active metabolism** even in conditions of deficiency.

4. Synergy with training and recovery

- Protein stimulates post-workout muscle protein synthesis and accelerates tissue repair;
- It has positive effects on energy levels and cognitive alertness, thus being a catalyst for daily performance.

Essentially, protein is not just a "nutrient", but a complex regulator of the entire body ecosystem: it influences muscle, appetite and metabolic rate. In a well-calibrated nutritional strategy, protein is the backbone of metabolic efficiency.

4. CHAPTER 4 – Strength training: the essence for muscles, metabolism and body appearance

Strength training should not be missing from any body recomposition strategy. They not only stimulate the development of muscle mass, but also maintain a high metabolic rate and give the body a superior appearance even after the end of the weight loss period.

1. Why strength is essential

- Active muscle mass consumes more energy, including at rest.
- Strength training generates an essential anabolic signal through micro-muscle damage, followed by repair and growth processes.
- After weight loss, a well-developed muscle mass retains a "dense" and toned appearance, in contrast to the flat appearance of rapid weight loss without muscle support.

2. Modern systems: calisthenics, isometry and Animal Flow

- Bodyweight exercises (calisthenics) and functional movements inspired by Animal Flow involve multiple muscle groups and improve neuromuscular control.
- A study published in 2024 shows that Animal Flow generates muscle activations comparable to or superior to classic exercises (activations of up to 60% of the MVC for deltoids and dorsals vs. ~45% for standard push-ups).
- Isometric exercises (maintaining contraction) contribute to hypertrophy and significant neuromuscular adaptations, especially when performed at high intensities (>70% MVC).

3. Under2ms Method – Under 2 milliseconds

Based on personal experience, I notice that the moment when the muscle begins to tremble and the transmission of the neuromuscular signal decreases below 2 milliseconds is a point of maximum anabolic efficiency. We have called this approach "Under2ms".

- The <2ms threshold signals maximum neuromuscular recruitment efficiency.
- The practical application involves: maintenance of isometric contraction until muscle tremor + rapid cyclic stimulation within functional dynamic exercises.

4. Practical implementation

- 2–3 weekly strength sessions, including:
  - Isometric exercises: hold 5–10 seconds at >70% MVC
  - Calisthenics and Animal Flow: focus on balance, rapid transitions, multiplanar activation
- Response monitoring: muscle tremor, subjective reaction, possibly measurements with neuromuscular velocity sensors (where possible)
- Synergistic nutrition: optimal protein and EAA intake (see chapters 2 and 3), plus sleep/rest

5. Concluding remarks

- The Under2sm method is an emerging strategy based on applied observation and needs further validation in scientific settings, but it is based on how the genetic memory we have had at our disposal for millions of years has dictated the pace and survival of the human species.
- However, the integration of isometry + temporal control of the muscle signal is supported by the literature as a method of advancing performance and hypertrophy.

Strength is not just a means of lifting weights. It is a mechanism of metabolic, postural and hormonal sculpting. With modern and precise approaches, the body not only loses weight – but becomes expressive, efficient and adapted.

5. CHAPTER 5 – Sleep: The Invisible Regulator of Fat Burning and Hormonal Balance

Sleep is not just a break between two days. It represents an essential moment of metabolic, neurochemical and hormonal recalibration. In the context of body recomposition, the quality of sleep directly influences the body's ability to burn fat, preserve muscle mass, and regulate food cravings.

1. Sleep and key metabolism hormones

- **Leptin** (satiety hormone): decreases significantly in conditions of sleep deprivation, which leads to an increase in the feeling of hunger. See the product I created especially for this – Thot Leptin Rx and related article: https://thotnutrition.com/thot-leptin-rx-the-eloquent-solution-to-losing-weight-in-2024-world-premiere-formula/
- **Ghrelin** (hunger hormone): increases in lack of sleep, amplifying appetite, especially for foods high in calories and sugar.
- **Cortisol** (stress hormone): remains high when sleep is insufficient, which promotes the accumulation of abdominal fat and water retention.

A study published in the *Annals of Internal Medicine* showed that sleep-deprived participants lost 55% less body fat than those who got enough sleep, although caloric intake and physical activity were similar.

2. Sleep and fat burning

- During deep sleep (N3 stage), **growth hormone is** released, which stimulates lipolysis and muscle regeneration.
- Insufficient sleep duration (<6 hours/night) disrupts this cycle and limits the mobilization of fat as an energy source.

3. Cravings, stress and water retention

Sleep deprivation causes:

- **Intense food cravings**, especially for refined carbohydrates
- **Accentuated mental stress**, with prolonged sympathetic activation
- **Water retention** due to chronic increased cortisol and renal imbalances

All this interferes with the effort of weight loss and body recomposition, even when the diet and workouts are well structured.

4. Sleep optimization for body recomposition

- **Constant routine**: going to bed and waking up at similar times daily
- **Exposure to natural light** in the morning and avoidance of blue light in the evening
- **Foods rich in magnesium** and tryptophan (e.g. pumpkin seeds, nuts, turkey)
- **Supplements with adaptogens** (ashwagandha, rhodiola) or melatonin, if needed

Sleep is that invisible trainer that, without lifting weights and without consuming calories, builds the ground on which the fight with fat is gained or lost. Don't neglect it: it is the hormonal architect of your transformation.

6. CHAPTER 6 – Stress Management: The Invisible Accelerator of Bodily Transformation

Stress management matters enormously. In the context of body recomposition, chronic stress can completely cancel out the effects of a well-structured diet and rigorous training. Why? Because stress directly influences the HPA (hypothalamus-pituitary-adrenal) axis, carbohydrate metabolism, fat retention and eating behavior.

1. Cortisol: the stress and stagnation hormone

- Cortisol is required in low doses for adaptation. But in excess (chronic stress), it becomes catabolic: it destroys muscle tissue and favors fat storage, especially in the abdominal area.
- Chronically high cortisol levels:
  - Increase blood sugar
  - Decrease insulin sensitivity
  - Inhibits lipolysis (fat burning)

2. Emotional stress = cravings, hormonal disorders, stagnation

- Under stress, the body seeks quick reward → cravings for sugar, salt and processed fats.
- It increases the secretion of **dopamine** and **endogenous opioids**, which makes emotional eating become an unconscious coping mechanism.
- It affects the rhythm of sleep, digestion and absorption of nutrients.

3. Subtle indicators of chronic stress

- Frequent feeling of hunger, even after meals
- Difficulty concentrating or irritability
- Cooling extremities, rapid heartbeat, feeling of "continuous alertness"

4. Tuning and recalibration techniques

- **Conscious breathing** (box breathing, cohérence cardiaque)
- **Exposure to nature**: barefoot walking, sunlight in the morning
- **Guided meditation / mindfulness** (even 5–10 min/day)
- **Natural adaptogens**: ashwagandha, rhodiola, holy basil (tulsi)
- **Journaling** /introspection: releasing cognitive tensions through writing

5. HRV (Heart Rate Variability) – Autonomous Compass

- HRV is an objective marker of the autonomic nervous system's ability to cope with stress.
- Increased values signal resilience; the low ones → rigidity, overload, risk of body stagnation.

- Devices such as Oura Ring, WHOOP or ECG sensor applications can be integrated into personalized monitoring.

Stress is not just in our heads. It is a vibration that distorts the chemistry of the body. You can transform him from an invisible saboteur into a subtle ally — through presence, breathing, and daily recalibration rituals.

7. CHAPTER 7 – Cortisol and fat storage: the hormone that decides the direction of metabolism

Increased cortisol levels can promote fat deposition, especially in the abdominal area. Although it is an essential hormone for survival, cortisol – when it is secreted chronically – becomes a silent ally of fat accumulation and blockage in the weight loss process.

1. What is cortisol and how does it work

- It is a glucocorticoid hormone secreted by the adrenal glands, especially under conditions of physical or mental stress.
- It activates the sympathetic nervous system, mobilizes energy resources and inhibits non-essential functions for immediate survival (e.g. deep digestion, reproduction).

2. The mechanisms by which cortisol promotes fat accumulation

- **It increases blood glucose levels** through gluconeogenesis (the conversion of proteins into glucose), which leads to compensatory secretion of insulin — the stocking hormone.
- **It decreases insulin sensitivity**, which encourages fat storage in adipocytes, especially in the visceral area.
- **It promotes muscle catabolism**, which reduces the basal metabolic rate.
- **It stimulates appetite**, especially for foods high in sugar, salt and fat — quick sources of energy for "fight or flight".

3. Abdominal area: the preferred target of cortisol

- Visceral adipose tissue (around organs) has specific receptors that respond strongly to cortisol.
- Abdominal fat produces inflammatory cytokines (IL-6, TNF-α) that can maintain a vicious cycle of inflammation → internal stress → increased cortisol → additional storage.

4. How to reduce the negative effects of cortisol

- **Deep sleep** (7–9 hours) → lowers basal cortisol levels.
- **Balanced meals** with protein + healthy fats → stabilize blood sugar and prevent reactive hypoglycemia (which stimulates cortisol).
- **Workouts with adequate recovery** → controlled intensity, avoiding chronic overtraining.
- **Anti-stress techniques**: breathing, meditation, exposure to nature, quality social contact.

Cortisol is not your enemy. It's just a biochemical messenger that reflects how you live. If you understand its rhythms and respect it, it becomes an ally instead of sabotage. Fat is not only stored from food – but also from chronic inner signals.

8. CHAPTER 8 – Hydration: The Silent Key to Digestion, Performance, and Appetite Control

Proper hydration optimizes digestion, supports physical performance and contributes significantly to regulating the feeling of hunger. Although often underestimated, water plays a central role in all metabolic processes involved in body recomposition.

1. The role of water in digestion and nutrient absorption

- Water activates digestive enzymes and contributes to the fluidization of gastric contents.
- Lack of hydration reduces the secretion of digestive juices and can slow down intestinal transit, favoring bloating and poor absorption of essential nutrients.
- Protein digestion and amino acid absorption are optimized in a properly hydrated environment.

2. Training performance and electrolyte balance

- A decrease of just 2% in body weight through dehydration can reduce physical performance by up to 10–15%.
- Hydration supports:
  - Muscle strength
  - Resilience
  - Avoiding cramps and mineral imbalances (sodium, potassium, magnesium)
- Electrolyte drinks can be useful in intense workouts or ketogenic diets, where mineral losses are accentuated.

3. Appetite control and false hunger signals

- Thirst is often confused with hunger. Adequate water consumption can significantly reduce false food cravings.
- Studies show that a glass of water drunk 20–30 minutes before a meal can reduce spontaneous calorie intake by 10–13%.
- Proper hydration contributes to better regulation of leptin and ghrelin – the hormones involved in satiety.

4. Practical recommendations

- **Hydration protocol – quick version:**
  - Romanian version: https://bralgei.com/ro/protocolul-de-hidratare-by-bralgei-shackry/
  - English version: https://bralgei.com/hydration-protocol-by-bralgei-shackry/
- **Minimum 30–35 ml mineral water/kg body weight/day** under normal conditions; more in exercise or high temperatures.
- **Start of the morning** with 500 ml of water at room temperature + a little quality salt or electrolytes (for mineralization)
- **Avoiding excessive fluid consumption during meals** (can dilute gastric juices)
- **Monitoring urine color** as a simple indicator of hydration status

Water is that invisible nutrient that does not provide calories, but supports all the processes that burn calories. Without it, digestion slows down, performance decreases, and the feeling of hunger is distorted. It's not just hydration – it's fine-tuning your metabolism.

9. CHAPTER 9 – Consistency beats perfection: adaptation, stability and transformation over time

Consistency beats perfection. Not the ideal decisions made occasionally, but the actions sustained day by day build real results. In the process of body recomposition, the sustained rhythm and coherent routine are worth more than intense but isolated episodes.

1. Biology of adaptation: the body needs time

- The body works on the basis of homeostasis – that is, it defends its balance and needs **repetition** to accept a new metabolic direction.
- Any change (fat loss, muscle growth) involves **slow processes of hormonal, neural and enzymatic regulation**.

2. Why "imperfect perseverance" defeats temporary perfect effort

- Aggressive strategies (extreme dieting, strenuous workouts) can have short-term effects, but they usually fail to maintain.
- Daily micro-victories (hydration, 1 successful workout, 1 balanced meal) have a **cumulative effect** and support **internal motivation**.
- Mistakes don't destroy progress – **prolonged incoherence** does.

3. Routine ≠ rigidity

- Routine means **stability** of basic choices, not robotization.
- It is about learning to return to one's own axis of equilibrium even after natural deviations.

4. Metaphor of adaptation: the body as a musical instrument

- The body does not respond to shocks, but to **fine tuning**.
- Like a guitar that only stays tuned if used regularly, the body regulates its metabolism through **rhythmic consistency**.

Perfection creates pressure. Consistency creates transformation. Let your daily rhythm be slow but steady – and your body will respond with stability, not reaction.

10. CHAPTER 10 – Unprocessed Foods: The Hormonal and Metabolic Foundation of Bodily Recomposition

Choose unprocessed foods as often as possible: natural sources of protein, vegetables, fruits, healthy fats and complex carbohydrates. They not only nourish the body, but also intelligently communicate with the endocrine, immune, and nervous systems.

1. Why unprocessed foods support satiety and balance

- They have a **high nutrient density**: they provide vitamins, minerals, fiber, phytonutrients, without excess calories.
- They contain **complete macronutrients** that are absorbed slowly and evenly.
- They keep **blood sugar stable** by avoiding insulin spikes that stimulate appetite and fat storage.

2. Food-hormone communication: how your choices influence biochemistry

- **The fiber** in vegetables/fruits increases the secretion of GLP-1 and PYY (satiety hormones).
- **Healthy fats** (omega-3s, MCTs) modulate inflammation and support leptin secretion.
- **Natural proteins** support the synthesis of dopamine and serotonin, influencing appetite and well-being.

3. What to choose – practical guidance

- **Proteins**: eggs, fatty fish, naturally grown meat, fermented legumes
- **Vegetables/fruits**: raw, steamed or ripe, preferably in season
- **Fats**: extra virgin olive oil, avocado, raw nuts, coconut oil
- **Carbs**: sweet potatoes, quinoa, buckwheat, millet, wild rice

4. What to avoid as much as possible

- Ultra-processed, packaged products rich in:
  - refined sugars
  - industrial vegetable oils (soybean, refined sunflower)
  - artificial flavors and enhancers
- They disrupt **hormonal balance** and promote chronic silent inflammation.

Eating natural doesn't mean simplistic eating – it means eating smart. Unprocessed foods are signals, not just calories. They tell the body that it is safe, that it can build, that it does not need to store. Every choice is a form of metabolic communication.

11. CHAPTER 11 – Monitoring Progress: Beyond the Scale

Monitoring progress is not just about the scales. In fact, when body recomposition is the goal, **weight** becomes the least faithful indicator. Real transformations are reflected in **form, energy, tone and functionality** – not just in numbers.

1. The scale: limited and misleading

- It can be influenced by:
  - Water retention
  - hormonal cycles
  - growing muscle mass (denser than fat)
- Rapid drops may reflect loss of water or muscle mass – not fat.

2. Alternative indicators of real progress

- **Comparative pictures** (same light, angle, time)
- **Body circumferences** (waist, hips, thighs, arms)
- **The fit of clothes** – how they sit on your body
- **Daily energy levels** and sleep quality
- **Training performance** (heavy weights, endurance, recovery)

3. Internal progress precedes external changes

- Hormones, digestion, insulin sensitivity, sleep quality improve **long before** the mirror reflects everything.
- Sometimes the body seems "stagnant" on the outside, but prepares for deep jumps.

4. Patience as a measuring tool

- Weekly (not daily!) monitoring reduces anxiety and provides an objective framework.
- It also records **how you feel**, not just what you see.
- A simple diary (energy, sleep, workouts, mood) can become an invisible progress map.

The scale measures gravity. It doesn't measure adaptation, resilience, body awareness, or the joy of living in your own body. Real progress is not linear – it is deep, sometimes silent, but always visible over time.

12. CHAPTER 12 – The Right Mindset: The Foundation of Sustainable Transformation

The right mindset makes all the difference. In any process of bodily transformation, the mind shapes the terrain on which the body operates. Your perception of change, difficulty, and time determines how far you will go and whether you will stay there.

1. It's not about restrictions – it's about conscious choice

- Don't look at the trial as a period of **temporary bans**.
- The right approach is that of a **transition to a new lifestyle** – in which feeding, moving, resting, and thinking align with your well-being.

2. Discipline does not mean rigidity, but clarity

- Discipline is **the freedom to repeatedly choose** in the direction of your values.
- It means understanding that **results do not come from fleeting motivation**, but from the stability of small, daily actions.

3. Patience: the invisible tool of those who succeed

- The real transformations are **organic, slow and progressive**.
- True strength comes from **accepting one's own pace**, not from the rush to reach an ideal image.

4. Balance: between effort and self-compassion

- There is no need for perfection.
- A **gentle return** to the chosen direction is needed, whenever deviations occur.
- Balance means **flexible consistency – the** ability to move forward without punishing yourself.

Mindset is not just a "motivational bonus". It's the shadow architect of your new body. If you change your thoughts, you change your choices. And if you change your choices, you change your life.

13. CHAPTER 13 – Glucose Management

Rules for managing glucose, sugars and starches (including their by-products):

1. Don't eat breakfast (ideally skip it). If you still eat, the first meal should be carb-free – ZERO:

- Choose **proteins**: eggs, kefir, bacon, etc.
  - Tip: a few cubes of mature Parmesan, rich in tyrosine crystals.
- Combine only with **leaves or green vegetables**:
  - Lettuce, arugula, endive, zucchini, cucumber, cherry tomatoes (in small quantities).
- **Completely avoid:** pasta, rice, bread, potatoes, fruit – any sweet or starchy food.
- **Coffee**:
  - Ideally simple, unsweetened or with butter (alternatively: switch to tea).
  - Allowed sweeteners: Green Sugar, Stevia.
  - No plant-based milk or other processed substitutes.

2. Every day – and ideally before every meal – take 1 tablespoon of apple cider vinegar:

- Recommended variants: **Organic Bragg** or high-concentration equivalents.
- Method of administration:
  - Directly or dissolved in a little water (followed by a glass of water, if needed).
- Benefits:
  - It slows down and partially blocks the absorption of carbohydrates and sugars.
  - It works more effectively than Glucophage/metformin in some cases.
- You can also add **dedicated add-ons**:
  - To block the absorption of sugars,
  - Stimulation of **GLP-1** secretion (for satiety),
  - Preventing sudden insulin spikes.

3. At main meals – start with fiber and vegetables:

- **Raw or lightly prepared leaves** (steamed/perpelleted):
  - They slow down the absorption of carbohydrates.
  - You can add vinegar/cider and olive oil for taste and metabolic effect.
  - Optionally add: chopped almonds or parmesan.
- Continue with **the keto/paleo-style** main course:
  - (if you don't know what it means, ask or look for examples online)
- If you still eat carbohydrates:
  - Never consume them **plain**!
  - Always combine them with **a source of fat** (butter, ghee, oil, kefir, sana, etc.).
  - This "shell" slows down the digestion and absorption of sugars – essential if you still consume sweets occasionally.

4. After meals – MOVEMENT:

- A **10-minute walk** immediately after a meal is ideal.
- Alternatively, if you are sitting, do heel raises (10 minutes).

*Glucose management isn't just about restrictions – it'**s about smart strategies** that recalibrate your metabolism and transform the way your body manages energy.*

14.Chapter 14 - CONTACTS & LINKS

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https://bralgei.com/ (Training and Coaching, Biohacking and Antiaging)

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https://gabrielpesa.com/ (Nutrition)
https://thotnutrition.com (Thot Nutrition - 100% Plant based Essential Amino Acids)
https://ioshield.eu (EMF Protection devices - Life matters)

Open this link to join my WhatsApp Community:
https://chat.whatsapp.com/LrF75BJRp4h5LyymHNuVED

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15. Chapter 15 – About Thot Aminos Essential Aminos

Video and details - biohacking style

DO YOU WANT ENERGY? Take Thoth Aminos:
https://www.youtube.com/watch?v=arlwkdgO2Ho&list=PLRAQbSML8ENhefJA9JyFltQ4P2Il7QuWi&index=39

Explanatory video:

- Part 1: https://youtu.be/vQYlr5te2kY
- Part 2: https://youtu.be/-ksJzSl6EkA
- Shark Gym with Thoth Aminos: https://www.youtube.com/watch?v=ioP4kBmGB4Q
- Thot Aminos is magic: https://www.youtube.com/watch?v=NLWVbY031EM&list=PLRAQbSML8ENhefJA9JyFltQ4P2Il7QuWi&index=36

What's the deal with essential amino acids?

1. **We don't produce them ourselves.**
   60% of the human body is made up of collagen and muscle. For their construction you need essential amino acids. But the body does not synthesize them. So, we have to bring it from the diet.
2. **The digestion of food does not guarantee absorption.**
   Digestive enzymes are what extract amino acids from food. But you know what's ironic? The body also produces enzymes from essential amino acids. So, a vicious circle.
3. **The problem of size and structure.**
   Proteins in the diet are long, complex and difficult to absorb. Only correctly "folded" amino acids (the "L-" shape) are absorbed efficiently. Large molecules can lead to inflammation, damage to the kidneys and heart.
4. **We only absorb amino acids, not protein.**
   Regardless of the source of the protein, only amino acids are the ones that are actually assimilated. They support the synthesis of hormones, enzymes, neurotransmitters, muscles, collagen, etc.
5. **AAU – Amino Acid Utilization Rate.**
   Only 17–30% of the protein consumed is converted into amino acids. The rest is converted into sugars or nitrogenous residues (urea, urates) that must be eliminated.

Thot Aminos has 98–99% AAU
, so you have almost complete bioavailability with no side effects.

6. **60% of body mass is amino acids.**
   Including bones: 40% are minerals, the rest is collagen (amino acids).
7. **Sources of amino acids.**
   Plants vs. animals. Plants need complex digestion (4 stomachs in herbivores). Animal sources can cause inflammation. The solution: plant biosynthesis by bacterial fermentation.

8. **The biological priority of the body.**
   The body uses the essential amino acids first for DNA, blood, the neuronal system, the endocrine system, and only then for muscles and collagen.
9. **They have no contraindications.**
   They are essential until death. Their lack leads to a decrease in cell density and accelerated aging.
10. **Reuse of amino acids.**
    It is only possible with the help of heat shock proteins, which are mainly found in the skin, intestine and lungs. Hence the value of hot-cold therapies.
11. **Thot Aminos – Professional features**

- 100% Plant-based, Kosher, No Gluten, No Sugar
- All 9 Essential Amino Acids + Histidine
- L-Leucine 40% (for muscle growth)
- HCL forms, fast dissolving, direct absorption
- Small molecule, correctly folded to the left (orthomolecular)
- No bitter taste, no synthetic additives
- Chewable or liquid/food soluble
- No digestion required; can be eaten at any time
- Dosage: 3–5/day for adults, can be taken all at once
- Do not raise blood sugar – ideal for fasting, keto, intense training, recovery or illness

More details:

- Thot Aminos – Official product page
- Blog – What Are Essential Amino Acids?
- L-Leucine: the key to longevity and muscle health

Articles and additional information:
http://www.bralgei.com/

Orders or contact:
office@thotnutrition.com