

Lesson 8

Physical Culture and Sports Nutrition: Fueling Peak Performance

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Understanding Macronutrients: The Building Blocks of Performance

Macronutrients are the cornerstone of athletic success.

They provide energy and support bodily functions. Carbohydrates fuel activity.

Proteins repair and build muscle. Fats offer sustained energy and hormone production.

Carbohydrates

Primary energy source.

Fuel high-intensity activities.

Examples: grains, fruits, vegetables.

Proteins

Essential for muscle repair.

Vital for tissue growth. Examples: meat, dairy, beans.

Fats

Sustained energy and hormone regulation.

Important for overall health.

Examples: nuts, oils, avocado.

Micronutrients: Vitamins and Minerals for Optimal Function

Micronutrients are vital for overall health. They boost immunity and ensure metabolic function. Vitamins and minerals facilitate key processes. Athletes need more to counter exercise stress.



Vitamin C

Boosts immune function.
Supports tissue repair. An antioxidant that combats stress.



Calcium

Essential for bone health.
Supports muscle contractions. Found in dairy and leafy greens.



Iron

Carries oxygen in blood.
Crucial for energy levels.
Found in meat and beans.

Hydration Strategies: Maximising Performance and Recovery

Hydration is critical for athletic performance. Dehydration impairs strength and endurance. Drink water before, during, and after exercise. Electrolytes replace lost minerals, aiding recovery.

1

Before Exercise

Drink 500ml of water 2-3 hours prior. Hydrate to prime your body.

2

During Exercise

Drink 250ml every 15-20 minutes. Maintain hydration during activity.

3

After Exercise

Replenish fluids and electrolytes. Use sports drinks or water and a snack.

Timing is Everything: Nutrient Timing for Training and Competition

Strategic nutrient timing enhances results. Pre-workout: carbs for energy. Post-workout: protein for repair. During: sustain energy levels. Maximise gains with specific nutrition windows.

- 1 Pre-Workout**
Consume easily digestible carbs. Provides immediate energy.
- 2 During Workout**
Maintain hydration. Small carb snacks for long sessions.
- 3 Post-Workout**
Protein and carbs within 1-2 hours. Aids recovery and muscle

Common Supplements: Separating Fact from Fiction

Supplements can support nutrition plans. However, choose wisely, and check the science. Creatine enhances strength. Protein powders aid muscle repair. Not all claims are valid; research matters.

Creatine

Boosts strength and power. Supports high-intensity efforts. Effective for muscle growth.

Protein Powder

Aids muscle recovery. Convenient protein source. Whey, casein, soy are options.

Caffeine

Enhances focus and reduces fatigue. Improves endurance performance.

Fuelling for Different Sports: Tailoring Nutrition to Specific Needs

Each sport demands a unique approach. Endurance athletes need more carbs. Strength athletes need more protein. Team sports require balanced nutrition for varied demands.



1

Endurance

Prioritise carbohydrate loading. Maintain hydration and electrolytes.



2

Strength

Focus on protein intake. Support muscle growth and repair.



3

Team Sports

Balance carbs, protein, and fats. Maintain energy and recovery.

Practical Tips and Takeaways: Implementing a Performance Nutrition Plan

Start with small changes. Prioritise whole foods. Hydrate consistently.

Understand your sport's needs. Tailor a plan that supports your goals.

