The Impact of Poor Nutrition on Athletes

This presentation covers the causes and negative consequences of poor nutrition in athletes. We'll explore how inadequate nutrition undermines training, recovery, and performance. By the end, you'll understand the critical role of nutrition in athletic success.

Dr. kacir Abderrezzak

Nutrition: The Cornerstone of Athletic Performance

Nutrition is the foundation of training, recovery, and performance. Athletes need 10-20% more nutrients than non-athletes. Macronutrients (carbs, protein, fats) and micronutrients are key.

Fueling Performance

Proper nutrition fuels optimal performance.

Enhancing Recovery

Adequate nutrients speed up recovery.

Supporting Health

Balanced diet supports overall health.

Inadequate Caloric Intake: Under-Fueling the Body

Lack of knowledge, poor planning, or restrictive dieting cause inadequate caloric intake. Low energy availability impacts endurance and strength. A 2023 NCAA study found that 30% of athletes under-fuel their daily needs.

Poor Planning

Often a result of poor planning or a lack of education.

Endurance Reduction

Low energy reduces endurance.

Strength Reduction

Low energy also reduces strength.

Macronutrient Imbalance: Missing the Mark

Overemphasis on protein or cutting carbs/fats leads to macronutrient imbalance. This reduces glycogen stores, causes muscle fatigue, and slows recovery. Sub-optimal carb loading can reduce cycling performance by 15%.

Reduced Glycogen

Imbalance reduces glycogen.

Muscle Fatigue

Imbalance causes muscle fatigue.

Slower Recovery

Imbalance slows recovery.

Dehydration: The Silent Performance Killer

Failure to hydrate adequately before, during, or after exertion causes dehydration. Even a 2% weight loss from dehydration can lower endurance by 20%. Elite marathoners see performance decline due to poor hydration strategies.

Endurance Decrease

Dehydration reduces endurance.

Cognitive Impairment

Dehydration impairs cognitive function.

Muscle Cramps

Dehydration causes muscle cramps.

Micronutrient Deficiencies: The Hidden Weakness

A diet lacking variety can lead to micronutrient deficiencies (e.g., low iron, calcium, vitamin D). This can cause anemia, stress fractures, and immune suppression. 42% of female athletes have low iron stores.

Anemia

Low iron causes anemia.

Stress Fractures

Low calcium causes fractures.

Immune Suppression

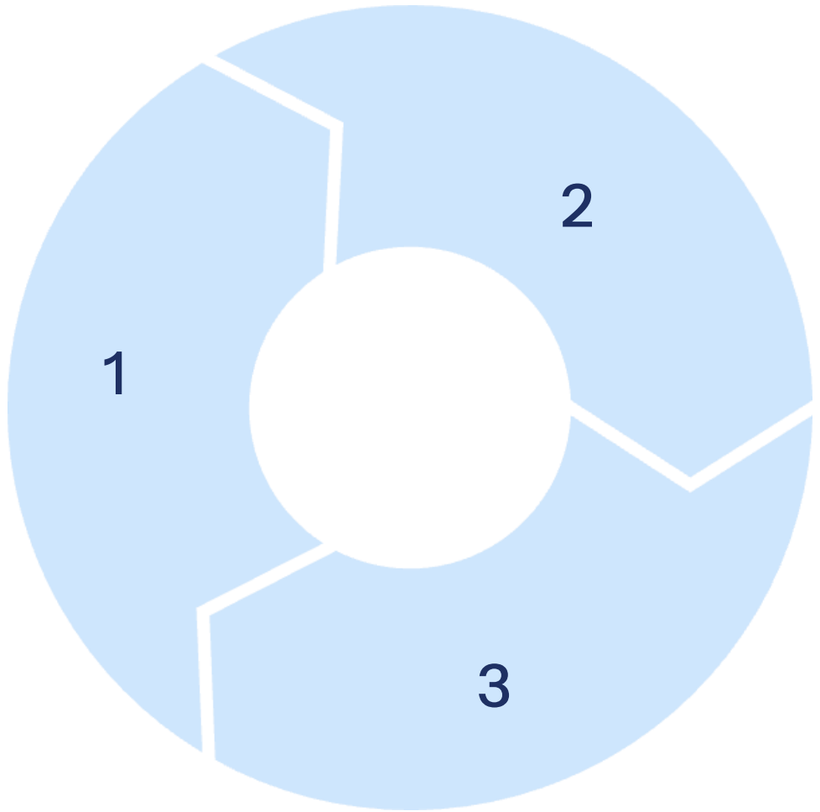
Low vitamins suppress immunity.

Increased Risk of Injury: A Fragile Foundation

Poor nutrition weakens connective tissues and bone health. Under-nutrition increases the risk of stress fractures by 60%. Female Triathletes showed heightened injury rates with calcium deficiency.

Weakened Tissues

Nutrition affects tissues.



Increased Fractures

Nutrition affects fractures.

Higher Injury Rates

Nutrition affects injuries.

Diminished Mental Resilience: Losing the Edge

Poor nutrition impairs mood, focus, and decision-making. This can lead to poor decision-making during competition. Omega-3 deficiencies are linked to mental fatigue during extended matches.

Impaired Mood

Affects mood.

Reduced Focus

Affects focus.

Poor Decisions

Affects decisions.

Performance Failures: Real-World Examples

Real-world examples demonstrate collapses due to poor nutritional strategies. These cases highlight the importance of addressing gaps in hydration and nutrition planning. We can learn a lot from the experience of others.

25%

Decline in endurance due to dehydration.

15%

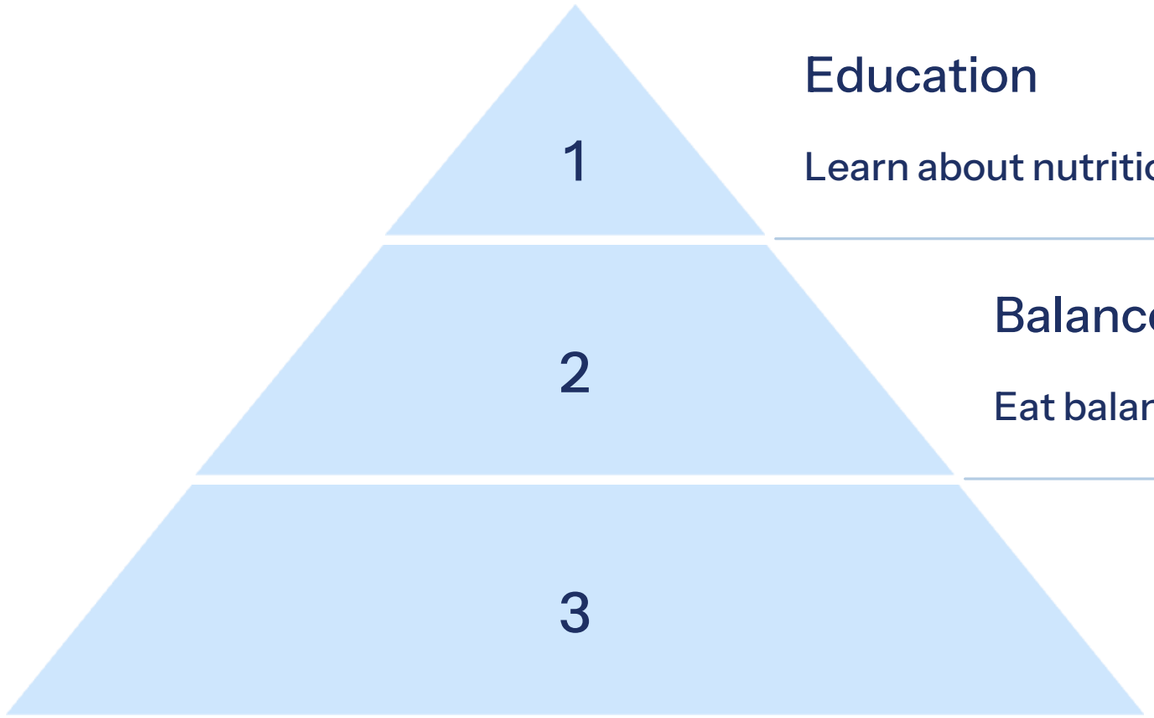
Reduction in cycling performance with poor carb loading.

60%

Increase in stress fractures with under-nutrition.

Towards Better Nutrition Practices: Optimising Potential

Incorporate balanced meal templates and hydration plans. Education and professional dietitian support are crucial for long-term optimisation. Prioritise nutrition to maximise athletic potential.



Education

Learn about nutrition.

Balanced Meals

Eat balanced meals.

Hydration

Stay hydrated.