



FUEL BETTER, STAY HEALTHY,
PERFORM WELL & NAIL YOUR
RACE DAY GOALS

Presented by Emily Moore, RD, CPT

July 30, 2025

#### About Me



Runner

Registered Dietitian for 9 years

Run & Strength Coach for 4 years

Founder of The Dietitian Runner

# Why Nutrition Matters

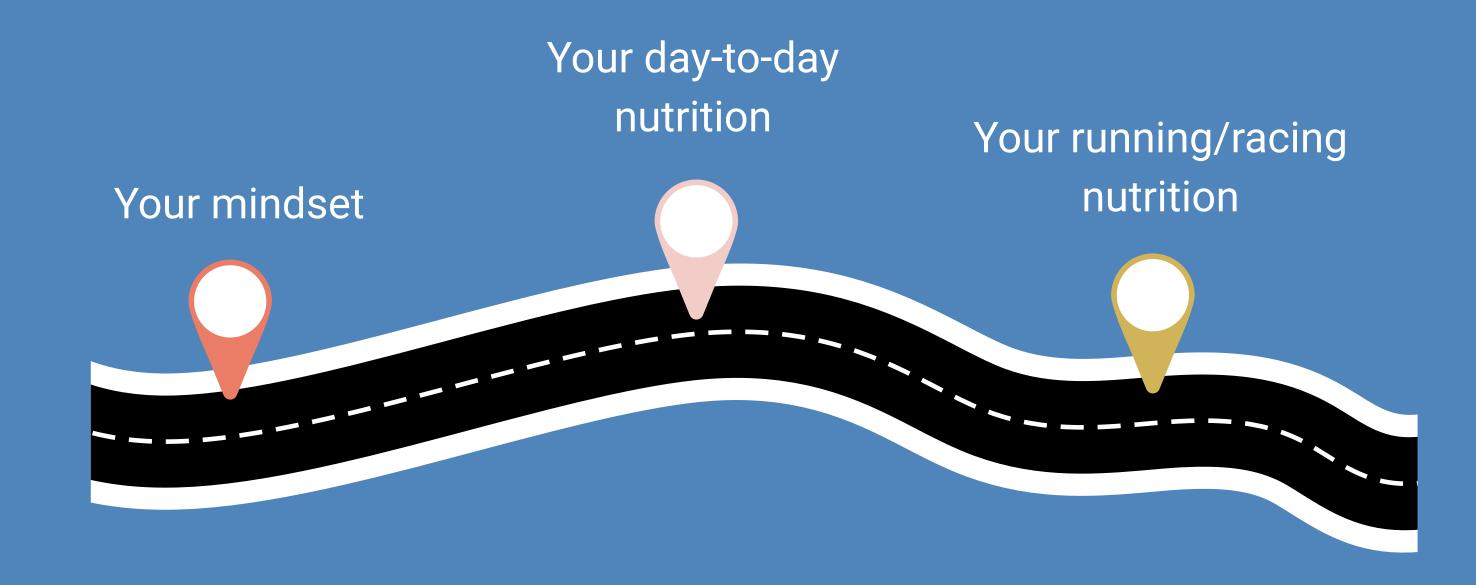
- Energy, performance, recovery, injury prevention
- Marathoners have high calorie & nutrient needs
- Underfueling can result in:
  - Nutrient deficiencies, cravings/overeating at night, poor energy, frequent illnesses and injuries, decreased immune function, muscle & bone loss, poor performance & hitting the wall, poor exercise recovery, irregular/loss of period in female athletes

Average person's calorie needs

Marathoner's calorie needs

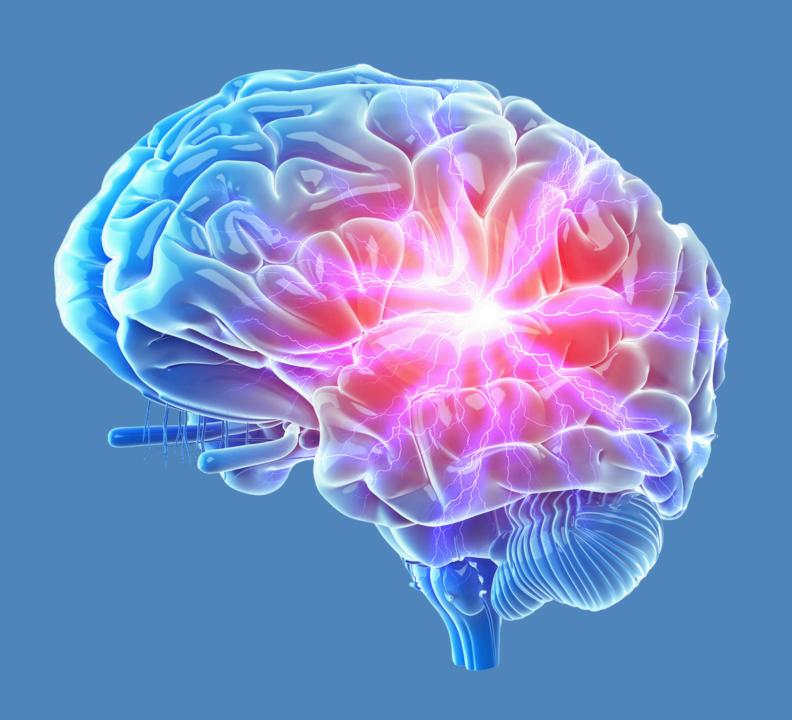






#### Mindset





- Determines how you fuel & nourish your body
- X Restriction & dieting mindset
  - Restrict/binge cycle
- de Having an optimization mindset

YOU ARE AN ATHLETE, IT'S TIME TO START FUELING LIKE ONE, OK?

#### Mindset

- NOT the time to focus on weight loss goals
  - A calorie deficit is dangerous during marathon training
    - Increased risk for Low Energy
       Availability (LEA): body isn't getting enough calories to support everything it needs to do (exercise, recovery, hormone production, bone health, etc)
    - Can progress to RED-S (Relative Energy Deficency in Sport)



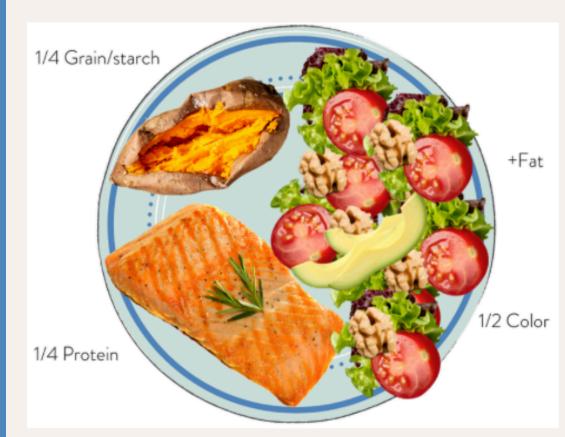
# Daily Nutrition

- Your nutrition foundation.. for your energy, health & performance
  - Calorie intake
  - Macronutrient intake
  - Micronutrient intake
  - Hydration & electrolytes
  - Meal planning, shopping, prepping
  - Pantry/fridge/freezer staples for quick, easy nourishing meals
  - Nutrition supplements
- Each athlete has their own unique needs



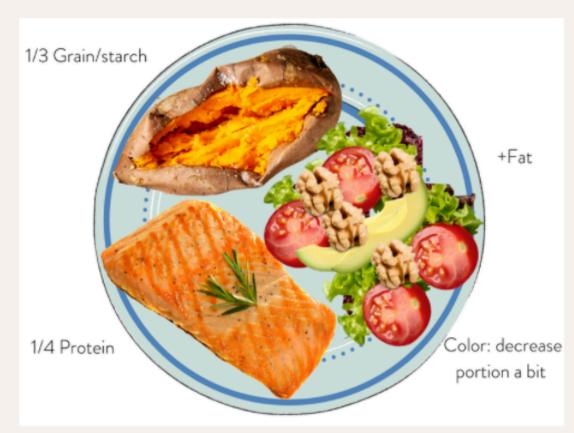


#### Runner's Plates



#### Easy Training Plate

- Use when NOT in a training cycle
- Appropriate for 20-30 min of easy effort exercise



#### Moderate Training Plate

- Use when in a training cycle
- Appropriate for 30-60 mins of easy effort exercise



#### Hard Training Plate

- Use when in a training cycle
- Appropriate for 60+ mins of easy effort exercise, 45+ mins of speed work, before/after long runs

#### 000

#### Runner's Plates

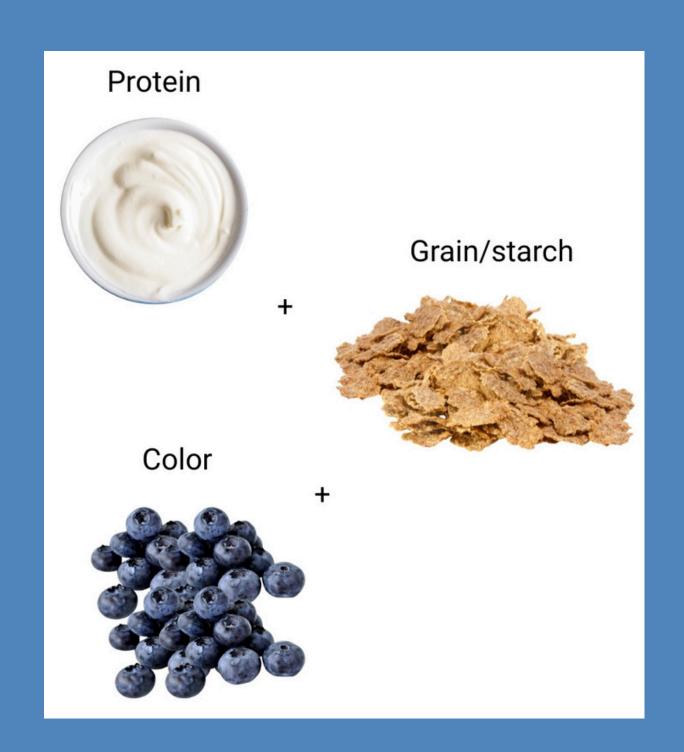


- As your mileage increases, this is also what significantly increases..
  - Daily calorie needs
  - Daily carbohydrate needs
  - Daily fluid and electrolyte needs
- Not increasing= underfueling, dehydration, inadequate electrolytes



#### Runner's Snacks

- Outside of running (not right beforehand)
- NOT BAD, helpful to meet your nutrient needs & prevent underfueling
- Carbs= energy, exercise recovery, to support your brain
  - When increasing mileage, make snacks more carb-rich
- Protein= muscle recovery + protein & fiber can assist with blood sugar control
- Color= micronutrients, antioxidants & fiber to keep you fuller longer





- Carbs, fat, protein
  - ALL ARE ESSENTIAL FOR HUMANS
  - MARATHONERS NEED ALL 3!







# Carbohydrates



- Main energy source
- Essential for runner's recovery
- Supports muscle mass & prevents muscle loss
- Boosts brain power
- Decreases injury risk
- Starchy veggies, legumes, fruit, dairy & grains
- Both simple/refined & complex carbs have a place in runner's nutrition
  - Complex= at meals & snacks away from exercise
  - Simple= within the hour of exercise (pre-run fuel),
     during exercise, during carb loading

# Carbohydrates

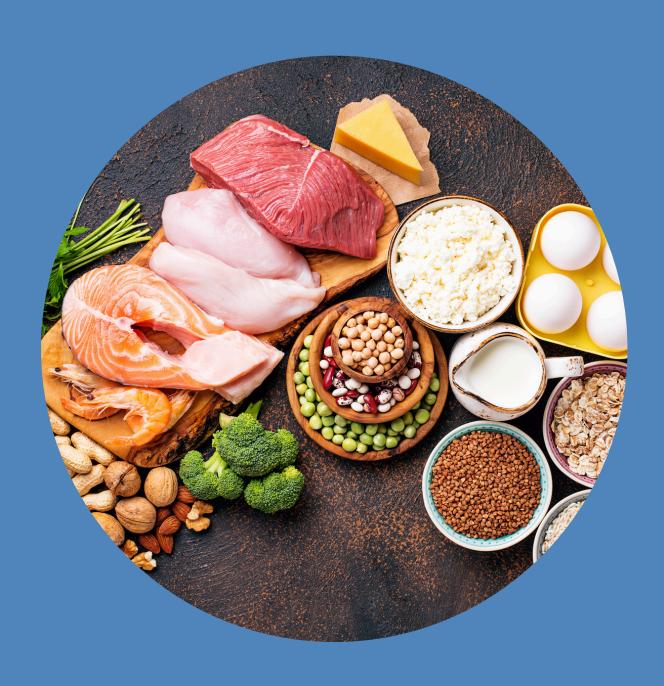
• Sports nutrition guidelines for endurance athletes:

Daily carb requirements (grams/kilogram body weight/day)	Exercise		
3-5 g/kg/day	Sedentary or very light training of short duration		
5-7 g/kg/day	Moderate intensity training, 1 h/day		
6-10 g/kg/day	Moderate to high intensity training, 1-3 hrs/day		
8-10 g/kg/day	Moderate to high intensity training, 4-5 hrs/day		



#### Protein





- Post-exercise muscle repair & recovery
- Supports lean body mass as we age
- Used to make hormones & enzymes
- Meat, seafood, dairy, eggs, legumes, soy. We also get \*some\* protein from nuts & seeds but not high protein food
  - Aim for a variety of protein-rich foods
- Sports nutrition guidelines for endurance athletes:
   1.4-2 g/kg/day

#### Healthy Fats





- Provides energy
- Helps the body absorb fat-soluble vitamins A, D, E, K
- Satiety
- Essential for hormone health
- Anti-inflammatory
- Fatty fish, olive oil, avocado, nuts & seeds
  - Omega 3s are essential fats that help manage inflammation, improve exercise recovery, reduce DOMS
    - Aim for at least 2 servings of fatty fish per week
    - Some athlete may benefit from a 3<sup>rd</sup> party tested omega 3 supplement
- Sports nutrition guidelines for endurance athletes: 20-35% of total daily calories

#### Micronutrients

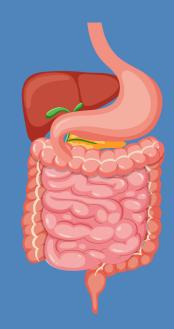
- Vitamins & minerals
- Essential to your health, hydration, immune system, energy level, recovery, performance, etc
- Runners can have higher micronutrient requirements and be at risk for micronutrient deficiencies
- FOOD FIRST!
- Eat a wide variety of foods, a variety of color (fruits + veg) & switching up what you eat each week
- Blood work first & consult with sports dietitian before supplementation, DO NOT supplement blindly



# Hydration



Protects joints & tissues



Supports digestion and metabolism



Regulates body temperature



Transports nutrients, oxygen and waste products







Supports performance

# Daily Hydration





- To estimate daily needs: your weight in lbs cut in half= \_\_\_\_ oz of fluids/day
  - 160 lb runner= 80 oz/day
  - If weight is triggering to you, just estimate your weight
  - All fluids count, sip all throughout the day, avoid chugging
  - BASELINE NEEDS ONLY- need to add hydration before, during & after workouts



•••

- Nutrient timing to enhance energy, performance & exercise recovery
- Use the guidelines I provide then personalize
- May require a bit of trial and error but figure this out DURING training!
- WILL NOT make much of a difference if you have a lot of gaps in your daily nutrition so that's your first priority and then we can put this piece into place

Pre-workout

**During workout** 

Post-workout

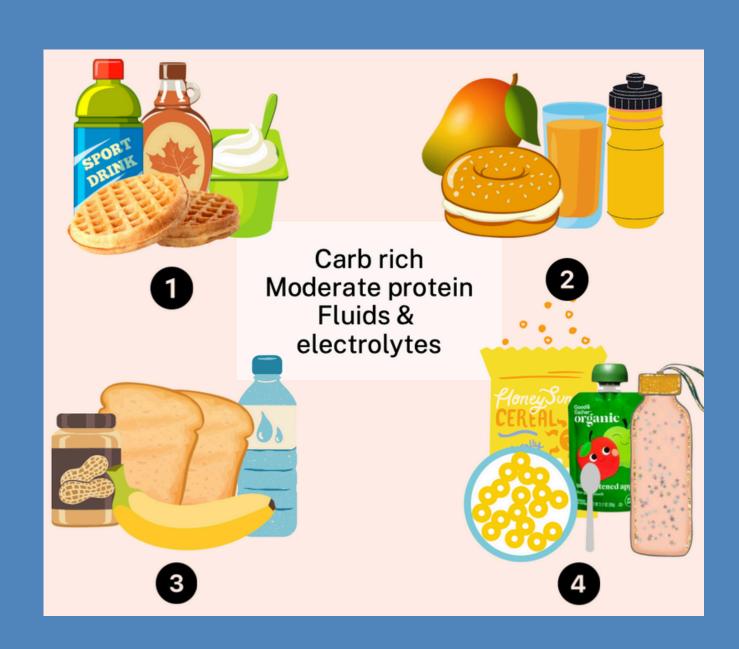
#### Pre-Workout Nutrition

- FUEL BEFORE ALL WORKOUTS
  - Supports energy, performance & to get the most out of your workouts
  - Better you can train, better you'll set yourself up for a strong race
- For workouts that are <1 hour= low fiber carbs</li>
  - If limited time to digest, (like before early morning run), choose a snack low fat, fiber & protein
    - Graham crackers, dried dates, banana,
       toaster waffle, fruit pouch, carb-rich sports
       drink, juice, bar



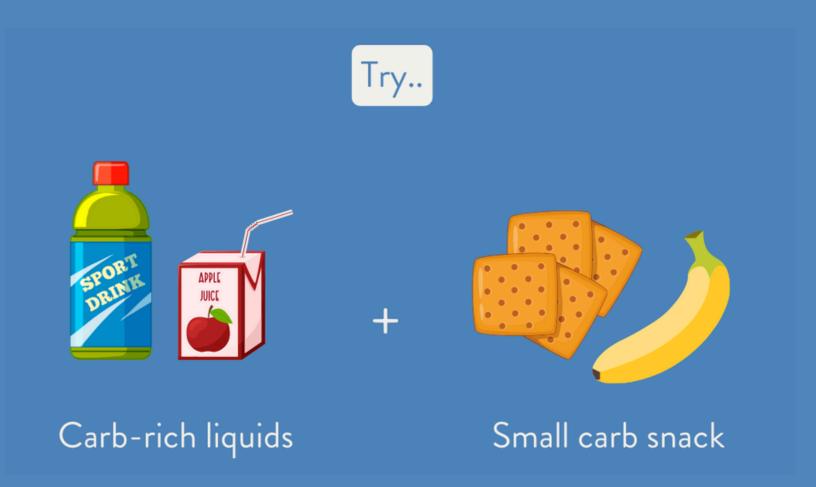


- For workouts that are >1 hour
  - Need to eat more to sustain you throughout your run
  - Let yourself digest before running
  - Goal= carb-rich breakfast + some protein if you have the time to digest + sports drink
  - Aim for minimum of 1 g/kg of carb
    - Would benefit from further optimizing to 1.5 2 g/kg carb before long runs & races
  - Test out before long runs
  - Can turn into your race day breakfast



#### Pre-Workout Nutrition

- If limited time for digestion before long runs
  - Try low fiber carb snack + carb-rich sports drink
    - 2 scoops of Skratch Labs Sport + 3 graham
       cracker rectangles= 73 g carb
    - 1 pouch of Tailwind High Carb Fuel (90 g carb) + toaster waffle= 104 g carb
    - 2 cups apple juice + banana= 87 g carb
- DO NOT NEED TO BE AFRAID OF SUGAR



# During Long Run Nutrition











**CARBS** 

**FLUIDS** 

**ELECTROLYTES** 

## During Long Run- Carbs

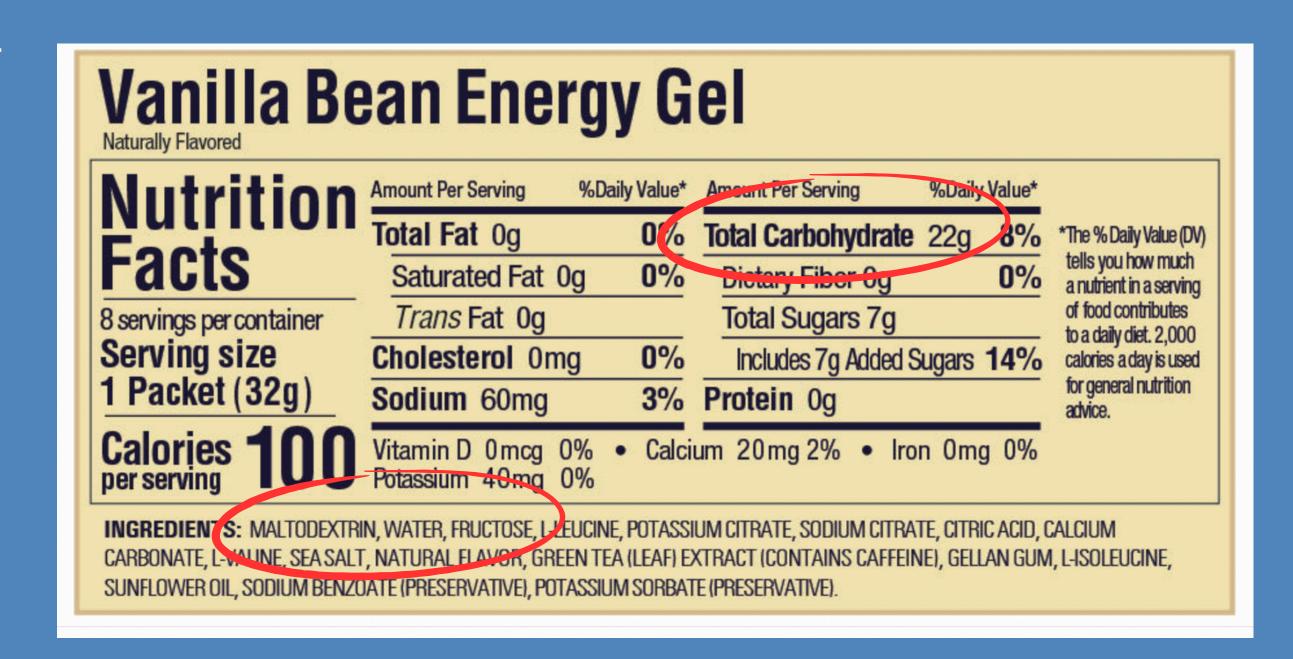
- Carbs
  - Low fiber carbs and sugar is best
  - Less blood flow to gut during running= digestion is slowed
- Can choose food or sports nutrition products or a combo
  - Trial different options during training
- Race Day:
  - Nuun Endurance (has carbs) ~every two miles until mile 20,
     then every mile thereafter
  - GU energy gel (Vanilla Bean & Strawberry Banana) at miles 14 and 21 \*TWO GELS FOR A MARATHON IS NOT ENOUGH
  - Junk Food Stops at miles 16 & 22 \*nothing new on race day
  - Pickle Juice at mile 23 \*source of sodium, not fuel\*





## During Long Run- Carbs

- How much?
  - Goal is 60-90+ g/hour of carbs
  - Starting hour 1
  - Carb-rich sports drink+ gels/chews/food
- Choose a blend of carb types for better absorption & tolerance
   Examples: maltodextrin + fructose or fructose + glucose



# During Long Run- Carbs











1 GU gel + 1 Crank Sports E- Gel per hour= 59 g carb 1 packet Skratch Labs Sport = 19 g carb = 78 g carbs

- Take 1 gel every 25-30 mins during running + drink 1 scoop of Skratch Labs Sport per hour (bring individual packets to refill bottle on long run/during race)
- Work on building up to your targets over time DURING training!

## During Long Run-Fluids

- Fluids
  - Goal= avoid dehydration (>2% of body weight) & avoid overhydration
  - Signs of dehydration:
    - Fatigue, headaches, nausea, vomiting, dark colored urine, dry mouth and skin and feeling really thirsty.
    - Increased body temp, at risk for heat exhaustion & heat stroke, makes your heart work harder, use more glycogen stores
  - Dangers of overhydrating (especially of dilute fluids like water)=
     exercise-associated hyponatremia
    - Signs: nausea, vomiting, headache, weakness, lethargy, seizures, death

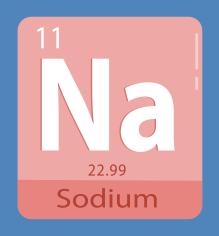


# During Long Run-Fluids

- How much?
  - Runs <1 hr: not necessary BUT know your body & may be necessary in this hot, humid weather
  - Runs >1 hr: absolutely neccessary
    - Based on individual sweat rate (ID through sweat testing), general sports rec is 14-27 oz/hr
- Hit your hourly goal within the first hour
- Start sipping within the first 10-15 mins of running, don't wait until thirsty to drink
- Practice NOW and slowly build up to goal during training
- Practice using the same products and gear to carry hydration during training that you'll use on race day

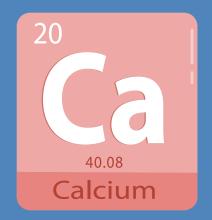


- Electrolytes
  - We lose 5 in our sweat





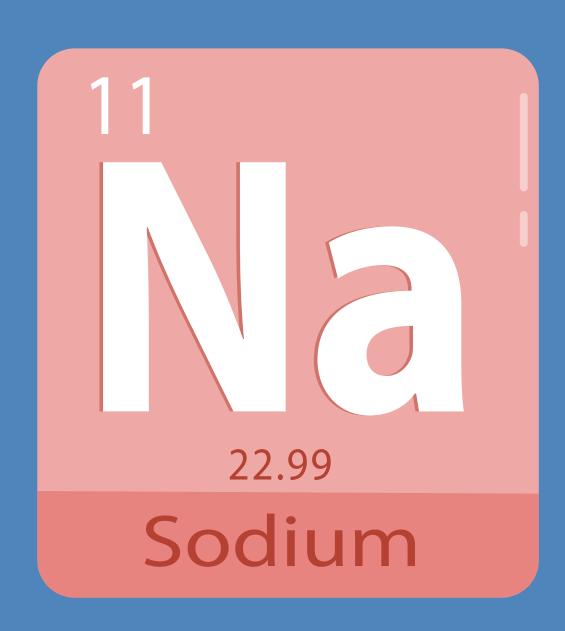






- Generally lose the most sodium
- Can vary wildly between runners





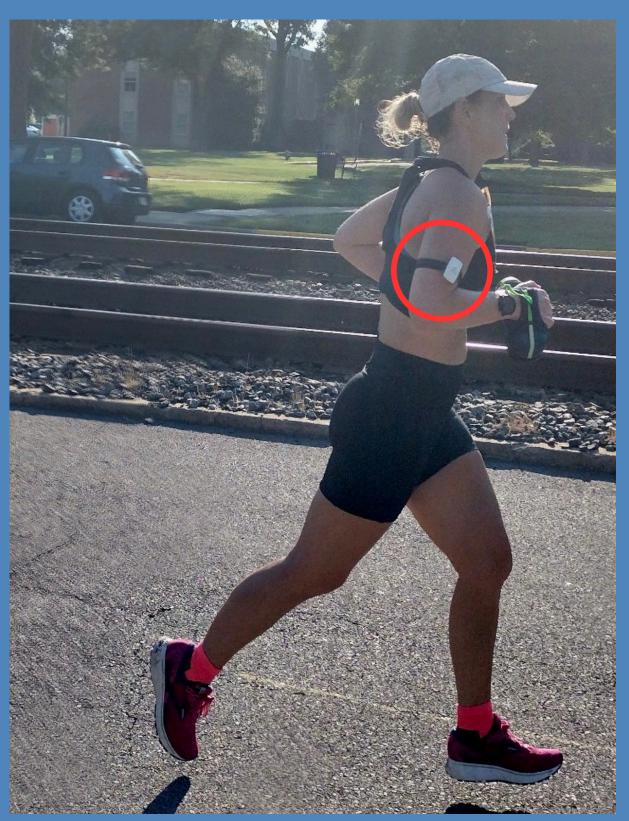
- Important with sweat losses & to prevent exerciseassociated hyponatremia
- How much do we need?
  - Based on individual sweat electrolyte composition (sweat testing)
  - General sports rec is at least 300-600+ mg/hr of sodium during running
  - Salty sweaters may need more, 600-1000+ mg/hr
- Runners need sodium & daily sodium needs are generally high (general recommendation of limiting sodium to 2300 mg/day doesn't pertain to runners)

- Signs that you're a salty sweater
  - Salt crystals on skin, gritty feeling
  - White stains on the inside brim of hat
  - White stains on clothes









#### My sweat test results from a 206 min run





36.4 Oz/h Avg Sweat Rate





658.1 mg Est. Potassium Loss



40.51 mg/Oz Sodium Conc.



0.0 minute 1st Sweat Drop



#### Electrolyte Products

Dietitian Runner For during running that I often recommend to my clients













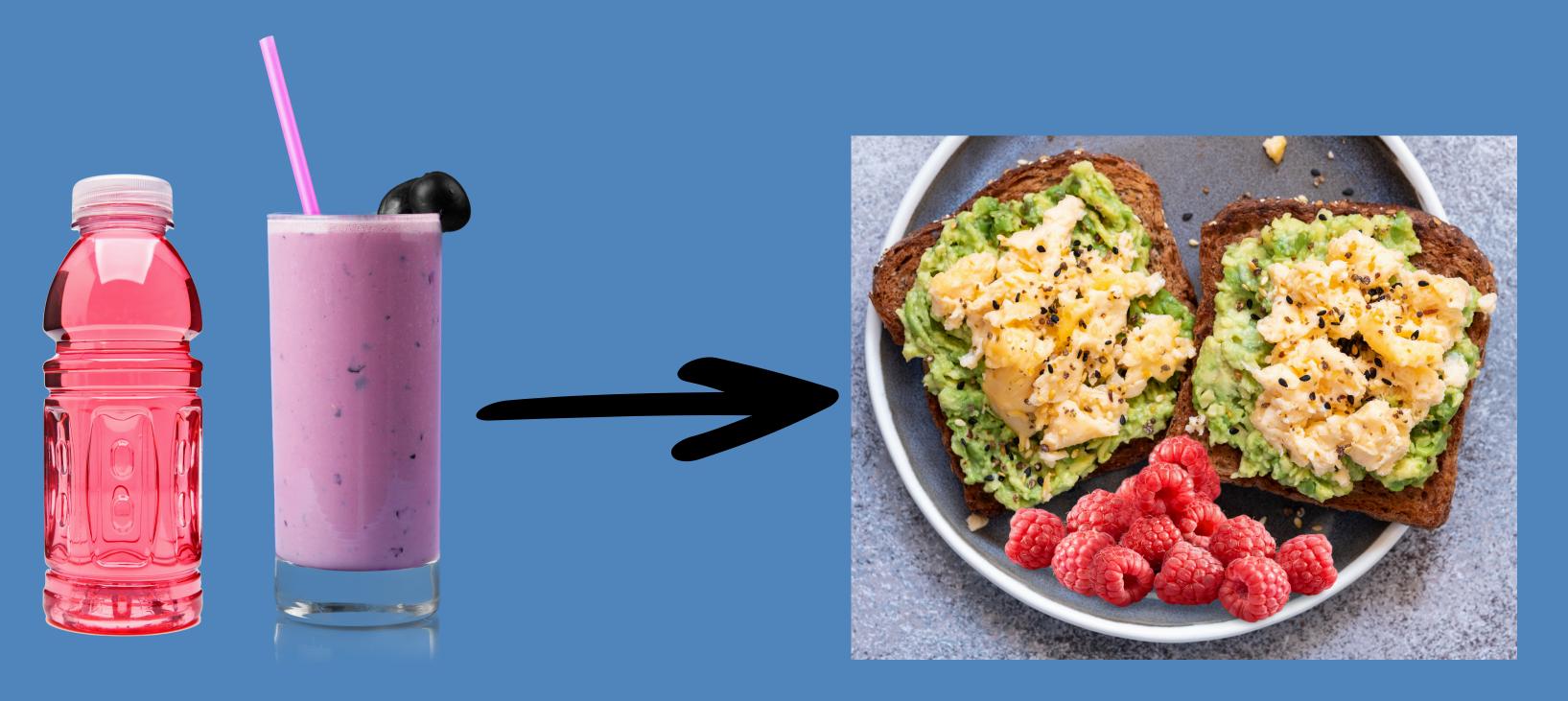
- Higher sodium gels:
  - Crank Sports E-gels
  - Huma Gel Plus
  - Victus
  - Amacx
  - Carbs Fuel \*Salted\* Gel

#### Post-Workout Nutrition

- Goal: to provide your body with nutrients to support your recovery
  - Important after each workout but especially after long runs and high intensity runs when glycogen is more depleted and higher degree of muscle breakdown
- Intentional nutrition right after exercise= better exercise recovery
- Delayed nutrition after exercise (waiting hours to eat after you finish a workout)=
   poor recovery & increased injury risk
- 2 options:
  - 1- Get a carb + protein snack in with fluids & electrolytes then follow it up with a meal (use Runner's Plate framework)
  - 2- Go straight for the meal but get it in asap
- GET INGREDIENTS AT STORE WHEN SHOPPING- PLAN AHEAD!

### Post-Workout Nutrition





# Carb Loading

- Race- specific, benefits performance for races that are >90 mins
- Goal is to optimize glycogen stores which has been show to..
  - Improves endurance performance by 2-3%
  - Extends the duration of steady state exercise by 20%
  - Postpones fatigue
  - Helps you avoid hitting the wall during racing

#### **Sports Nutrition Guidelines**

Day	Training	Carbohydrate	
1	Rest/light shake out jog	8-12 g/kg/day	
2	Rest/light shake out jog	8-12 g/kg/day	
3	Rest/light shake out jog	8-12 g/kg/day	
4	Race day	Follow plan for before, during and after long run/race	





# Carb Loading

- Example: A 170 lb runner= 77 kg x 8-12 g/kg/day= 618-924 g/day
- Focus on low fiber carbs (refined/simple grains) and carb-rich fluids
- This is not intuitive
- Plan for 3 meal/day + morning snack + afternoon snack + carb-rich liquids at all meals & snacks

	Breakfast	AM Snack	Lunch	PM Snack	Dinner
Day 1 Total carbs:					
Day 2 Total carbs:					
Day 3 Total carbs:					
Day 4 RACE DAY					



#### The Dietitian Runner Newsletter

Some of the links on this page are affiliate links, which means I may earn a commission if you make a purchase- at no additional cost to you. I only share things I use and love.

Hey Emily!

Hello from Wilmington NC!\*

We moved over the weekend. After 2 days of unpacking and finding homes for everything, we are settling in and so far absolutely loving it! I found a shady new running path this morning and got my first run in here! It's a bit hotter than Virginia but I love being by the water! Ok, so now onto today's newsletter!

Have you ever heard of nutrient timing?

They're fancy words for pre-workout, intra-workout and post-workout

# Join The Dietitian Runner Newsletter

For weekly nutrition & training tips join <a href="here!">here!</a>



# Questions?

- hello@emilymoorenutriton.com
- thedietitianrunner
- https://thedietitianrunner.com