



**PERFORMANCE NUTRITION
FOR SWIMMERS
JUSTIN KLEIN RD, CSSD, LD**

Overview

A vibrant display of fresh fruits and vegetables in wooden baskets. The scene is filled with various produce, including apples, lemons, grapes, and carrots, arranged in a neat and appealing manner. The lighting is warm, highlighting the natural colors of the food.

+ Nutrition Principles

+ Macronutrients

+ Nutrient Timing

+ Supplements

+ Hydration

+ Nutrition For Injury

Current Landscape



- Bigger weight rooms and better S&C programs



- Top notch facilities



- Better sports medicine facilities

Current Landscape



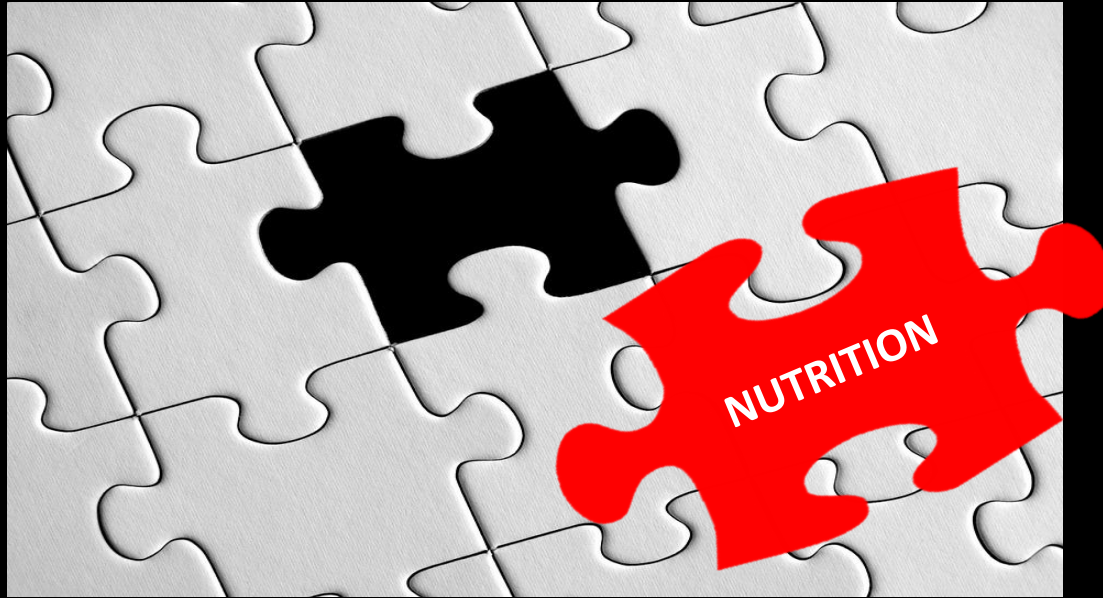
- Better locker rooms



- Better uniforms and equipment


Current Landscape

- So what is the missing piece to the puzzle?





NUTRITION CAN MAKE A GOOD ATHLETE **GREAT** OR A **GREAT** ATHLETE GOOD.



“Nutrition is often the **LIMITING** factor in a training program.

Those who **OPTIMIZE NUTRITION**, maximize results.”

MAKE IT ABOUT YOU

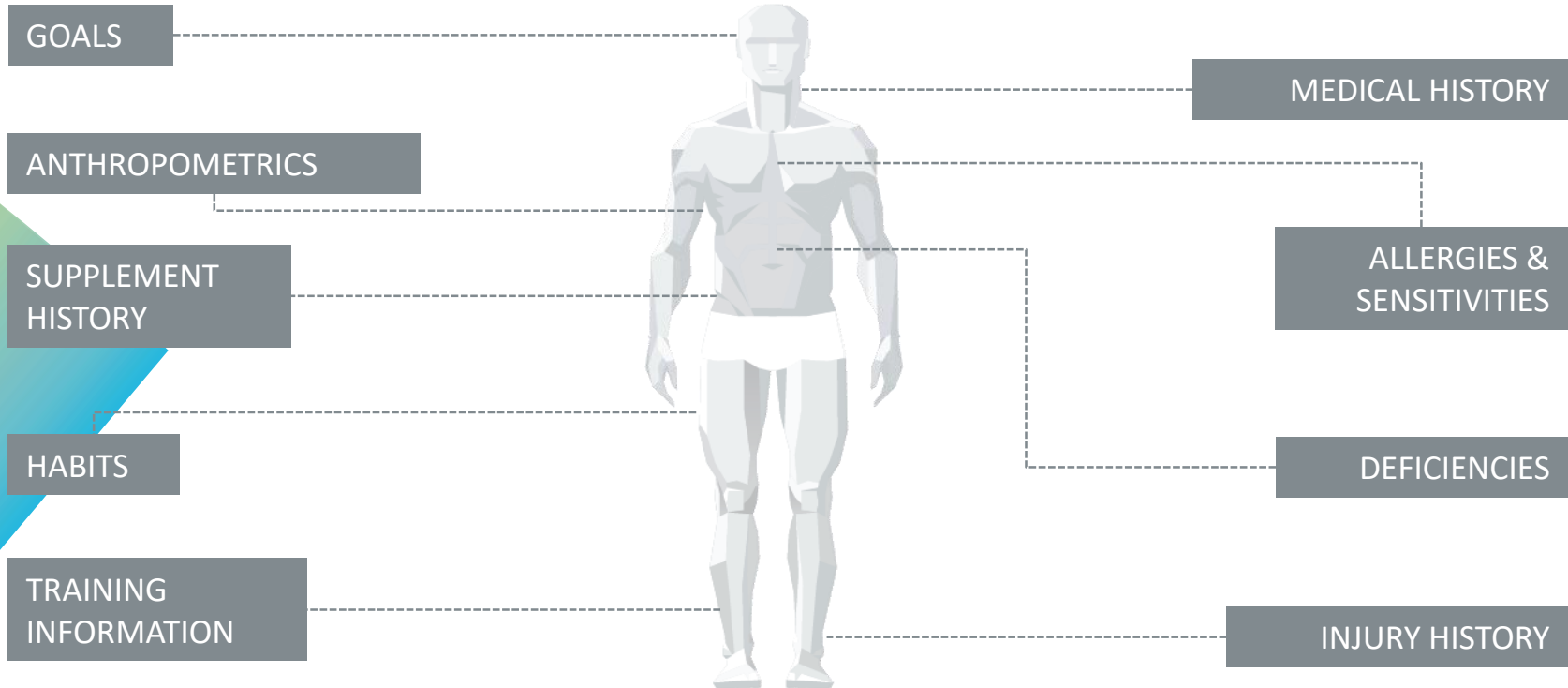


Eating is not about following a strict set of rules; it's about tailoring your nutritional game plan to best support your body, goals, and preferences.

Adapt these principles to make them work best for you and all that you want to achieve.

KNOW YOURSELF

Understand your goals, habits, and unique physiology to refine your nutritional game plan.



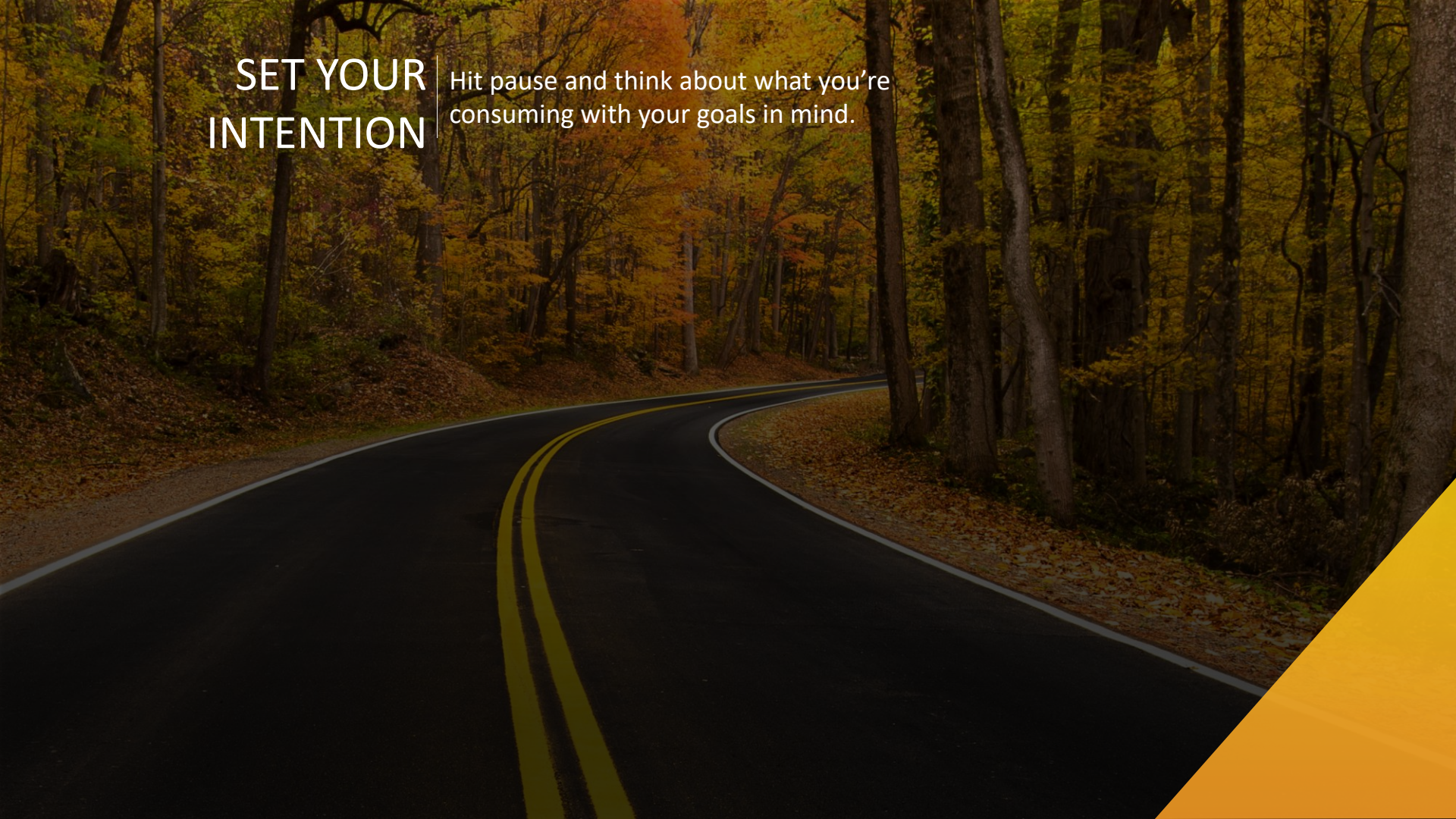
EAT WITH PURPOSE



What you eat matters. Eating with purpose is about coming to the table with your goals in mind. Be intentional with your food choices and fuel your body for performance.

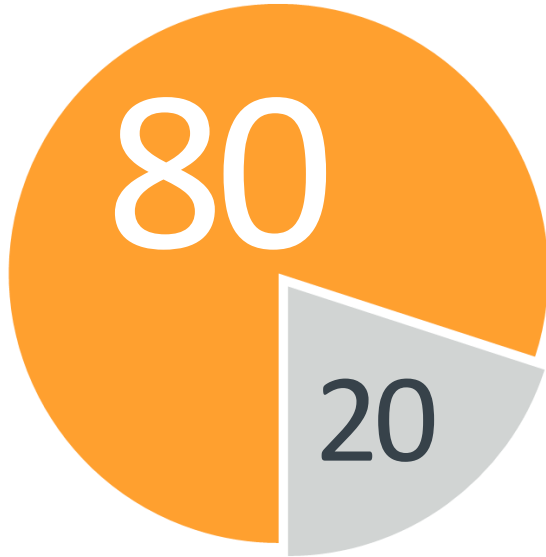
SET YOUR INTENTION

Hit pause and think about what you're consuming with your goals in mind.



FIND BALANCE

Aim to eat well
about 80 percent of the time.



Food is about more than nutrients. A balanced perspective to eating will help you stay aware of what you put in your body, and it will also make you more likely to eat well over the long haul.



FUEL FOR IMPACT

Our understanding of quality food is constantly evolving with research. When deciding what to eat, keep it simple and natural or minimally processed. Choose foods that taste good and fuel your body.

FEED YOUR SUPERPOWERS

Fill your plate with foods that help your body fuel, build, protect, and prevent.



FUEL



PROTECT



BUILD



PREVENT



FEED YOUR SUPER POWERS WITH FOODS THAT FUEL

CARBOHYDRATES = FUEL

- + Primary fuel for the brain
- + Fuels high intensity activities
- + Goals, intensity, and duration of activity affect how much is required

COME BACK TO EARTH

- + Whole grains
- + Minimally processed items
- + At least 3 grams fiber / serving

“BROWN CLOSE TO THE GROUND”



FEED YOUR SUPER POWERS WITH FOODS THAT BUILD

PROTEIN = BUILD

- + Builds muscle tissue
- + Maintains and supports the immune system

THE LESS LEGS THE BETTER

- + Aim to decrease saturated fat
 - + Grilled > Fried
 - + Skinless > Skin
- + Look for leaner cuts of animal proteins

RECOMMENDED DAILY INTAKE

- + 0.5 – 1.0 grams per pound total body weight



FEED YOUR SUPER POWERS WITH FOODS THAT PROTECT

FATS = PROTECT

- + Contains powerful nutrients and antioxidants for cellular repair of joints, organs, skin, and hair
- + Aids in nutrient absorption (vitamins A, D, E, & K)
- + Releases energy slowly keeping you satiated, regulating blood sugar, and stabilizing energy levels

EAT FATS THAT GIVE BACK

- + Omega-3 fatty acids, to boost:
 - + Brain power
 - + Mental clarity
 - + Memory
- + Unsaturated fats



FEED YOUR SUPER POWERS WITH FOODS THAT PREVENT

VEGETABLES & FRUITS = PREVENT

- + Provide natural vitamins, minerals, and antioxidants that contribute to the repair of the body
- + “Support Staff”

UP YOUR COLOR QUOTIENT

- + Bright, deep colors
- + 3+ colors on every plate
- + Don't forget about herbs and spices!



UP YOUR COLOR QUOTIENT

YELLOW FOODS

Optimizes brain function

- + Star fruit
- + Yellow figs
- + Golden kiwis
- + Yellow pears
- + Yellow peppers
- + Yellow tomatoes
- + Squash
- + Sweet corn

GREEN FOODS

Rejuvenates musculature and bone

- + Green leafy veggies
- + Avocados
- + Broccoli
- + Kiwis
- + Green cabbages
- + All green veggies

ORANGE FOODS

Supports skin and mucosal tissues

- + Apricots
- + Cantaloupes
- + Nectarines
- + Papayas
- + Carrots

WHITE FOODS

Enhances immune system, lymph system, and cellular recovery

- + Bananas
- + Garlic
- + Ginger
- + Gobo root
- + Hearts of palm
- + Horseradish
- + Jicama
- + Mushrooms
- + Onions

RED FOODS

Supports heart and circulatory system

- + Cherries
- + Cranberries
- + Strawberries
- + Beets
- + Red onions
- + Tomatoes / tomato sauce

PURPLE FOODS

Promotes microcirculation

- + Blackberries
- + Blueberries
- + Plums
- + Cabbages
- + Eggplants
- + Grapes
- + Olives



How Much Do We Need?

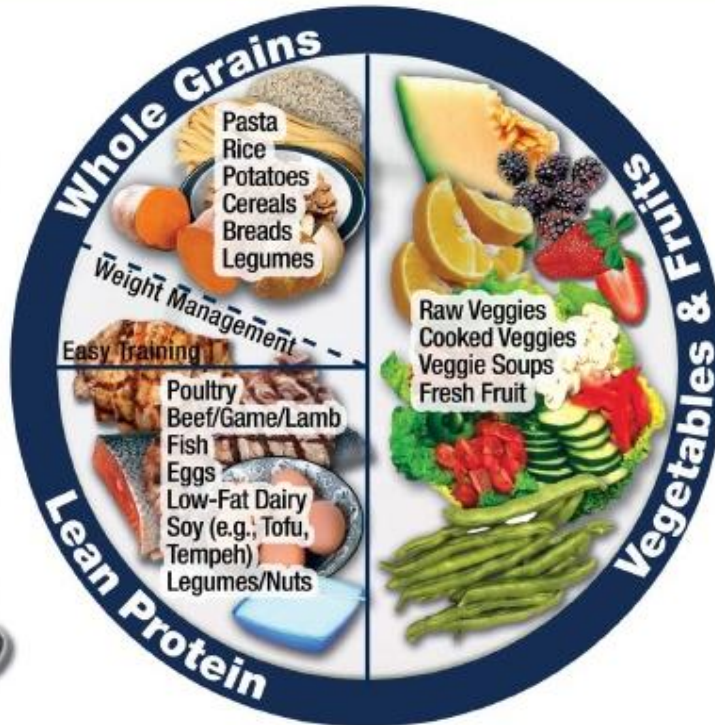
EASY TRAINING / WEIGHT MANAGEMENT:

FATS

1 Teaspoon



Avocado
Oils
Nuts
Seeds
Cheese
Butter



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages

Coffee
Tea

FLAVORS

Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup



How Much Do We Need?

HARD TRAINING / RACE DAY:

FATS

2 Tablespoons



Avocado
Oils
Nuts
Seeds
Cheese
Butter



Grains

Pasta
Rice
Potatoes
Cereals
Breads



Fresh Fruit
Stewed Fruit
Dried Fruit



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages



Coffee
Tea

Lean Protein

Poultry
Beef/Game/Lamb
Fish
Eggs
Low-Fat Dairy
Soy (e.g., Tofu,
Tempeh)
Legumes/Nuts



Cooked Veggies
Veggie Soups
Raw Veggies



Vegetables

FLAVORS

Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup



MAXIMIZE YOUR EFFORTS

Eat and drink the right things before, during, and after your workout.

THINK IN 3's

- + Timing:
 - + Pre / During / Post
- + Composition:
 - + Carbohydrates / Proteins / Fluids

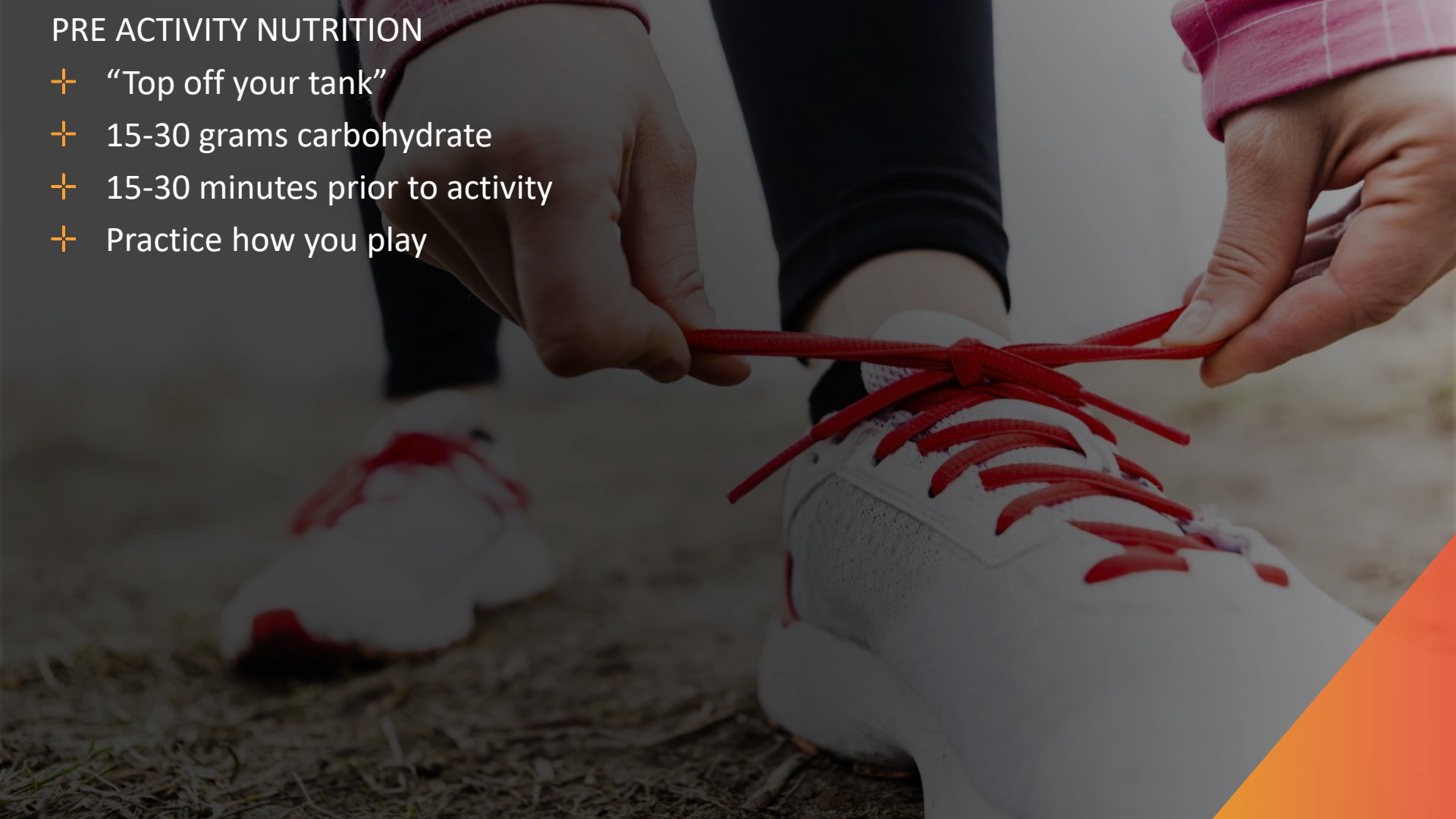
DON'T WASTE YOUR WORKOUT

- + Open window for nutrient delivery to muscles / cells
- + Timing is key!

SUCCESS DEPENDS ON SLEEP

PRE ACTIVITY NUTRITION

- + “Top off your tank”
- + 15-30 grams carbohydrate
- + 15-30 minutes prior to activity
- + Practice how you play





DURING ACTIVITY NUTRITION

- + “Maintain”
 - + Fluids (water)
 - + Electrolytes
 - + Fuel stores
- + 4-6 gulps every 10-15 minutes

POST ACTIVITY NUTRITION

1

REFUEL WITH CARBS

The more intense the training, the more carbohydrates you need.

2

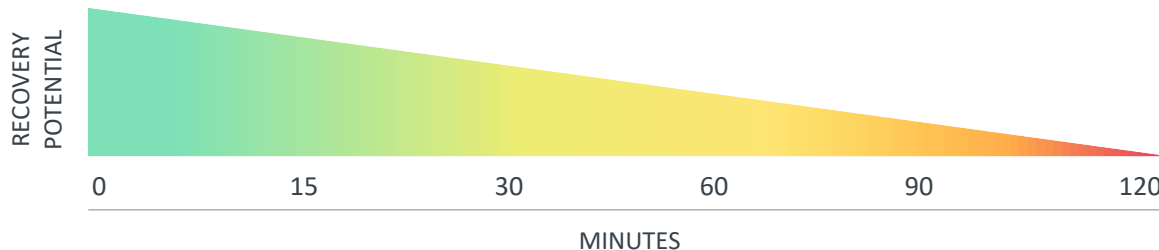
REBUILD WITH PROTEIN

Body weight determines protein needs post-workout.

3

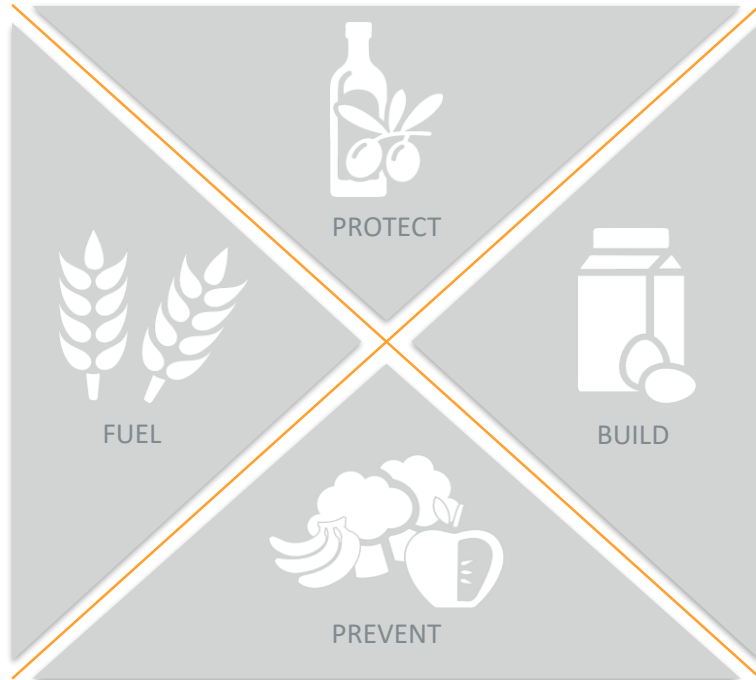
REHYDRATE WITH FLUID

Drink 20-24 ounces of fluid for each pound lost during training.



FILL THE GAPS

It can be tough to get all your nutrients from food alone. If you fall short, supplement wisely.



DIETARY SUPPLEMENTS:

THE GOOD, THE BAD, THE UGLY



THE PROBLEM

- Poor dietary choices and food frequency are limiting factors in why most athletes do not achieve their performance goals.
- You can't out-supplement a bad diet. Many athletes think they can get around poor fueling with supplements.
- More is not better. Using more than the recommended dosage will not result in greater gains.
- Athletes run the risk of using a supplement containing banned substances by relying on advice from untrained professionals.



THE FOOD FIRST SOLUTION

- Eat a meal or snack every 3-4 hours for optimal energy levels.
- Pre-workout snack before each training session to minimize muscle breakdown for energy.
- Plan ahead: On off days portion out and prep snacks to stay ahead of schedule and ensure frequent fueling throughout the day.

GET SOME SLEEP



7-9 HOURS IS OPTIMAL
REGULAR SLEEP PATTERN



RECOVERY & REPAIR
PRODUCTIVITY
IMMUNITY
MEMORY



INFLAMMATION
FATIGUE
STRESS HORMONES

AIM TO SUSTAIN

Staying hydrated and eating early and as often as you need helps to sustain energy, lower stress, and boost metabolism.

No matter your schedule, kick-start your day with an energizing meal. Continue eating small meals or snacks and hydrating throughout the day to keep your energy up, your focus sharp, and your mood stable.



RISE AND DINE

Eat your first meal
within 30 minutes of waking up.

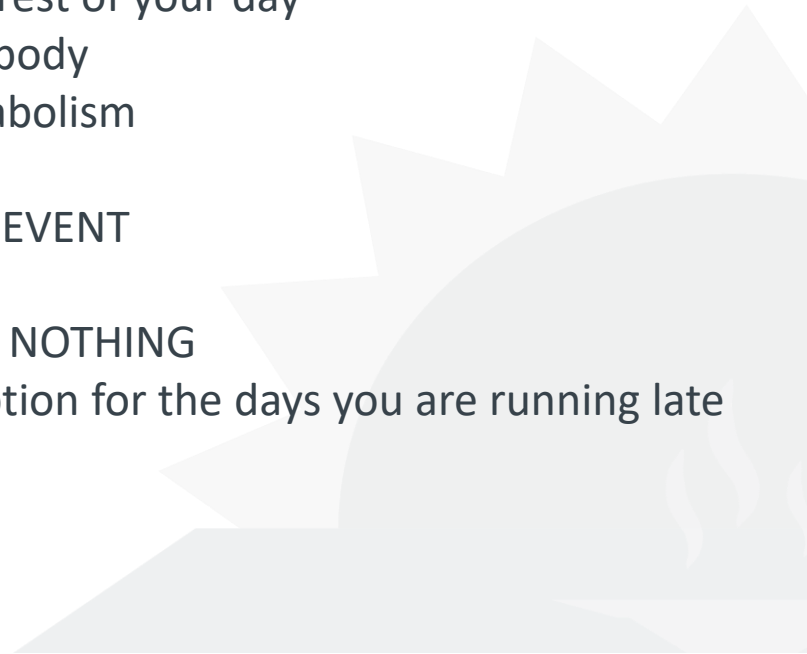
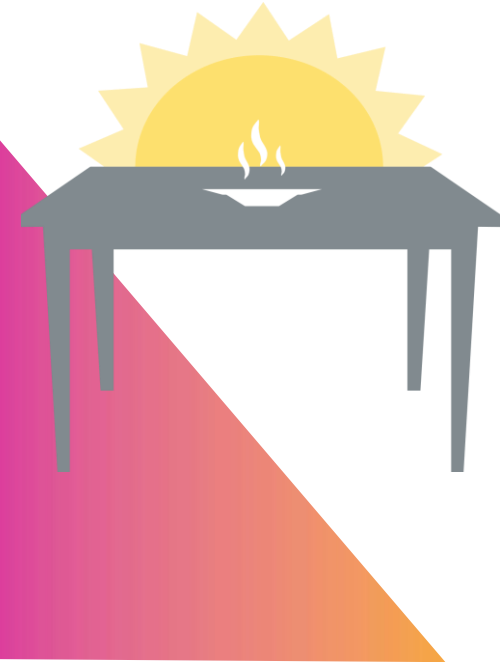
“BREAK – THE – FAST”

- + Sets the tone for the rest of your day
- + Fuels your brain and body
- + Jumpstarts your metabolism

FUEL | BUILD | PROTECT | PREVENT

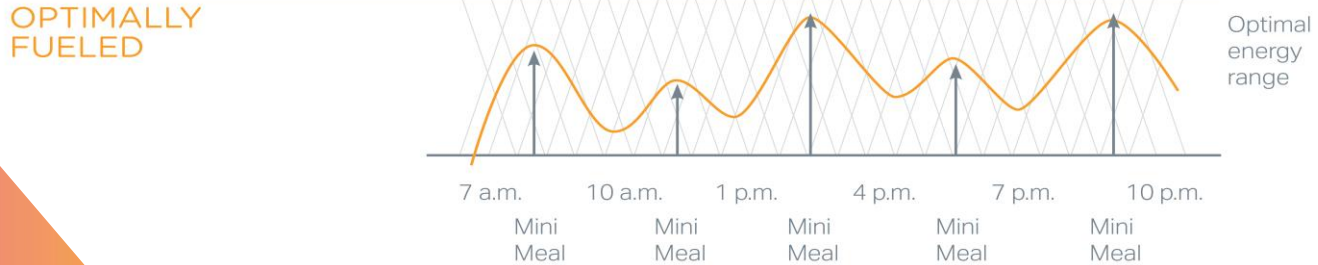
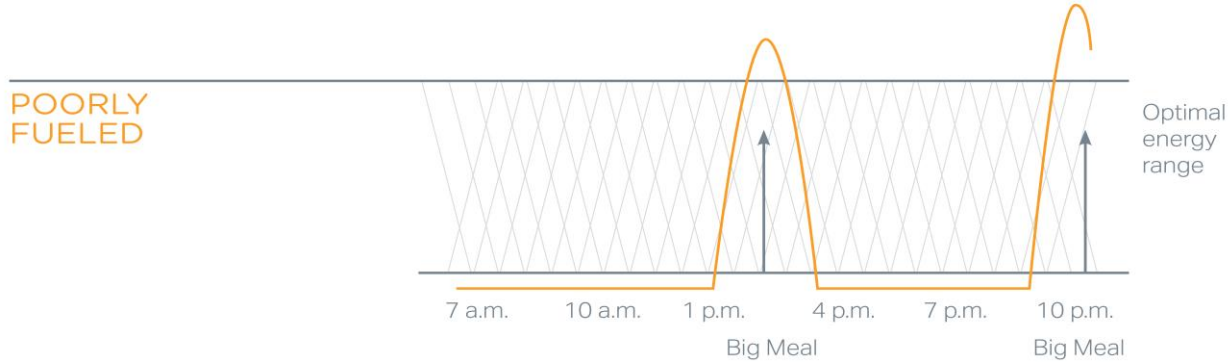
SOMETHING IS BETTER THAN NOTHING

- + Have a just in case option for the days you are running late or in a hurry



CREATE AN EVEN SPREAD

Spread your snacks and meals
evenly throughout the day.



STAY HYDRATED

Choose beverages that hydrate
your brain and body.

RECOMMENDED DAILY INTAKE

- + 1/2 – 1 ounce per pound total body weight
- + Water first, then a sports drink as needed

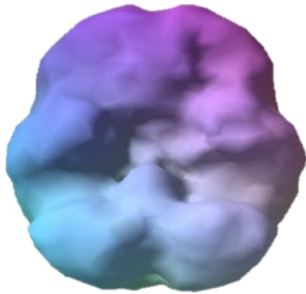


STAY HYDRATED

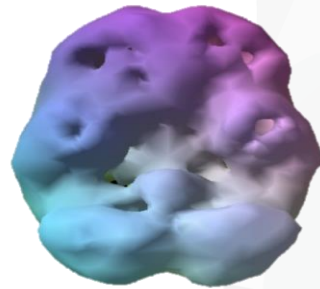
Choose beverages that hydrate
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PERFORMANCE BENEFIT

- + Increases energy
- + Improves movement, recovery, and agility
- + Aids in mental clarity and activity
- + Assists the body in thermoregulation via sweat



HYDRATED



DEHYDRATED



WHAT'S IN YOUR SWEAT?

Na

Cl⁻

K

Mg

Ca







Sodium, chloride and potassium work together to regulate and maintain fluid balance.

Magnesium and calcium are essential for optimal muscle function and play key role in energy metabolism.

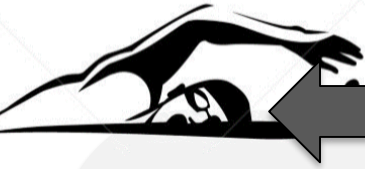
- Losing as little as 2% body weight will result in ↓ performance. (For 150lb athlete, 2% = 3lbs lost)
- Consume fluids throughout the day to maintain optimal hydration levels. (Training lasting >1 hour alternate with a sports beverage)
- Remember to hydrate before, during and after training sessions

THE PERFECT DAY

Think about your goals and plan your nutrition and hydration around your schedule.

Time	Activity	Meal
6:00 AM 	Breakfast	Oatmeal, berries, 2 eggs, 1 tsp Olive Oil 
8:00 AM	Post-Workout	Chocolate Milk
10:00 AM	Locker Snack	PBJ Sandwich
12:30 PM 	Lunch	6 oz turkey, 2 slices whole wheat bread, spinach salad, low-fat dressing 
3:00 PM	Locker Snack	Apple w/1/4c nuts
6:00 PM 	Post-Practice Snack	RTD or Chocolate Milk
7:00 PM	Dinner	5 oz grilled salmon, ½ c whole wheat pasta, steamed broccoli 
9:30 PM	Bedtime Snack	1 cup low fat cottage cheese and ½ c berries

BALANCING EXERCISE-INDUCED INFLAMMATION



EXERCISE-INDUCED INFLAMMATION IS THE BODY'S RESPONSE TO INJURY DUE TO INTENSE PHYSICAL ACTIVITY

- The immune system response causes redness, swelling and soreness.
- Acute inflammation is a normal response to high intensity activity, but prolonged inflammation is a sustained response that affects the entire body.
- Prolonged inflammation:
 1. Causes fatigue, muscle damage and soreness.
 2. Limits muscle growth and training progression and ↑ muscle loss.
 3. Managing prolonged inflammation will enhance recovery and ↓ soreness

An underwater photograph of a swimming pool. The water is clear and blue. Several lane lines are visible, consisting of blue and yellow floats. The pool floor is tiled, and there are lights along the bottom edge of the pool. The overall lighting is dim, with the primary light source being the pool's lights.

QUESTIONS?