

# **TRAIN. FUEL. DOMINATE**

**Athletic Training and Nutrition for  
Performance Optimization**



By: Mario Nathan

# For Every Athlete Chasing GREATNESS

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## Why I Made This Zine:

As a collegiate soccer player, my success derives from learning optimal techniques in regards to my nutrition and methodology of training. Growing up and throughout my career, I realized that certain training techniques and nutrients serve different roles and they need to be manipulated in ways that provide the most optimal output by enhancing athletic performance and energy through correct nutrition. By ensuring your training correlates specifically with your sports, you are able to transfer your ability to your game much more efficiently. Additionally, optimizing your nutrition correctly and understanding how your body will respond to certain things allowed me to have an epiphany of how CRUCIAL nutrition is not just for fueling your body, but for your overall health and growth.

## INTRODUCTION:

### BUILDING THE COMPLETE ATHLETE

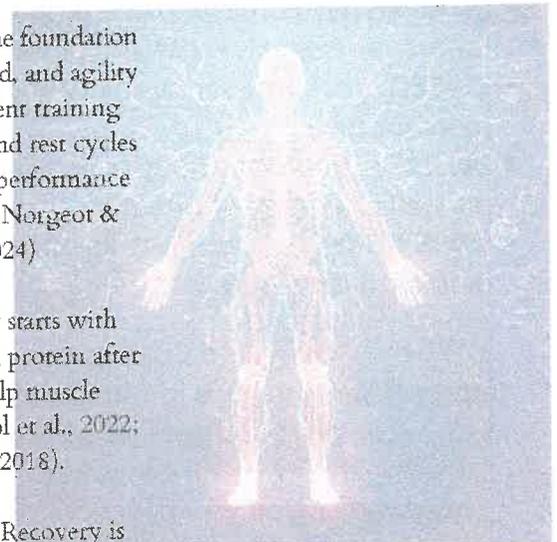
Athleticism isn't just speed or size. It's a system of multiple factors: training, fueling, and recovery. According to Chun-Chung et al. (2021), managing stress, training intensity, and nutrition in certain cycles of periodization (in-season, off-season, pre-season) is important for maximizing performance across a specific season.

This zine breaks down that system into three domains:

**TRAIN** — Build the foundation with strength, speed, and agility training. Consistent training with proper load and rest cycles boosts long-term performance (Sun et al., 2025; Nørgeot & Fouré, 2024)

**FUEL** — Energy starts with food. Carbs before, protein after workouts to help muscle recovery (Turnagöl et al., 2022; Orrù et al., 2018).

**DOMINATE** — Recovery is adaptation. Sleep, rest, and food restore your body and allow you to perform again (Chun-Chung et al., 2021).



## Foundations of Athletic Training

Agility · Strength · Speed · Mobility



Athletic performance is built on significant physical attributes that allow them to excel in competition. Each trained in certain ways to develop power, quickness, and coordination: aspects crucial for athleticism

- **STRENGTH:** Increases force production, which improves explosiveness and power.
- **SPEED:** Improves sprint ability and reduces ground contact time.
- **AGILITY:** Enhances body control and coordination, as well as change of direction.
- **MOBILITY:** Reduces injury and promotes efficient and natural movement.

Speed, Agility, and Quickness (SAQ) training improves performance in competitive athletes (Sun et al. 2025). Moreover, Norgeot & Fouré (2024) imply that specifying training methodology, like using horizontal plyometrics for sprinting or vertical plyometrics for jumping yields most beneficial sport-specific gains.

## Macronutrients: Fuel With Purpose

**Macronutrients** consist of 3 molecules: Carbohydrates, Proteins, and Fats. These macronutrients fuel athletic performance and recovery. Each nutrient has a specialized role in optimizing performance and is most efficient depending on time of consumption in consideration of activity.

- **Carbohydrates** provide energy for quick and rapid activity where energy is needed immediately. Athletes **NEED** carbs before and after training to perform at their best and to replenish glycogen (carbohydrate stores).
- **Protein** repairs muscle and facilitates growth. Post-workout protein crucial for starting the recovery process and “healing” the body (Turnagöl et al., 2022).
- **Fats** provide long-lasting energy and play a huge role in regulating hormones, fats are especially useful for endurance-based exercise and recovery.

Nutrient **timing** matters. Consuming carbs + protein after training helps start recovery and reduces muscle damage.



## Micronutrients and Supplementation - Fueling Recovery & Injury Prevention

Recovery isn't just about rest and sleep, but also involves how you fuel your body. Whether you're trying to fuel your body or stay injury-free during a long-season, micronutrients and supplementation, an often overlooked aspect of athletic nutrition, are absolutely crucial and beneficial:

- 👉 Vitamin D - supports bone strength and supports immune system
- 👉 Collagen - (w/ vitamin C) helps strengthen and rebuild tendons, ligaments, and joints, all crucial for efficient movement
- 👉 Omega-3s reduce inflammation from stress caused by exercise
- 👉 Creatine - aids in recovery and enhances strength
- 👉 A nutrient-dense diet full of healthy foods and micronutrients prevents muscle loss and immune deficiency

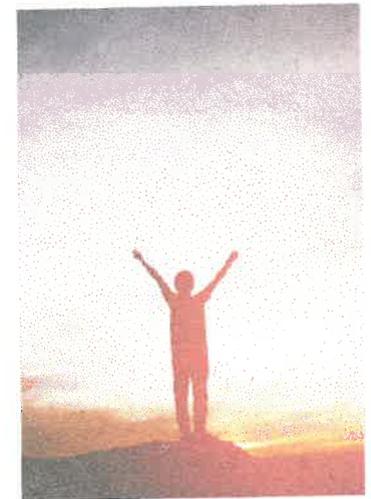
Athletes who undereat and have horrible diets delay and worsen healing, increasing injury risk (Turnagöl et al., 2022).



## **BULLETPROOF MENTALITY** Discipline, Consistency, and Determination

Training correctly and dialing your nutrition and are essential to achieve peak athleticism, but the MIND is what drives you to keep showing up and maintain confidence within yourself. Elite athletes have insane mental discipline, consistency, and levels of drive that allow them to go 100% every rep. Studies show that consistent routines and proper periodization support performance, prevent burnout, and build resilience (Chun-Chung et al., 2021).

- Discipline – Show up even when you don't want to.
- Consistency – 1% everyday builds long-term elite results.
- Grit – Push through adversity, bounce back harder and learn from mistakes.



## HYDRATION AND TIMING: THE UNDERDOG



Hydration is crucial and often overlooked by athletes. A reduction of 2% body weight from dehydration can hinder peak physical and mental performance. Proper fluid intake before, during, and after exercise prevents fatigue, cramping, and mental fatigue (Orrù et al., 2018).

Similar to hydration, nutrient timing, especially carbohydrates and protein, ensures efficient recovery and energy availability during exercise. Carbohydrates pre-activity provides energy for performance, while protein supports muscle repair post-training or competition (Turnagöl et al., 2022).

Electrolytes (like sodium and potassium) are essential for intense workouts and hot conditions where athletes sweat high amounts. Smart athletes don't just train hard, but they also hydrate and time their nutrition correctly.

### Pre-Workout:

*12-20oz of water + simple carb*

### Intra-Workout

*Sip water or electrolytes*

### Post-Workout:

*Rehydrate w/ 16-24oz of fluids + sodium/potassium (lost in sweat)*

## The Power of Periodization: Training Smarter

Athletic training isn't constant and the same every time. Your body needs cycles of stress and recovery to be able to perform at its best. Periodization is the concept of structuring training in different seasonal phases (preseason, in-season, offseason) to ensure proper preparation, recovery, and consistent gains.

According to Chun-Chung et al. (2021), Periodized programs that modify training routines, nutrition, intensity, and recovery across the year leads to better performance when its most needed and lower risk of injury (Chun-Chung et al. 2021).

### The 3 Phases of Training:

**Off-Season** – Focuses on developing muscle, size, and recovery. Less practice intensity and total.

**Preseason** – Sharpen coordination, speed, power, explosiveness, conditioning, and ramp up sport-specific practice and intensity.

**In-Season** – Maintain strength and conditioning focus on preventing injury. Prioritize rest and proper nutrition to fuel training/games and recovery.



# REST AND RECOVERY: THE PINNACLE OF GROWTH

## Sleep = GROWTH.

*Training does not build muscle, recovery does. Sleep, nutrition, and recovery causes the body to adapt to the stress of training. Without recovery, little to no progress can be made.*  
(Chun-Chung et al., 2021)

### Helpful tips for Recovery:

- **Creatine and Protein** - These nutrients help rebuild tissue and improve strength and recovery during and after workouts (Turnagöl et al., 2022).
- **Electrolytes** - Replenish minerals lost in sweat and restore hydration and muscle function (Orrù et al., 2018).
- **7–9 hrs Sleep** - Sleep is crucial for regulating hormones, immune function, and muscle repair (Chun-Chung et al., 2021).

Overtraining can lead to:  
Heavy fatigue and soreness  
and increased stress and  
worse performance  
(Chun-Chung et al., 2021)



## Final Thoughts

*Everything in this zine is grounded in both lived experience and research. Take what helps you. Discard what doesn't. But never stop learning, fueling, or pushing for more, not just in athletics, but in every aspect of life. Athletic Performance isn't luck; it's built through strategy and efficiency.*

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