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INSTITUT CANADIEN DU SPORT

High Performance Nutrition Foundations

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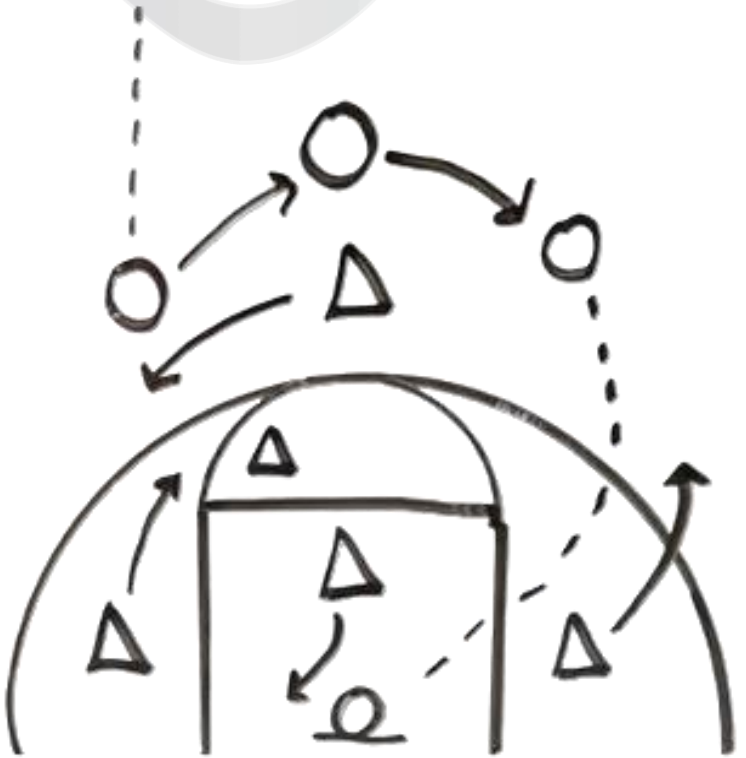
Sport Nutritionist

ABOUT ME:

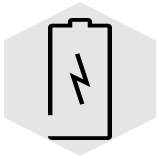
- I work with >15 high-performance sports, from XCSki to volleyball and figure skating to combat sports; from developing teens to Olympians!
- My goal is helping athletes make nutrition simple, practical and realistic.
- How? 1:1 support, cooking skills, grocery store tours, body composition testing, hydration testing, travelling to camps & competitions...

GAME PLAN:

- High-Performance Nutrition Foundations
  - Macronutrients
  - Athlete Plates & Meal Timing
- Fueling Around Training (+ Hydration)
- Summary & Questions



WHY DOES NUTRITION MATTER?



Provide energy for training & exercise

Prevent nutrient deficiencies

Support adaptation & recovery between sessions

Reduce risk of injuries, illness & low energy availability

Improves focus, mood & decision-making

Include foods you enjoy!

SPORT NUTRITION PYRAMID

SUPPLEMENTS

Use with purpose.
Quality and consistency matter most.

- Protein powder
- Creatine
- Omega-3
- Vitamin D
- Iron
- Multivitamin
- Probiotics
- Electrolyte tablets/capsules

SPORT FOODS

Convenient fuel to support training and performance when whole foods are not practical.

- Sports drinks
- Energy gels & chews
- Energy & protein bars
- Hydration mixes
- Quick snacks (e.g., rice cakes, granola bars, fruit snacks)
- Easy-to-digest carbs
- Caffeine (if used)

WHOLE FOODS

The foundation.
Fuel, nutrients and variety for daily health, training and recovery.

- Fruits & vegetables
- Grains (rice, pasta, oats, bread, quinoa, potatoes)
- Protein (meat, fish, eggs, dairy, tofu, beans, lentils)
- Healthy fats (nuts, seeds, avocado, olive oil)
- Fluids (water, milk, soy milk)
- Variety & balance

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MACRONUTRIENTS

CARBS

FUEL

Primary energy source for training, high intensity efforts & the brain.

PROTEIN

BUILD & REPAIR

Supports muscle repair, adaptation & recovery from training.

FAT

SUPPORT & PROTECT

Supports brain function, hormone production & longer-term energy.

FLUID

HYDRATE & PERFORM

Regulates body temperature, transports nutrients & keeps everything running efficiently.

WHAT DO YOU THINK?

Which are examples of carbohydrate foods?

1. Bread, Chocolate Milk, Grapes
2. Banana, Tofu, Chicken
3. Avocado, Apple, Salmon
4. Chocolate Milk, Rice, Coconut

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SOURCES OF CARBOHYDRATES

Starch

Some Dairy Products

Added Sugar

Fruit

WHAT DO YOU THINK?

Which are examples of protein foods?

1. Bread, Milk, Quinoa
2. Beef, Tofu, Yogurt
3. Avocado, Apple, Chicken
4. Salmon, Rice, Black Beans

WHAT DO YOU THINK?

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SOURCES OF PROTEIN

Animal proteins

Plant proteins

WHAT DO YOU THINK?

Which are examples of anti-inflammatory fats?

1. Salmon, Avocado, Almonds
2. Olive Oil, Butter, French Fries
3. Mayonnaise, Butter, Avocado
4. Almonds, Butter, Salmon

WHAT DO YOU THINK?

Which are examples of anti-inflammatory fats?

1. Salmon, Avocado, Almonds
2. Olive Oil, Butter, French Fries
3. Mayonnaise, Butter, Avocado
4. Almonds, Butter, Salmon

SOURCES OF FAT

Anti-inflammatory (Omega 3, 9)





Inflammatory (Omega 6, Trans, Saturated)





WHAT DO YOU THINK?

What can an athlete eat or drink to improve their fluid status?

1. Coffee
2. Lettuce
3. Raspberries
4. All of the above

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SOURCES OF FLUID

Water

Tea & Coffee

Juice & Smoothies

Pop & Sport Drinks

Soup/Stew

Dairy

Vegetables & Fruits

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Athlete Plates & Meal Timing

Easy/No Training Day

FATS - 2 tsp.
Oils
Avocado
Mayonnaise
Nuts, seeds
Butter
Margarine

FLAVOURS
Salt, pepper
Herbs, spices
Vinegar
Salsa
Mustard

Canada's food guide — Food guide snapshot

ATHLETE PLATES

WHAT DO YOU THINK?

What is the ideal amount of time you should leave between meals and snacks?

1. 0-2 hours
2. 2-4 hours
3. 4-6 hours
4. Doesn't matter

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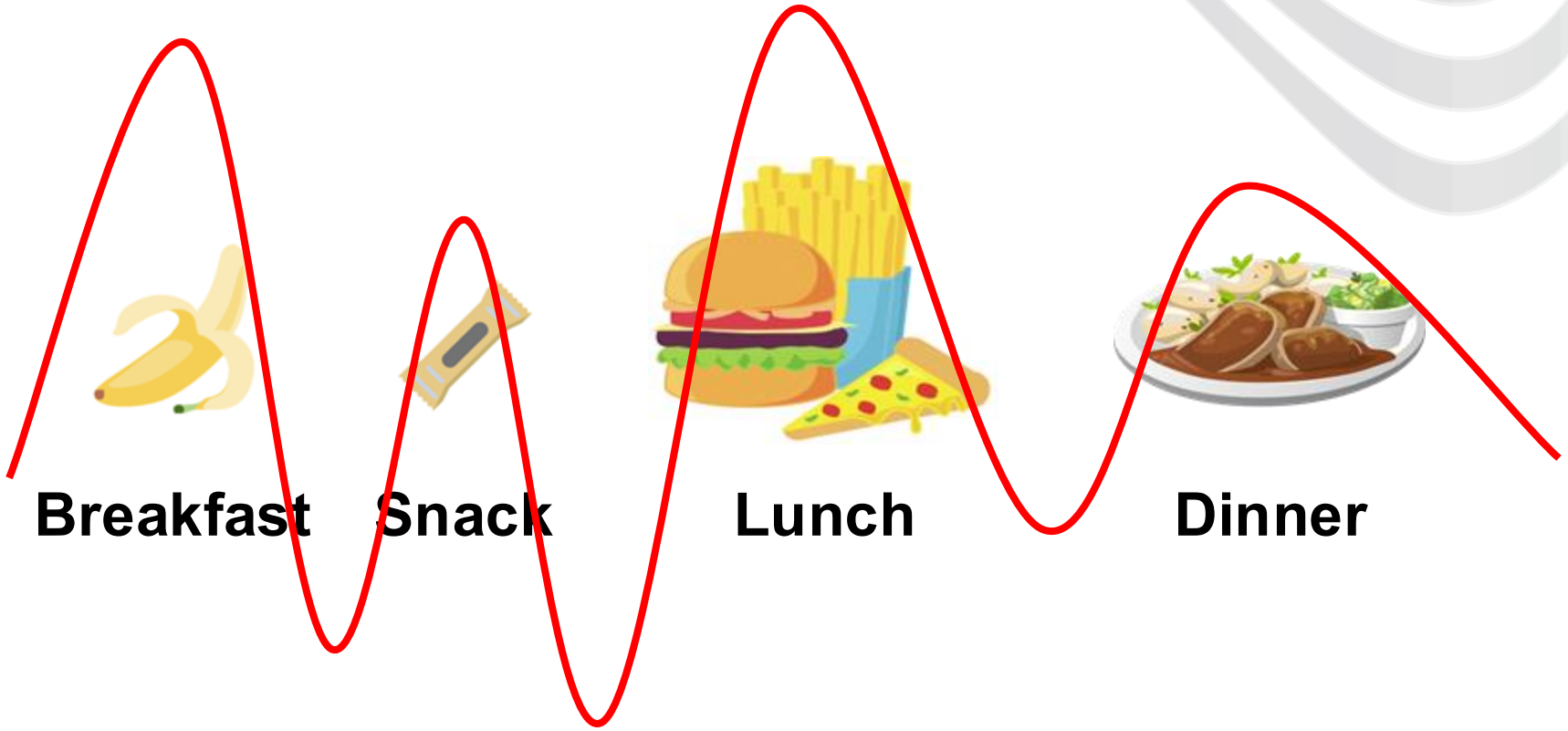
MEAL TIMING & ENERGY



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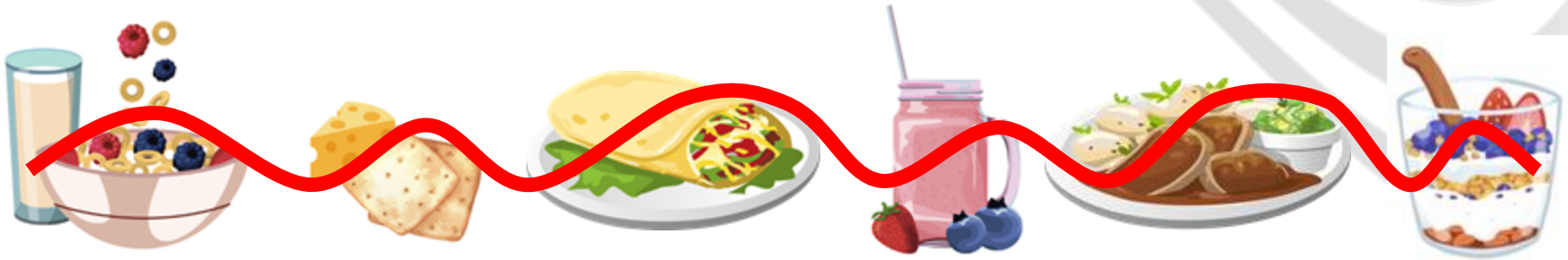

Breakfast	Snack	Lunch	Snack	Dinner	Snack
7:00	10:30	12:00	3:00	6:00	9:00

Eat at least every 2-4 hours to maintain energy levels and blood sugar balance

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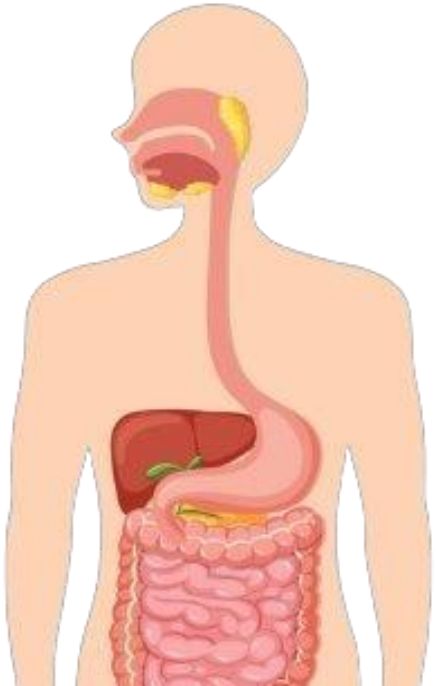
Fueling Before Training

WHAT DO YOU THINK?

How long does it take for our bodies to digest carbohydrates?

1. <2 hours
2. 2-5 hours
3. 4-9 hours
4. 12+ hours



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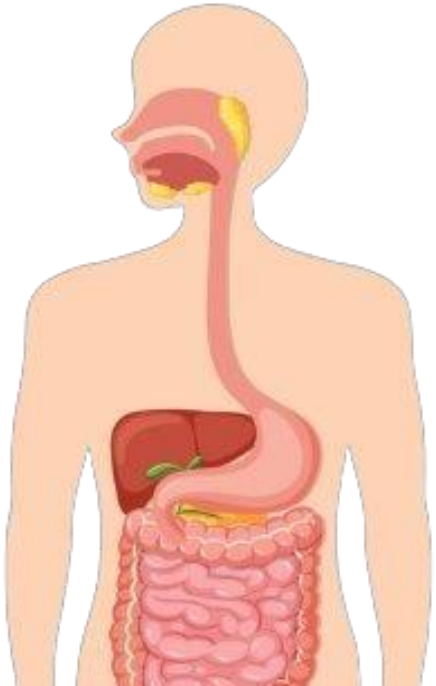
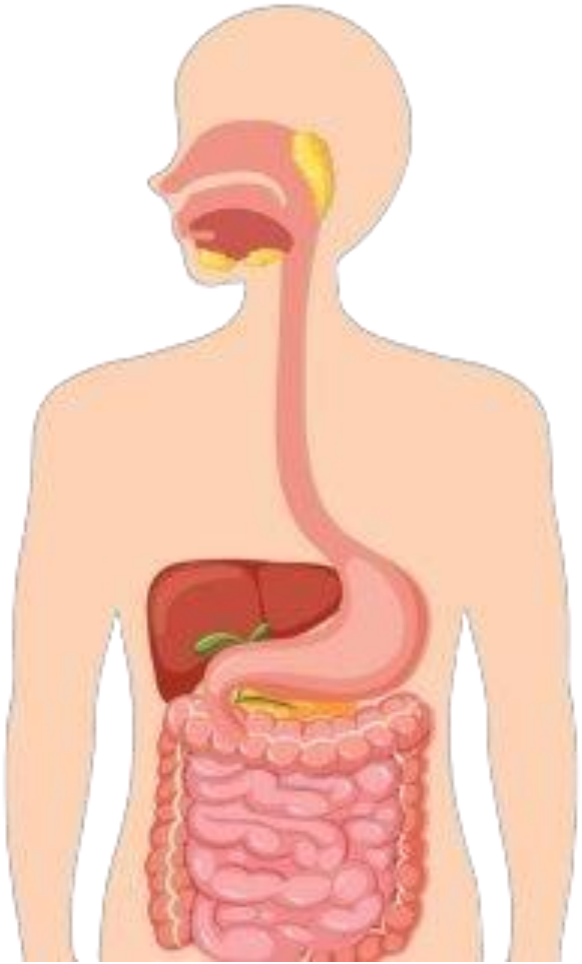
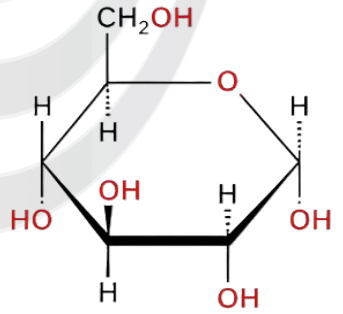


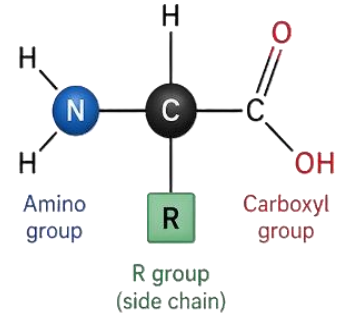
DIGESTION:



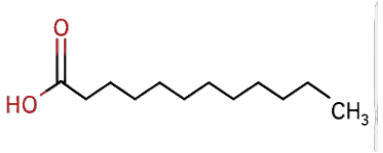
Carbohydrate: < 2 hrs



Protein: 2-4 hrs



Fat: >4 hrs



PRE-WORKOUT: 3-2-1- MODEL

Hours Before

3 CARBS + PROTEIN + FAT

2 CARBS + PROTEIN

1 CARBS

PRE-WORKOUT: 3-2-1- MODEL

3 HOURS BEFORE	2 HOURS BEFORE	1 HOUR BEFORE
Pasta & Sauce Stir-Fry with Rice Turkey Sandwich Chicken Caesar Salad Oatmeal + Fruit Burrito Bowl Chicken + Potatoes	Smoothie Yogurt + Granola Cereal & Milk Egg & Toast Cheese & Crackers Trail Mix + Fruit PB + Rice Cakes	Fruit (Fresh, Dried) Juice Crackers Granola Bar Applesauce Pouch Rice Krispie Square Fruit Gummies Sports Drink

WHAT DO YOU THINK?

Thirst is a good indication of your hydration status during exercise.

1. True
2. False

WHAT DO YOU THINK?

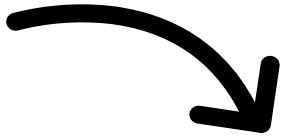
Thirst is a good indication of your hydration status during exercise.

1. True
2. False

HYDRATION & PERFORMANCE

2%

The level of dehydration which impacts performance



Performance can decrease by up to 10% at this level!

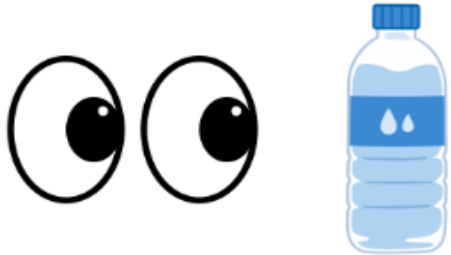
3%

The level of dehydration that causes you to sense thirst

HYDRATION & PERFORMANCE

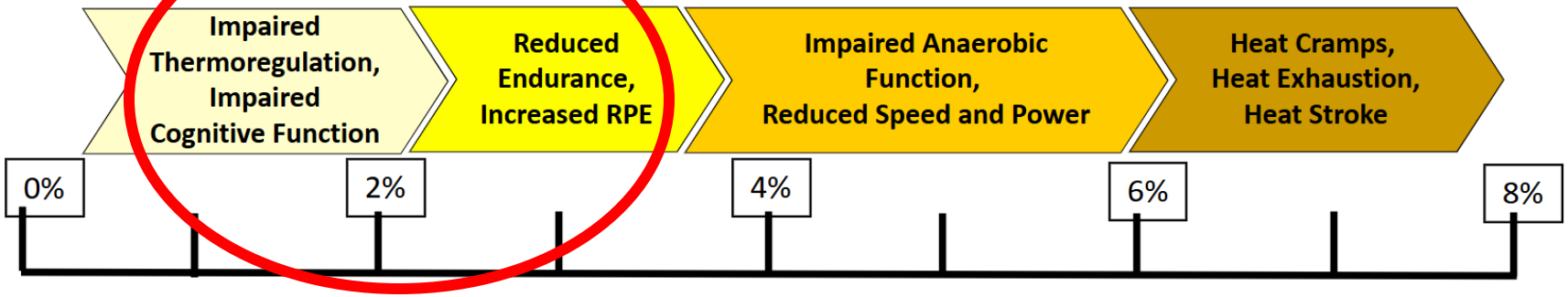
TIPS:

- Take small, frequent sips – don't chug if you forget!
- Water bottle always in sight
- Drink continuously during workouts – every 15 mins



HYDRATION & PERFORMANCE

1	HYDRATED
2	HYDRATED
3	HYDRATED
4	DEHYDRATED
5	DEHYDRATED
6	DEHYDRATED
7	SEVERELY DEHYDRATED
8	SEVERELY DEHYDRATED




DARK URINE


HEADACHES


POOR CONCENTRATION


FAST HEART BEAT


EARLY FATIGUE

All warnings signs of early dehydration!

WHAT DO YOU THINK?

Which is the best example of something you could have 2 hours before exercise?

1. Egg, Toast, and Water
2. Egg, Toast with Peanut Butter, Water
3. Chicken Caesar Salad and a Smoothie
4. Applesauce and Juice

WHAT DO YOU THINK?

Which is the best example of something you could have 2 hours before exercise?

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Fueling During Training

WHAT DO YOU THINK?

You should never use sport drinks they contain too much sugar!

A. True

B. False

WHAT DO YOU THINK?

You should never use sport drinks they contain too much sugar!

A. True

B. False

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CARBS = YOUR MAIN HIGH-INTENSITY FUEL

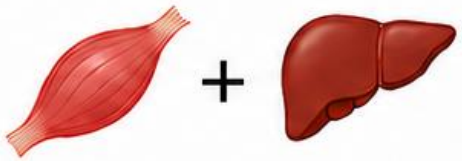
CARBS POWER YOUR TRAINING, HELP YOU PERFORM LONGER AND RECOVER BETTER!

1 EAT CARBS BEFORE TRAINING

Fills your fuel tank.

2 YOUR BODY STORES CARBS IN YOUR MUSCLES + LIVER

This stored fuel is called glycogen.



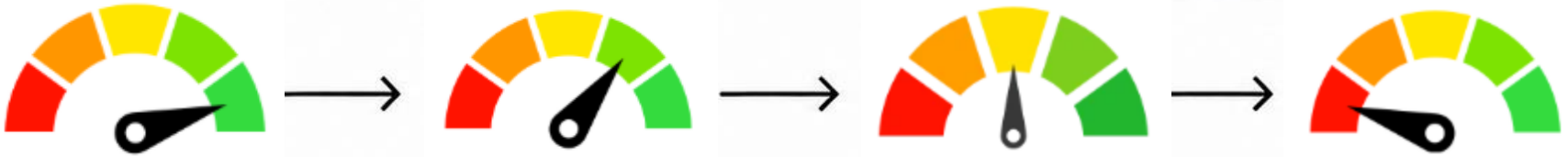
3 DURING TRAINING, YOU USE THAT STORED FUEL

The longer/harder you train, the more you use.

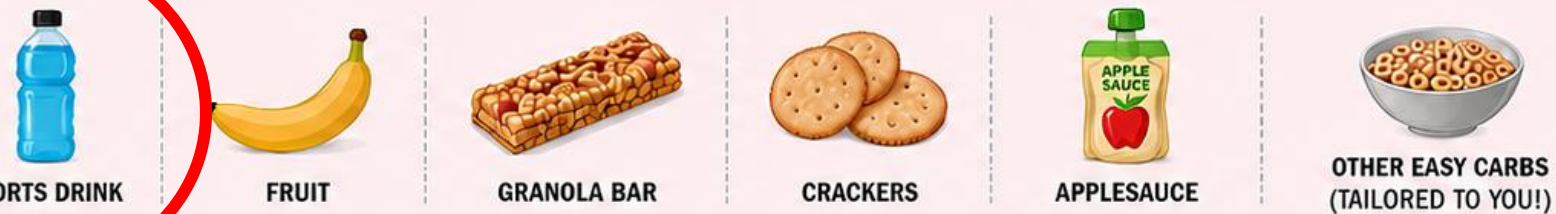
4 AFTER ABOUT 60–90+ MIN OF HARD TRAINING...

Your fuel tank may start getting low.

→ Energy, focus and quality of training can drop.



LONG SESSION? TOP UP YOUR FUEL!



DURING TRAINING…

- If your practice is LESS than 1 hour:
  - Water is usually enough.
- If your practice is MORE than 1 hour:
  - Add easy-to-digest carbs to keep your energy up
  - Tip: Choose a sports drink if you don't have time to chew a snack.
  - Especially in hot/humid environments or with more intense practices!

DURING EXERCISE…

- For exercise 1.0-2.5 hrs:
  - 30-60 g of carbs per hour of exercise
- Examples of 30g of carbs:
  - 500mL sport drink
  - 1 banana
  - 1 cup of pretzels
  - 1 granola bar
  - 2 Go-Go Squeez packs
  - 2-3 Welch's Fruit Snacks

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Fueling After Training

THE 3 R'S OF RECOVERY:

Refuel	Carbohydrate
Rebuild	Protein
Rehydrate	Fluid

*Eat **within 60 minutes** of exercise for the most benefit!*

AFTER EXERCISE:

Carbohydrate

Quick Energy

+

Protein

Slow Energy

RECOVERY MEAL/SNACK IDEAS:

Recipe idea:	Carbs (60g+)	Protein (20-40g)
Bagel sandwich	Whole grain bagel	3-4 oz deli turkey OR tofu slices + cheese + shelf-stable milk box
Greek yogurt bowl	1 cup granola + berries or banana	1.5 cups Greek yogurt
Chicken & rice burrito	Large tortilla + ¾ cup rice	3-4 oz. chicken + cheese
Overnight oats	1 cup oats + fruit + honey	1 scoop protein powder + milk
Pasta salad	1.5 cups pasta + veggies	Chickpeas or chicken
Snack box	1-2 cups fruit + whole grain crackers	1 cup cottage cheese

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PORTABLE OPTIONS:

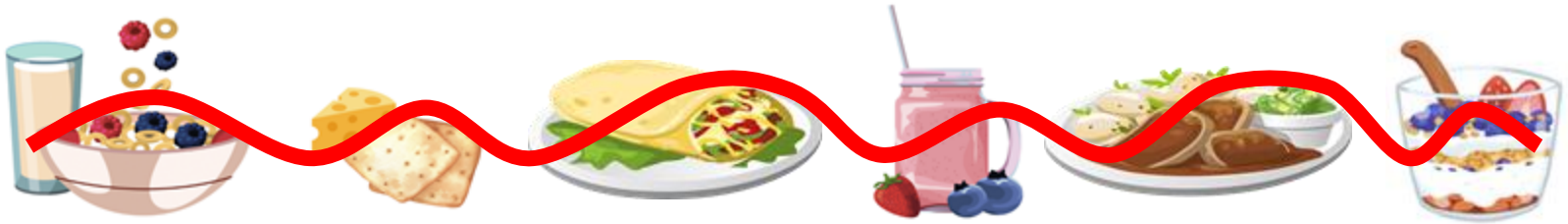
SUMMARY: General

Carbs

Protein

Fat

Water



Breakfast | Snack | Lunch | Snack | Dinner | Snack

Eat every 2-4 hours to maintain energy balance

SUMMARY: Athlete Plates

Easy/No Training Day

FATS - 2 tsp.
Oils
Avocado
Mayonnaise
Nuts, seeds
Butter
Margarine

FLAVOURS
Salt, pepper
Herbs, spices
Vinegar
Salsa
Mustard

Training Day

FATS - 1 tbsp.
Oils
Avocado
Mayonnaise
Nuts, seeds
Butter
Margarine

FLAVOURS
Salt, pepper
Herbs, spices
Vinegar
Salsa
Mustard

Hard Training Day

FATS - 2 tbsp.
Oils
Avocado
Mayonnaise
Nuts, seeds
Butter
Margarine

FLAVOURS
Salt, pepper
Herbs, spices
Vinegar
Salsa
Mustard

FUELING AROUND TRAINING

Before: 3-2-1 Model

Hours Before

3 PROTEIN/FAT + CARBS

2 PROTEIN + CARBS

1 CARBS

During: Quick Carbs

After: The 3 R's

3 R's OF RECOVERY

Refuel	Carbohydrate
Rebuild	Protein
Rehydrate	Fluid

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Thank you!
Any questions?

Rebecca Ourique, MHSc, RD

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