Fuelling for Swimmers Series

NUTRITION FOR OLDER ATHLETES

Supporting performance, recovery, and long-term health

Presented by Stefanie Rosser,
Registered Dietitian

ABOUT ME

- BSc. Dietetics at McGill University
- Member of l'Ordre des diététistes-nutritionnistes du Québec (ODNQ)
- Dietitian at Sööma in Pointe-Claire
- Specialities: eating disorders, disordered eating, sports nutrition and intuitive eating

Stefanie Rosser
Registered Dietitian

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WHAT TO EXPECT TODAY

01 IMPACT OF AGEING ON BODY AND PERFORMANCE

02 MACRONUTRIENTS & MICRONUTRIENTS

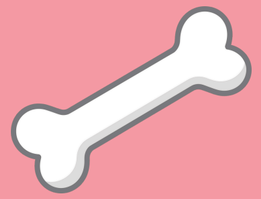
03 SUPPLEMENTS REVIEW

04 Questions

WHY THIS MATTERS?

Key considerations when aging

Bone density



Lean mass preservation

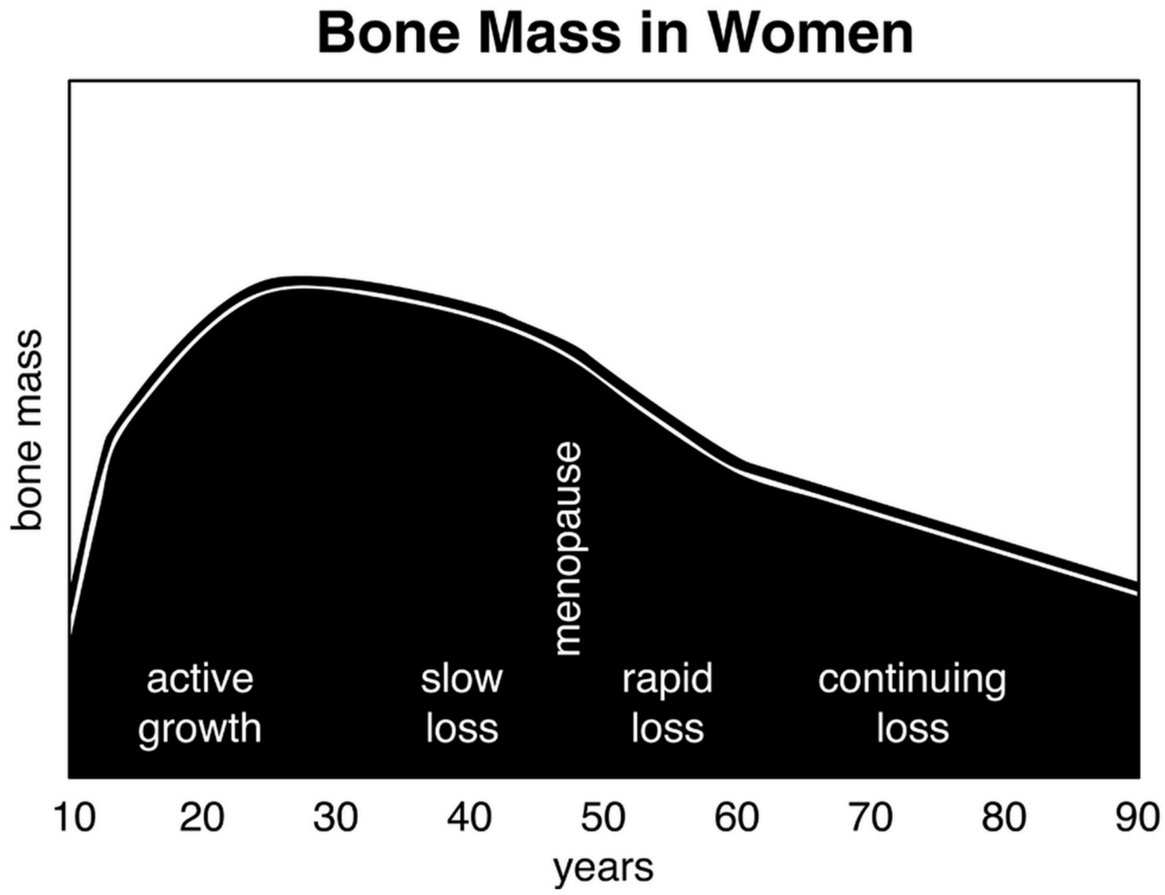
Performance longevity

Inflammation & Recovery

Immune Function & Energy

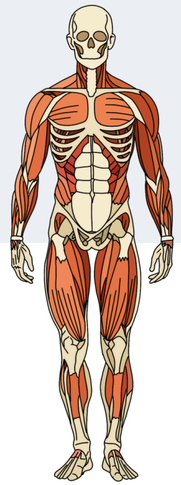
BONE HEALTH

- Bone mass peaks ~age 30–35, declines after 40
- Needs: Calcium, Vitamin D, Magnesium, Protein
- Weight-bearing & resistance exercise support bone remodeling

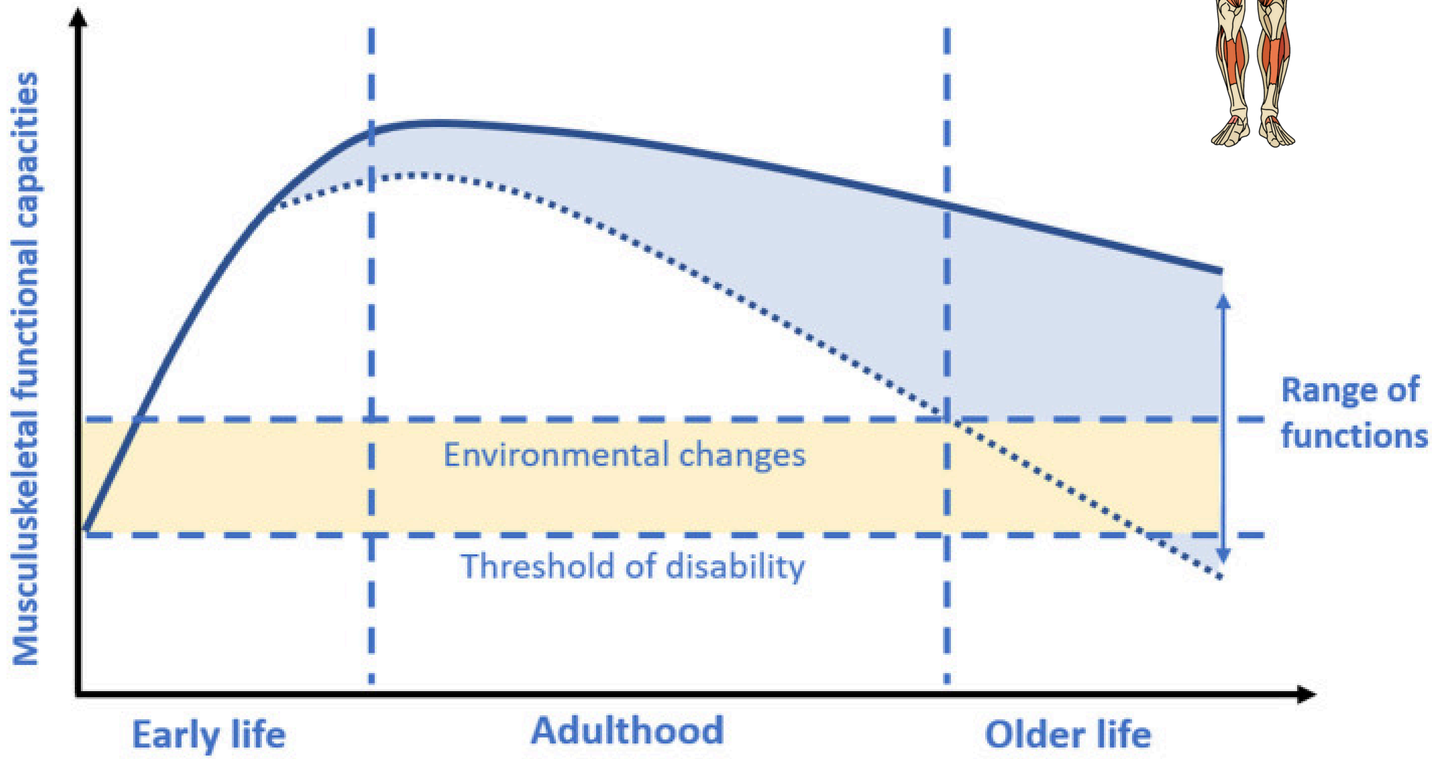


Reproduced from J Bernstein, ed: Musculoskeletal Medicine. Rosemont, IL, American Academy of Orthopaedic Surgeons, 2003.

LEAN MASS PRESERVATION



- Sarcopenia: ~1% muscle loss per year after 40 without intervention
- Emphasize resistance training & adequate protein
- “Use it and fuel it, or lose it.”

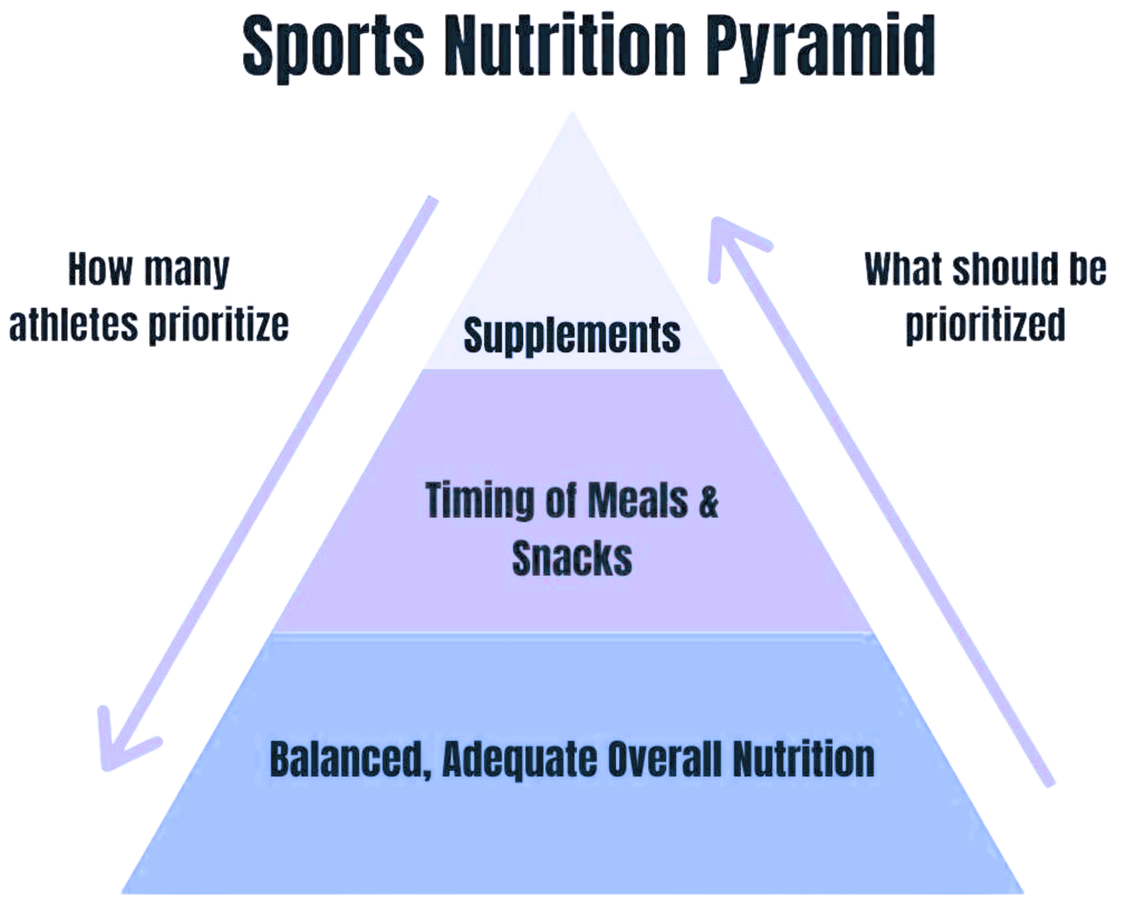


Azzolino D, Spolidoro GCI, Saporiti E, Luchetti C, Agostoni C, Cesari M. Musculoskeletal Changes Across the Lifespan: Nutrition and the Life-Course Approach to Prevention. Front Med (Lausanne). 2021 Aug 31;8:697954. doi: 10.3389/fmed.2021.697954. PMID: 34532328; PMCID: PMC8438318.

RECOVERY & INFLAMMATION

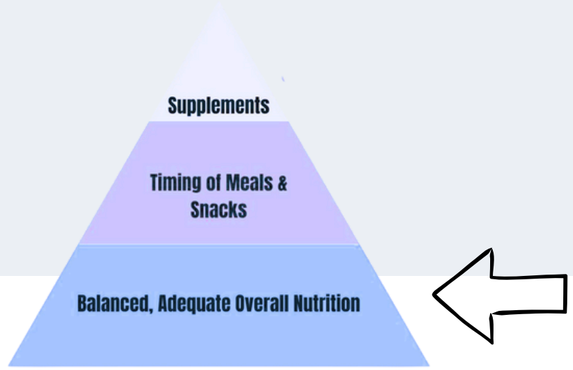
Age alone does not substantially impair sports recovery in physically active individuals.

NUTRITION PRIORITIES



NUTRITION PRIORITIES

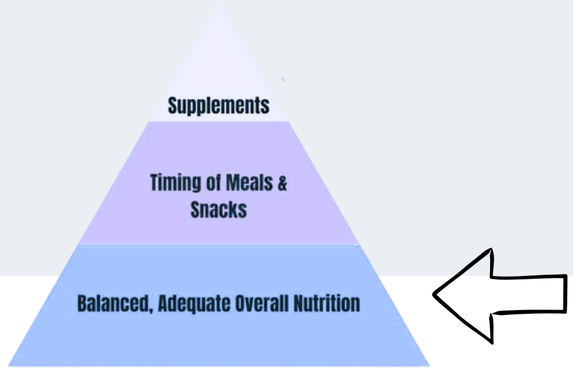
EATING ENOUGH



- Energy restriction leads to:
  - bone loss
  - muscle breakdown
  - hormonal disruption
- Match intake to training load, not age-based “diet culture” expectations
- Aim for consistent fueling every 3–4 hours
- Pre/post training fuel = non-negotiable

NUTRITION PRIORITIES

EATING ENOUGH



Signs of underfueling

Physical:

Fatigue

Weight loss

Irregular/lack of periods

Muscle soreness

Psychological:

Anxiety

Difficulty sleeping

Brain fog

Irritability

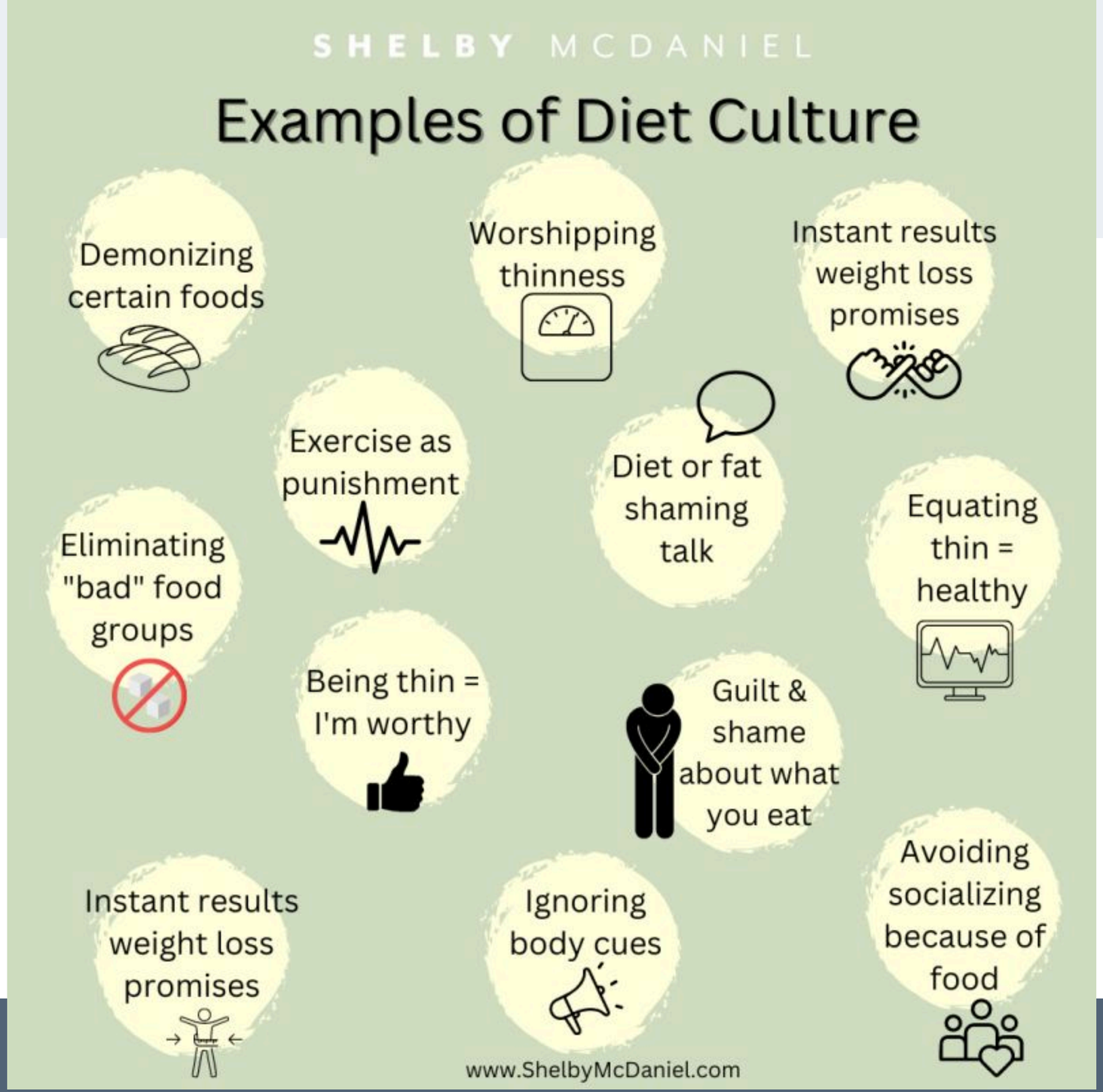
Performance:

↓ Performance

↑ Plateaus

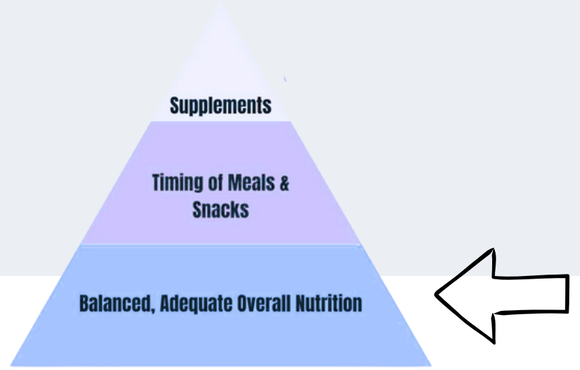
↑ Injuries

Why do people struggle with eating enough?



NUTRITION PRIORITIES

MACRONUTRIENTS

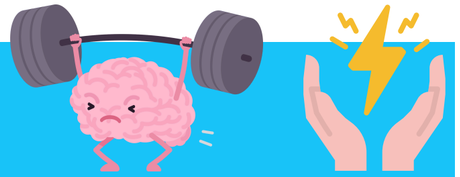


CARBOHYDRATES
40-60%

PROTEIN
20-30%

FATS
20-30%

CARBOHYDRATES



Why are they important?

- Main source of energy for swimmers, especially in higher-intensity events
- Essential for brain and muscle

What are their roles?

- Energy production - they get converted to energy
- Sustain performance - stored glycogen for longer practices and competitions
- Muscle endurance and repair - help delay fatigue and aid protein to synthesize muscle

CARBOHYDRATES

SIMPLE

COMPLEX

Power, speed and endurance are all important for swimmers!

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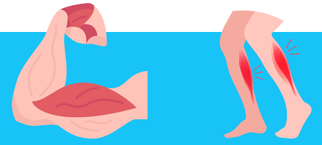
PROTEIN



Why are they important?

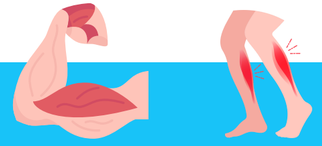
- Help to build, repair and maintain muscle

What are their roles?

- Support the immune system and digestion as proteins make up antibodies and enzymes
- Ensure recovery after training by repairing muscle tears
- Work with carbohydrates to build muscle

The repetitive movements in swimming and high training load can cause muscle breakdown!

FATS



Why are they important?

- To ensure they body gets enough fuel

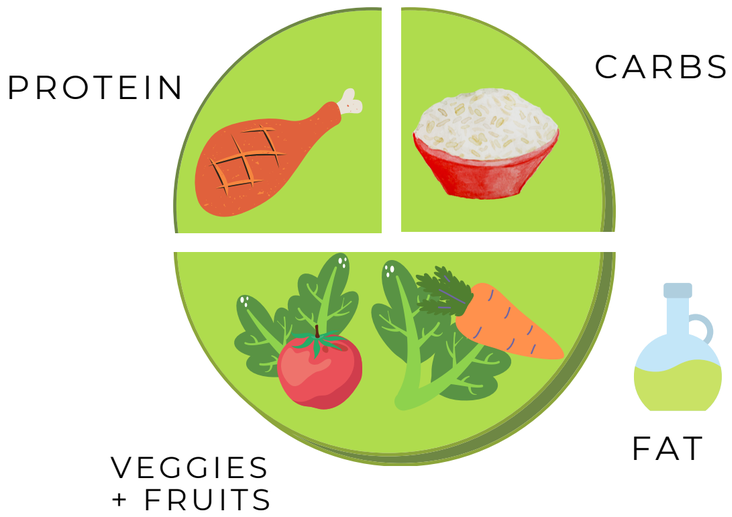
What are their roles?

- Source of longer-term fuel as take more time to digest than the other macronutrients
- Essential for hormone production, which affects growth, development and menstrual cycle
- Manage inflammation through antioxidant support and maintenance of cell membrane health

Swimmers can have very high energy needs and often swim more than once a day!

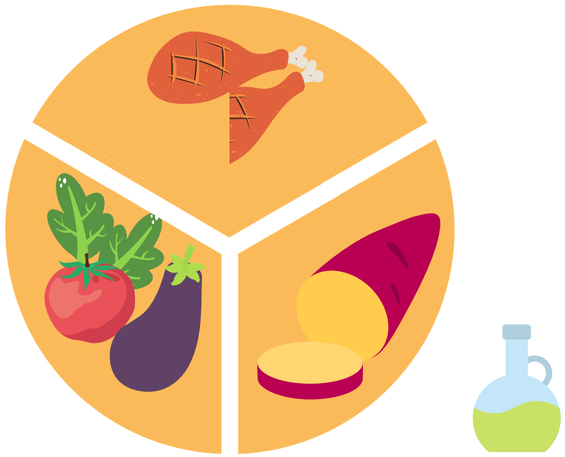
DAY TO DAY FUELING - MEALS

EASY
FACILE



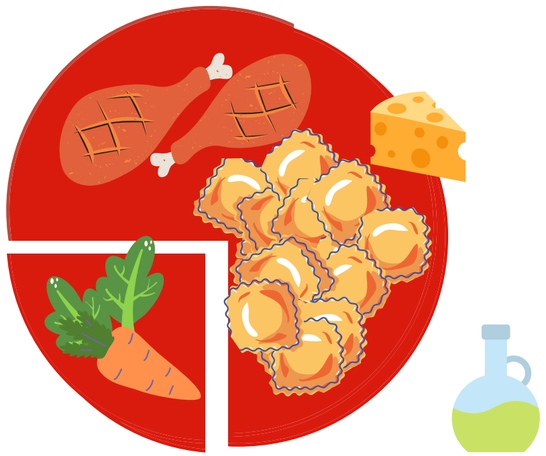
- Rest day
- Yoga or stretching
- Walk

MEDIUM



- 30-45 min event (one per day)
- 1h-2h practice or outdoor activity (ski, hike, etc.)
- 60 min land training

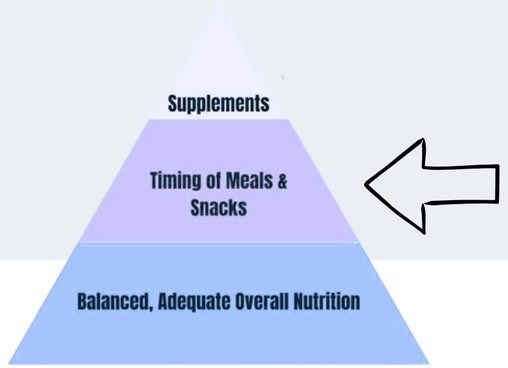
HARD
DIFFICILE



- >60 min event or multiple events in the same day
- >90 min land training
- 3h-4h outdoor activity
- Training camps

NUTRITION PRIORITIES

TIMING - BEFORE



3 HOURS BEFORE

High Complex Carbohydrates + Moderate Protein + Low fat

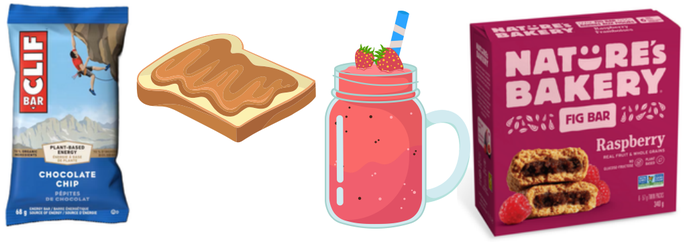
Have a snack, high in carbohydrates, low in fat and moderate in protein.

- Chicken sandwich with a salad
- Greek yogurt with fruit and granola
- Smoothie with fruit, protein powder and seeds.
- Spaghetti with meat sauce

1-2 HOURS BEFORE

Complex Carbohydrates

Glucides Complexes



Have a snack, high in carbohydrates, low in fat and moderate in protein.

- Bagel with nut butter
- Yogourt with granola
- Crackers with cheese
- Chocolate milk and a fruit

<1 HOUR BEFORE

Simple Carbohydrates

Glucides Simples

Have a snack, that is high in carbohydrates. Choose easily digestible foods or liquids.

- Sports drinks/gels
- Fresh or dried fruit
- Apple sauce

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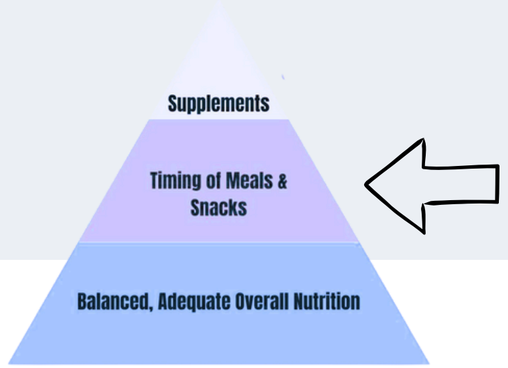
NUTRITION PRIORITIES
TIMING - DURING



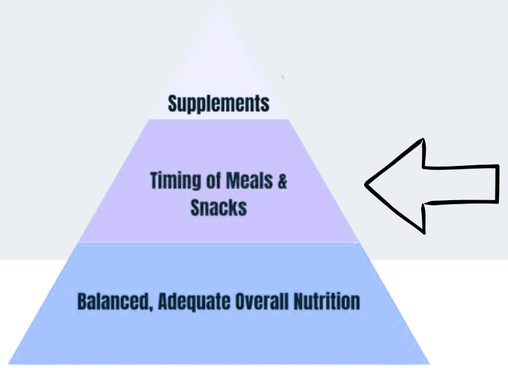
≤1 h

- Stay hydrated with water every 15-20 minutes

>1 h

- 30-60 g carbohydrates every hour
- Sports drinks (ex. 1 bottle of Gatorade)
- Apple sauce
- Dried fruit

NUTRITION PRIORITIES
TIMING - AFTER



- Within 60 minutes after: “Window of Opportunity”
- Glucose uptake is more efficient due to insulin sensitivity and increased blood flow
- Stimulation of muscle growth and resynthesis of tissues (up to 2-4 hours after)

Carbohydrates

+

Protein

Snacks

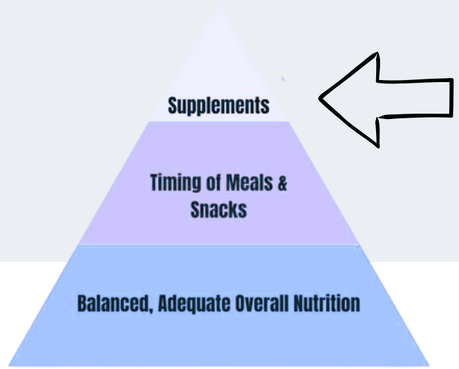
- Smoothie with fruits and Greek yogurt
- Milk (regular, chocolate or soy)
- Cheese and crackers

Meals

- Pasta with meatballs
- Meat/fish/tofu with rice or potatoes and veggies
- Tuna/egg sandwich with raw veggies and hummus

NUTRITION PRIORITIES

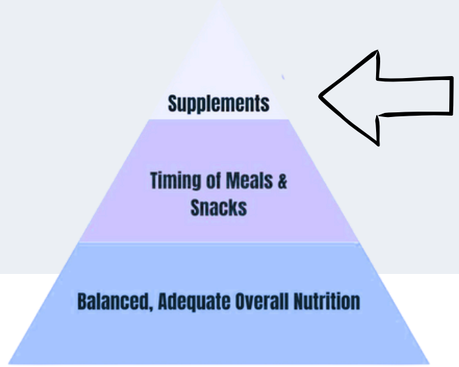
MICRONUTIENTS



Potentially useful vitamins:

- Vitamin D & Calcium: foundational for bone health
- Iron: monitor especially for menstruating women or vegetarians
- Magnesium & Zinc: support recovery

NUTRITION PRIORITIES
SUPPLEMENTS



Emphasize evidence-based!

Worth considering:

- Creatine monohydrate (3–5 g/day): can supports muscle retention & recovery
- Vitamin D (as needed based on levels)

Use with caution or low evidence:

- Collagen (inconsistent data)
- BCAAs (redundant if protein intake is adequate)

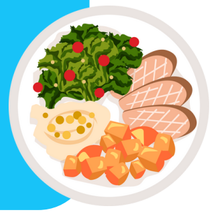
KEY POINTS

Eat Frequently

Aim for **5-6 nutrient dense meals or snacks** each day. This helps fuel your performance and maintain constant energy levels throughout the day.

Balanced Nutrition

Try incorporating a source **of carbohydrates, protein, and fats** into most meals and snacks. This combination helps provide sustained energy.

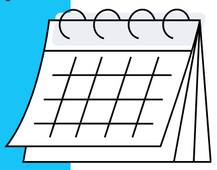


Stay Hydrated

Fluid loss of more than 2% body weight can lead to impaired training and performance.
Plan to drink 2 cups of water 2-3 hours before practice/events. Monitor color of urine, with light yellow meaning you are likely well hydrated.

Plan Ahead

Look at your weekly training schedule and other events. **Plan to prepare or bring meals and snacks with you** and get a sense of what's provided on site.
Develop and test your fueling and hydration strategies before competitions and events.



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QUESTIONS?

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THANK YOU!

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REFERENCES

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