Nutrition For Athletes

Foundations of Sports Nutrition:
Optimizing Physical and Mental Performance

Introduction & Land Acknowledgement

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Territory of the Coast Salish People

Overview

What is the Role of a Sports Dietitian?

As a Sports Dietitian, I provide different services to help athletes meet their fullest potential. Services vary from one-on-one individual consultations, grocery shopping and cooking workshops as well as group presentations.

How Can a Sports Dietitian Help you?

- Support your overall health and well being through education and empowerment.
- Individualized nutrition planning → Daily nutrition, performance goals, recovery strategies, competition planning, meal planning and education on supplements and nutrition products.

Overview

01

Importance of Nutrition

- Why is good nutrition important for athletes?
- Highlight: Table tennis as a sport

02

Energy & Energy Availability

- Energy balance
- Energy requirements for an athlete
- Low energy availability: Signs and symptoms & Prevention

03

Protein & Carbohydrates

- Role in an athlete’s performance & Recommended intakes
- Traditional food examples

04

Pre/Post-Workout Nutrition

- Pre and post workout guidelines + meal and snack examples containing these nutrients

Importance of Nutrition

Why is Nutrition Important for Athletes?

“A good diet won’t make average athletes elite, but a poor diet will make elite athletes average”

- Aids in physical and mental performance
- Increase our ability to exercise for longer durations and at higher intensities
- Enhances recovery and helps us maintain a healthy immune system
- Supports bone health and muscle growth and maintenance

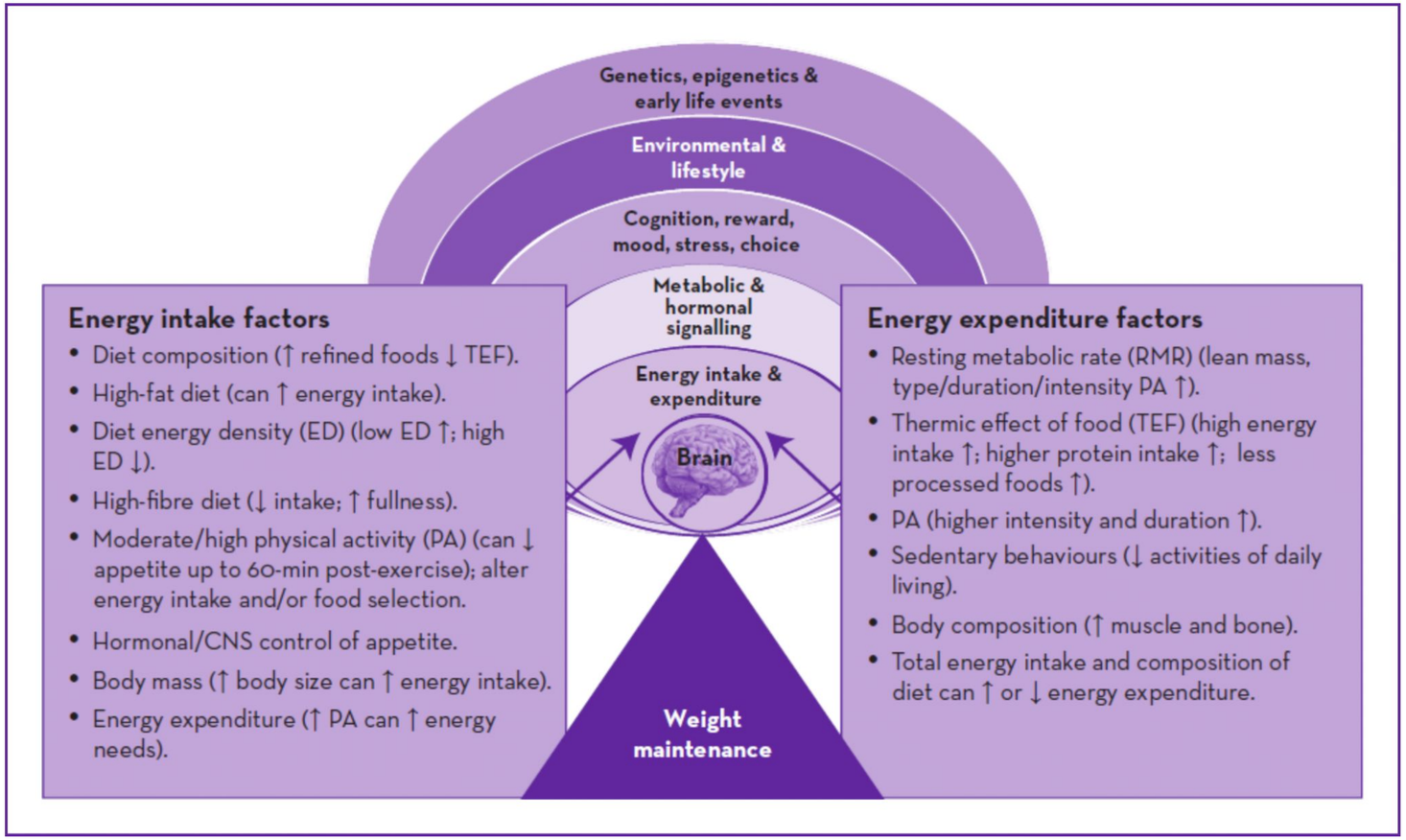
Importance of Nutrition

Table Tennis as a Sport:

- High-intensity, high-skills sport
- Necessary to have balance of entire body and speed of reaction time
- Requires agility and dexterity
- Consuming a balanced, nutritious, and energy-sufficient diet may improve physical indicators and enhance overall health

Energy Balance

Energy Balance: The balance between your energy intake and energy expenditure which are influenced by a number of factors.



Energy Intake

A number of dietary factors can influence our total energy intake...

Energy Expenditure

A number of dietary factors can influence our total energy expenditure...

FIBER

CARBS

PROTEINS

FATS

Energy Availability

Energy Availability: The number of calories leftover for basic physiological functioning after accounting for energy used in our training.

Low Energy Availability: The number of calories leftover for basic physiological functioning after accounting for energy used in our training.

Are You Eating Enough?

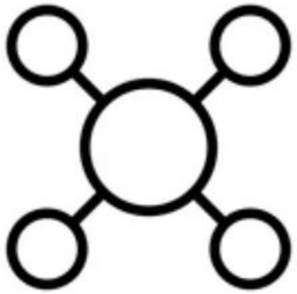
Questions to ask yourself to know whether you're eating enough:

- Do i have the **physical capacity** to complete my training?
- Am I sleeping well and not feeling overly **fatigued** through the day?
- Am I able to **recover** adequately between sessions (not too sore)
- Am I able to maintain my **energy** levels pretty well throughout the week?
- Is my physical **performance** improving at the rate my coaches are expecting?
- Am I able to produce adequate **power and strength** at key times?
- Am I able to **gain strength and muscle mass** during strength phases?
- Am I able to **maintain strength and muscle mass** through high volume training blocks?
- Is my **mood** fairly stable?
- Am I not getting **sick** more than 2-3 times through the year?
- Female: is my **menstruation** regular and consistent during high volume training blocks?

Protein

Why is protein important for an athlete?

1. Protein Synthesis
   a. Muscle → Repair and growth
   b. Bone
   c. Connective Tissue
   d. Enzymes and other Protein Molecules
2. Satiety → Feeling of Fullness



Protein

What is the recommended protein intake for an athlete?

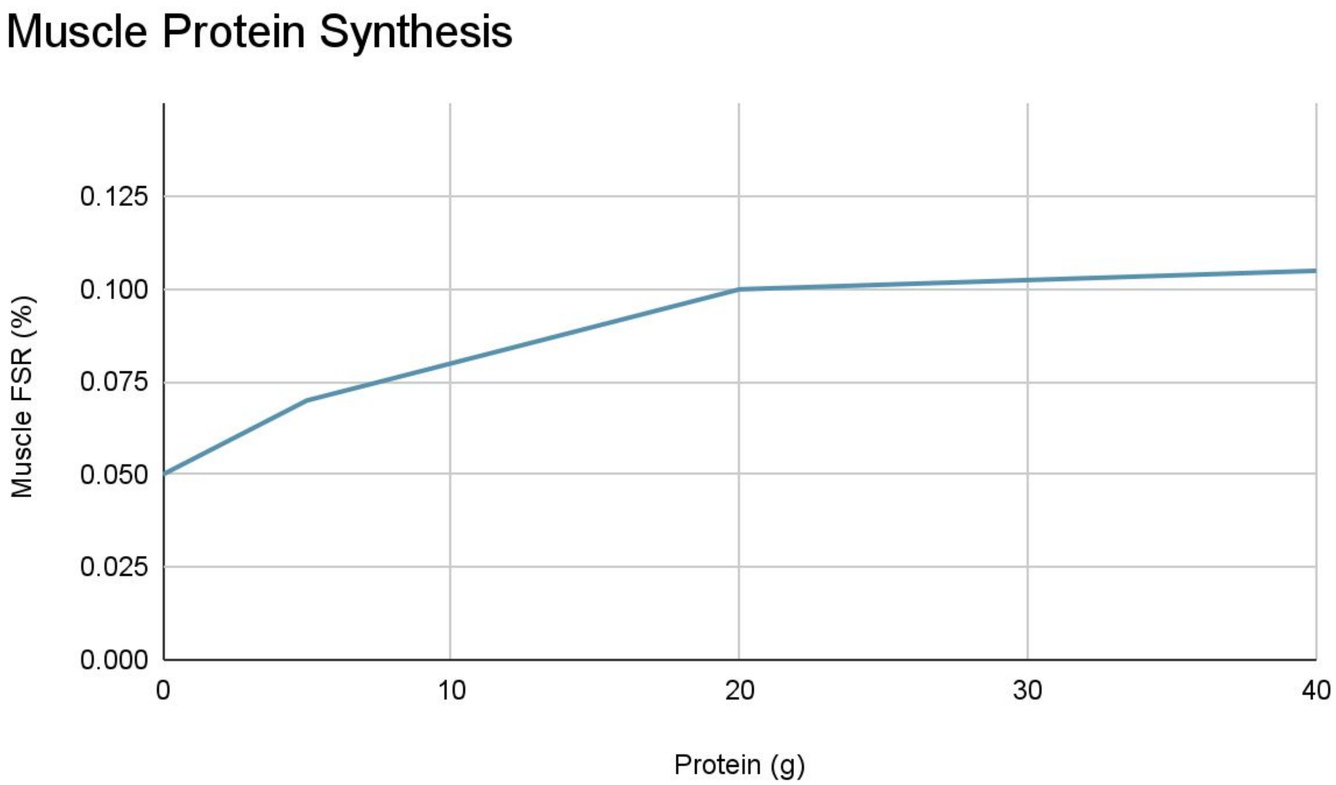
Average Human

RDA = 0.8g/kg/d

Athlete

Per day = 1.7-2.0g/kg/d

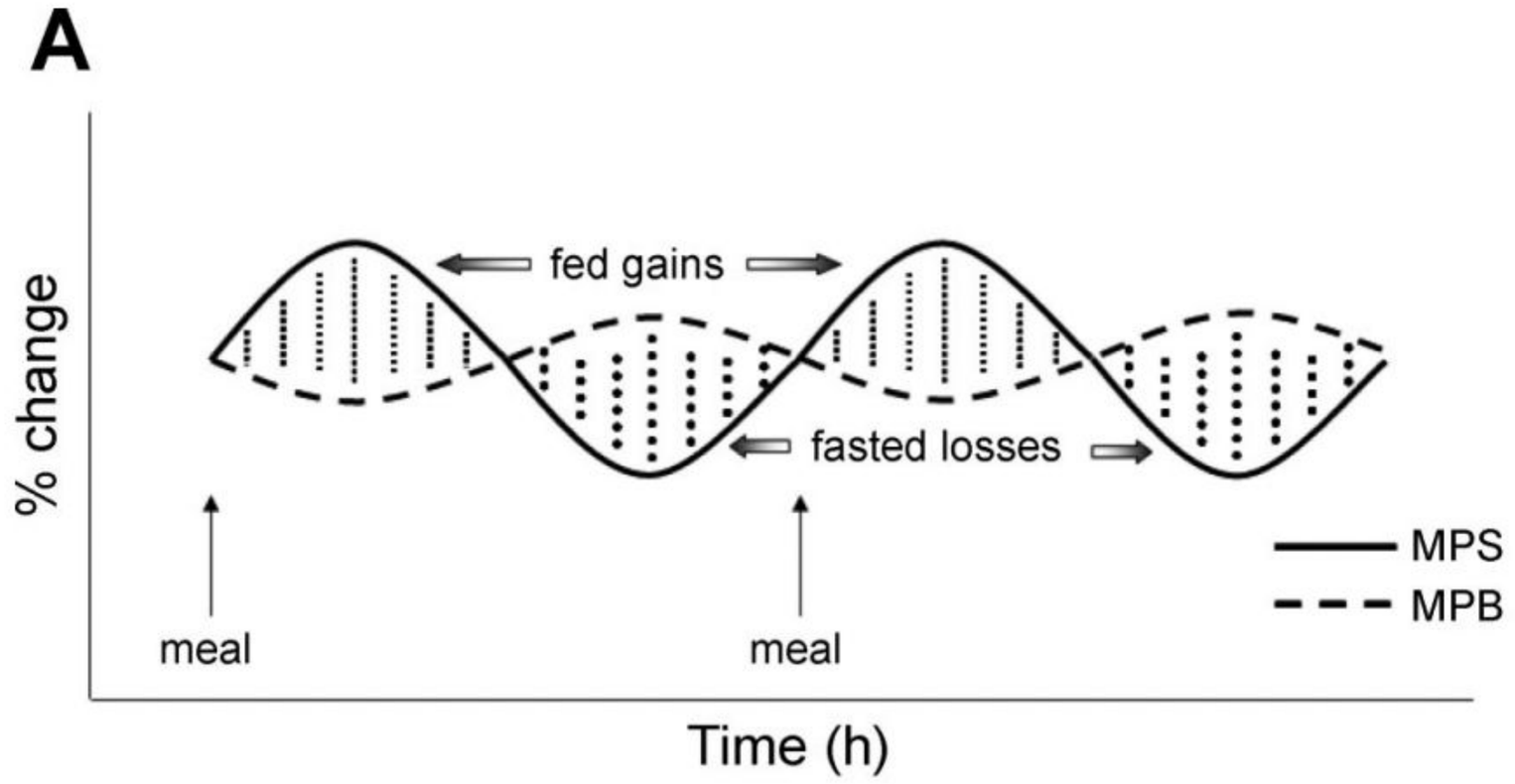
Per feeding = 0.3-0.5g/kg



Moore et al. 2009

Protein

How should an athlete distribute their protein throughout the day?



- ~4-6 meals per day
- Saturating dose of 0.3-0.5 g/kg per meal
  - ~20-30g of protein

Moore et al. 2009

What Are Good Sources of Protein?

White Meat

Grouse, Goose, Rabbit/Hare, Duck, Chicken, Turkey

Red Meat

Beaver, Moose, Caribou, Muskox, Muskrat, Beef, Pork

Marine

Fish (salmon, tuna, whitefish, arctic char), beluga, seal

Vegetarian

Eggs, dairy products (yogurt, milk, cheese), legumes, lentils, soy, nuts and seeds

What Does 20g of Protein Look Like?

Palm-sized, cooked meat

Palm-sized, cooked fish

1 small can of tuna

2 cups cow/soy milk

2 ½ oz (70g) hard cheese

¾ cup greek yogurt

1 ½ cups legumes

3 large eggs

¾ cup nuts or seeds

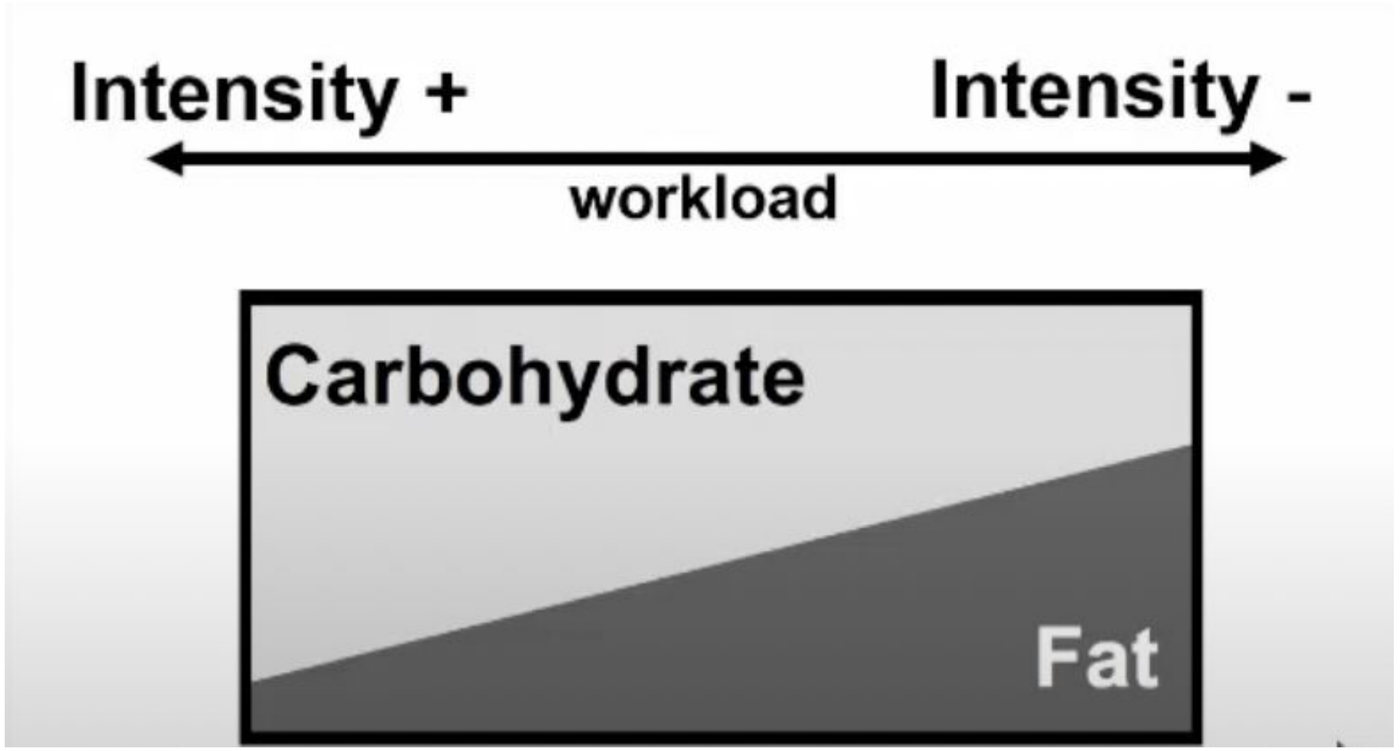
Carbohydrates

Why are carbohydrates important for an athlete?

1. Preferred source of energy for brain and muscles
   a. Needs driven by intensity and volume of training
2. Source of fiber and antioxidants
3. Beneficial around and during training
   a. Maintains blood glucose levels
   b. Spares glycogen stores
   c. Central nervous system effects

Fuels Brain & Muscles

Our body primarily uses carbohydrates for energy during high intensity exercise.



Carbohydrates

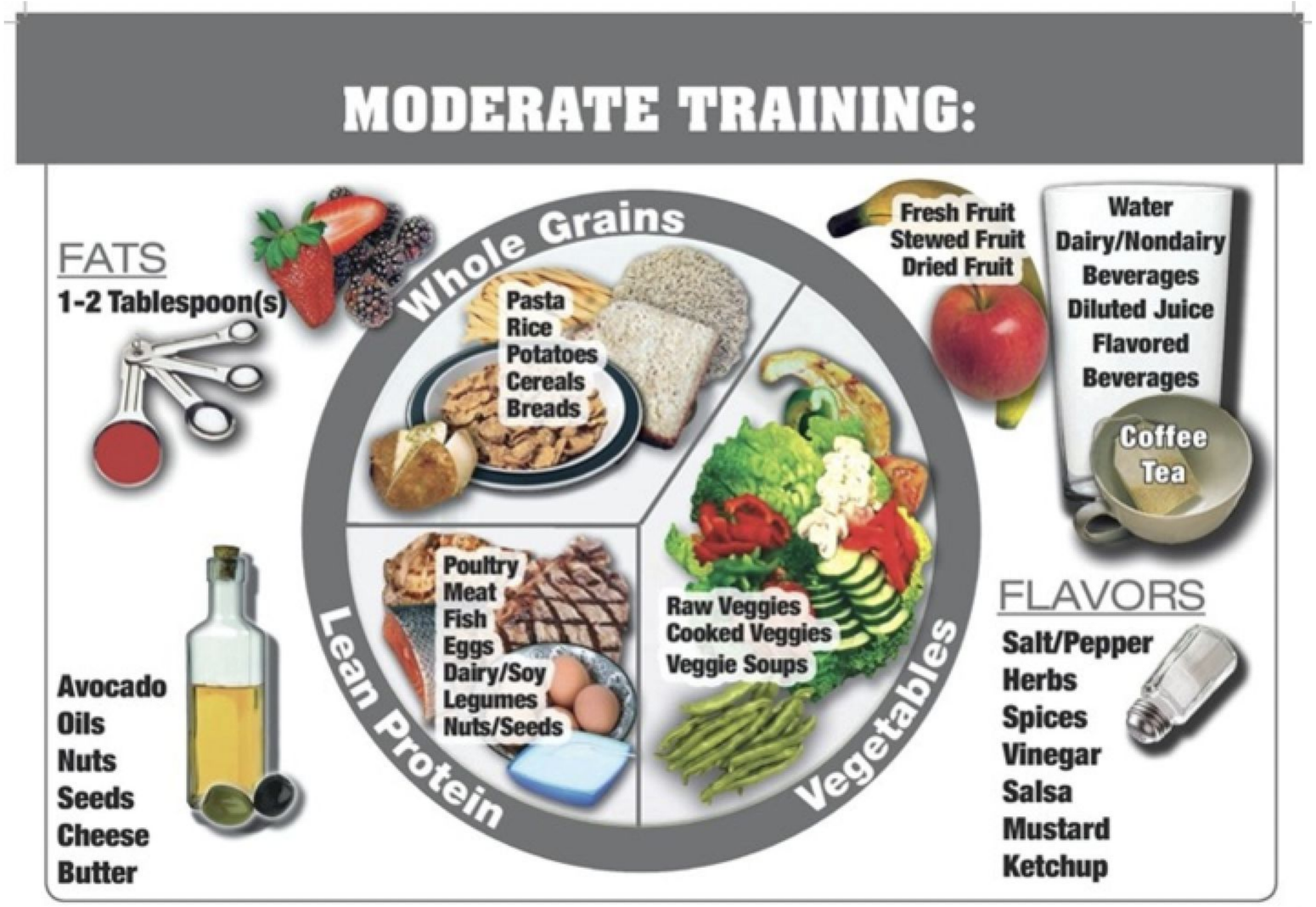
What is the recommended carbohydrate intake for an athlete?

Racket Sport Athletes

- Minimum 55% of total energy intake
- ~6-10g/kg per day
- Example: 80 kg athlete
  - 480-800g/d

Balanced Plates

Balanced Plates



Balanced Plates

Fueling For The Work Required

Example training week:

MON	TUES	WED	THURS	FRI	SAT	SUN
9:00-12pm: Table Training **3:30-5pm:** Physical Training	**9:00-10am:** Table Training **10:30-12pm:** Skills Training	**9:00-12pm:** Table Training **3:30-5pm:** Physical Training	**9:00-10am:** Skills Training **10-10:45am:** Mobility	**9:00-12pm:** Table Training **3:30-5pm:** Physical Training	**Rest**	**Rest**

Nutrient Timing

Nutrient Timing: The application of knowing when to eat and what to eat before, during and after exercise to improve performance and recovery.

Pre-Workout

- **GOAL =** Provide the right amount of carbohydrate, fluid and protein to prevent hunger, and low blood sugar and potentially optimize training and performance.

Post-Workout

- **GOAL =** Provide the right amount of carbohydrate, fluid and protein to help us refuel, rebuild and rehydrate after training.

PRE WORKOUT

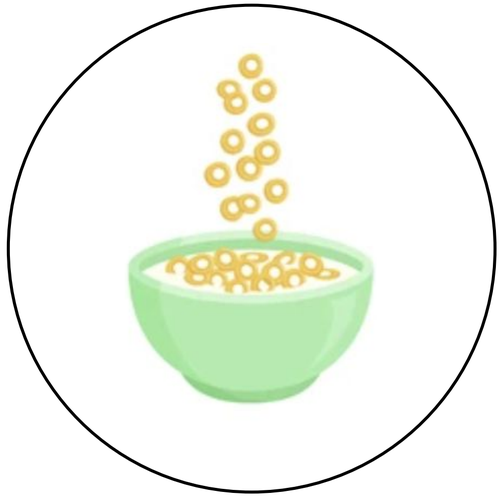
POST WORKOUT

Pre-Workout Guidelines

GOAL = Provide the right amount of carbohydrate, fluid and protein to prevent hunger, and low blood sugar and potentially optimize training and performance.

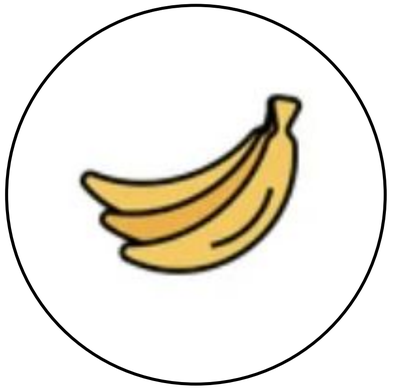
3 Hours

Full meal or large snack containing protein, fat and carbohydrates



2 Hours

Snack containing carbohydrates and protein



1 Hour

Small snack containing simple carbohydrates

3 Hours

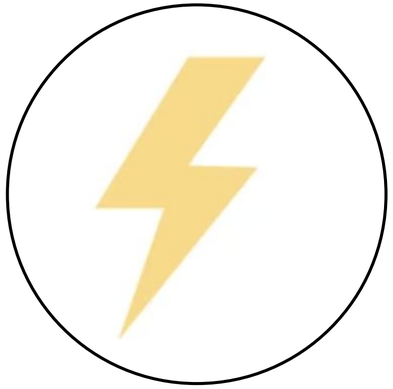
2 Hours

1 Hour

Post-Workout Guidelines

GOAL = Provide the right amount of carbohydrate, protein and fluid to help us refuel, rebuild and rehydrate after training.

HOW MUCH? = At least **1g/kg** of carbohydrate and **0.3g/kg** of protein.



Refuel

Full meal or large snack containing protein, fat and carbohydrates

Rebuild

Snack containing carbohydrates and protein

Rehydrate

Small snack containing simple carbohydrates

For a 80 kg Athlete...

Carbohydrate = 80 kg x 1g/kg = **80g**

Protein = 80 kg x 0.3g/kg = **24g**

What Does That Look Like?

- 1 ½ cups Cooked Pasta
- ¾ cup Pasta Sauce
- ⅓ cup Low Fat Cheese

What Can I Do For You?

As a Sports Dietitian, I provide different services to help athletes meet their fullest potential. Services vary from one-on-one individual consultations, grocery shopping and cooking workshops as well as group

1:1 Nutrition Counselling

Nutrition Presentations

Nutrition Workshops

Thank You!

Questions?

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