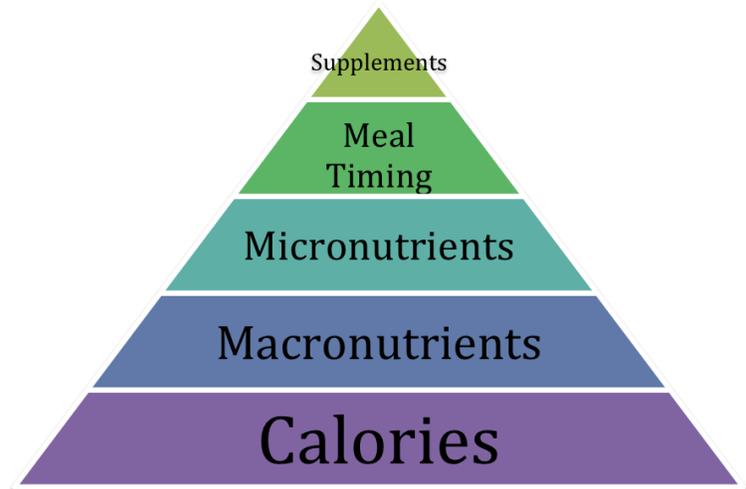


# Performance nutrition and supplements

## The nutrition pyramid

- *Calories* – The energy we need to fuel our body and especially our workouts
- *Macronutrients* – These include protein, carbs, and fats. Ensuring getting the right proportion depending on the type of activity will also provide adequate fuel. More endurance = more carbs.
- *Micronutrients* – Vitamins and minerals are essential in keeping us in good health, help us maintain bodily functions, and help us utilize our energy efficiently.
- *Meal timing* – Either a large or short gap between meals/snacks and our workouts can negatively affect the workout and our digestive system
- *Supplements* – These are the icing on the cake! When everything else is met, supplements can take us to the next level. But which supplements should we take?



## Tips when recommending supplements

- Check the label for a natural product number (**NPN**) or drug identification number (**DIN**), which indicates that the product is licensed and approved for sale in Canada and ensure their safety
- Get client to meet their energy and nutrient needs before trying supplements
- Encourage client to speak with their pharmacist first in case of possible medication interactions and/or underlying medical conditions
- Go through recommended usage with client to ensure proper dosage
- Suggest that the client trains their gut when first using supplements
- Never try a new supplement on game/event day

## What to eat before, during, after AEROBIC exercise:

**Before:** The purpose of the pre-workout meal is to provide an easily digested source of energy to be focused during the workout and prevent being distracted by hunger.

Time before the game	What	Example
3-4 hours	<b>Regular, full balanced meal</b> Moderate to high in carbohydrates Moderate protein	2 cups pasta topped with $\frac{3}{4}$ cup tomato sauce and 4 lean (3oz) meatballs
2-3 hours	<b>Smaller meal</b> High in carbohydrates Moderate protein	Tuna sandwich with vegetables and a fruit
1-2 hours	<b>Snack</b> Very high in carbohydrates Low in protein	1 $\frac{1}{2}$ cup lower fibre breakfast cereal with $\frac{1}{2}$ cup reduced fat milk (skim, 1% or 2%) and a fruit
Less than 1 hour	<b>Small snack</b> Mostly carbohydrates	1 fruit or 1 cup fruit and milk smoothie

**During:** Foods eaten during a workout need to be digested easily while offering enough energy to fuel your muscles, brain and nervous system. This means you need to choose carbohydrate-rich foods that are low in protein, fibre and fat. This can be achieved by consuming fruit, sports bars and drinks, diluted fruit juice, granola bars, cold cereal, pretzels, or crackers, all of which can be easily packed in your hockey bag.

**After:** Your priority here is to replenish your energy stores and repair any muscle and tissue damage. After your workout, it is important to eat a meal or snack within 30 minutes of your game and again 1-2 hours after that. All meals and snacks should contain carbohydrates to protein. Some post-exercise meals and snacks include:

- Fruit, yogurt, and granola;
- Peanut butter sandwich and a banana;
- Chocolate milk, cheese string and a fruit;
- Pasta with meatballs, side dish of vegetables;
- Chicken stir-fry on rice with vegetables

## **What to eat before, during, after ANAEROBIC exercise:**

**Before:** Same as for aerobic exercise

**During:** Consuming protein or amino acids during strength training reduces protein breakdown during and immediately after exercise. How much? Tolerance?

**After:** If there are more than 8 hours between workouts, there is no recommendation, rather eat until full. If there are less than 8 hours: 15-25g of protein with 45-75g of carbohydrates within 30 minutes of exercise and again 2 hours after. If the goal is to gain muscle mass: 0.25 to 0.3 g/kg of protein (equivalent to 15-25 g of protein) in the first two hours after exercise and then every 3-5 hours for a day. No benefit to eating more than 40 g of protein per meal

### **Supplements:**

Although other supplements are marketed for their beneficial effects on either endurance or strength training, the following ones have proven effects (this is not as exhaustive list, but rather the most common ones):

**Aerobic exercise:** Caffeine, sports drinks/gels/bars, beetroot, protein powders

**Anaerobic exercise:** Creatine, omega-3, protein powders

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