



Fueling the Competitive Soccer Player

*Getting Started
Section 1*

Michele Fumagalli, RD, LDN

Michele Fumagalli, RD, LDN



Business Marketing degree from Notre Dame

**Bachelors of Science in Dietetics from
Benedictine University**

**Completed 1200 hour Internship through
University of Houston**

Chef trained

Owner & Head Dietitian at Fit Plate Nutrition

**Helping over 500+ athletes, from everyday to pro, to win
on & off the field by dialing in what, when, why, & how
they fuel.**

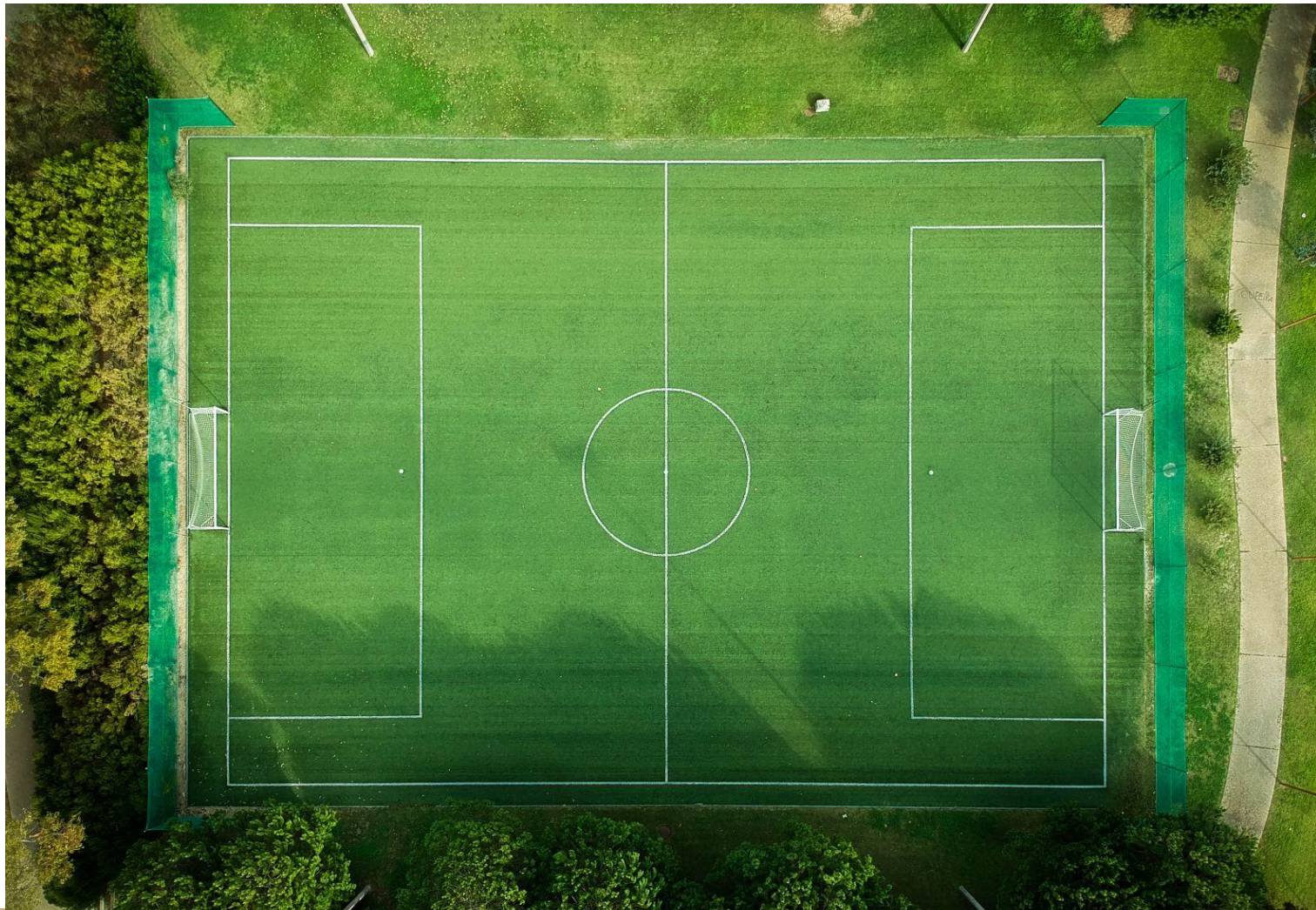
Michele Fumagalli, Former Pro Athlete



**Four Final Fours at the
University of Notre Dame**

**Professional Soccer
USA & Germany**

**2018 CrossFit Games
Individual Athlete**

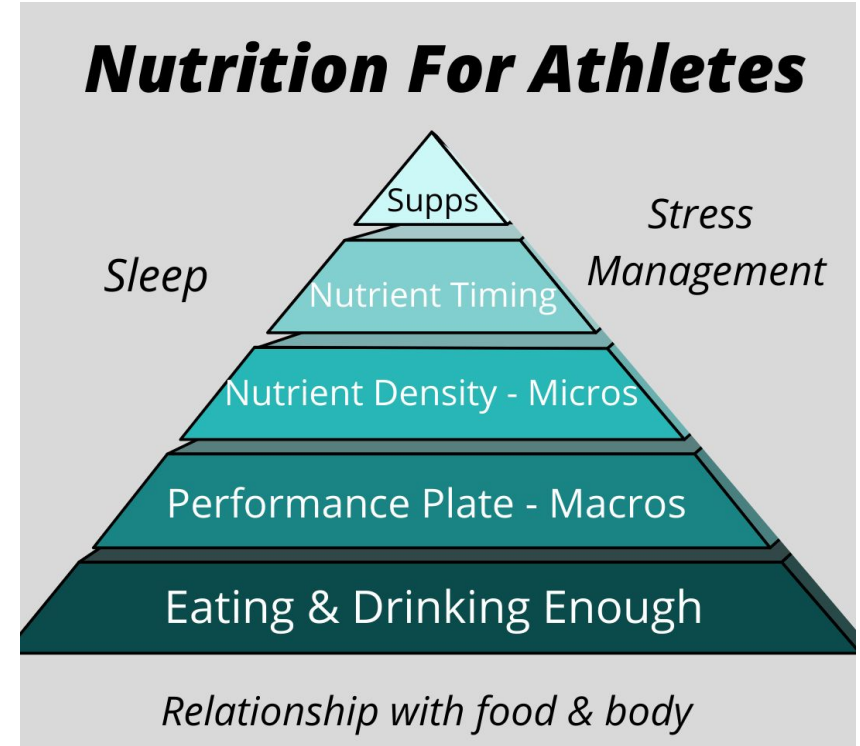


Name one thing you
do well with your
nutrition?

Name one or two
things you can
improve upon with
your nutrition?

Welcome to the Course!

- Section 2: The What & Why of Sports Nutrition (specific to soccer)
- Section 3: Hydration & Fueling body with enough energy
- Section 4: Building your Performance Plates
 - Fueling Snacks
- Section 5: Nutrient Timing
 - Pre & During Nutrition
 - Post-Training Nutrition
 - Game Day & Tournament Nutrition
- Section 6: Supplements & Extras





Establish Your Why & Goals

- What are your goals for the course?
- What do you want to learn about nutrition for performance?

How to be an A Student

- ★ Watch Lectures & follow along slides
- ★ Print & Fill Out Worksheets after lecture
- ★ Complete Fuelwork
- ★ Ask Questions in comments
- ★ Set weekly focuses to improve nutrition gaps and weaknesses
- ★ Find what works for you

This is a self paced course!

I recommend working in 30-45 minute increments for optimal engagement and retention.

Section 1 & 2 together

Section 3 at once

Section 4 broken into two parts due to most post lecture work

Section 5 Pre-During

Section 5 Post/Tournament

Section 6 at once

*worksheet during & after



Section 2

The What & Why of Sports Nutrition

Lecture 1

Michele Fumagalli, RD, LDN

Evidence-Based Sports Nutrition: WHAT?



Susie

- 3 days of soccer per week
- Picky eater
- Lactose Intolerant
- 3-4:30pm Practice time + 1-2 weekend games



Abby

- 5 days of soccer per week
- Likes all food
- Allergic to nuts
- 4-6:30pm practice + weekend tournaments

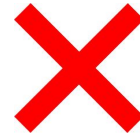
Do you think these athletes have the same fueling needs?

Evidence-Based Sports Nutrition: WHY?

Where TO get your nutrition information from



- Nutrition experts (aka registered dietitians)
- Doctors (but know most are not nutrition experts)



- Teammates
- Coaches or trainers
- Prof soccer players
- 'nutritionists'
- Social media influencers



Why is Sports Nutrition Important?

Athletes, especially growing elite athletes have greater nutritional needs (*energy, protein, hydration, M&V and carbohydrate*) than non-athletes.

The WHY of Sports Nutrition

A person's legs in orange and blue sneakers are shown stepping on concrete stairs. The image is overlaid with several text boxes listing the benefits of sports nutrition. The text boxes are arranged around the central image of the legs and shoes.

Cognition
& Focus

Injury
prevention

Health

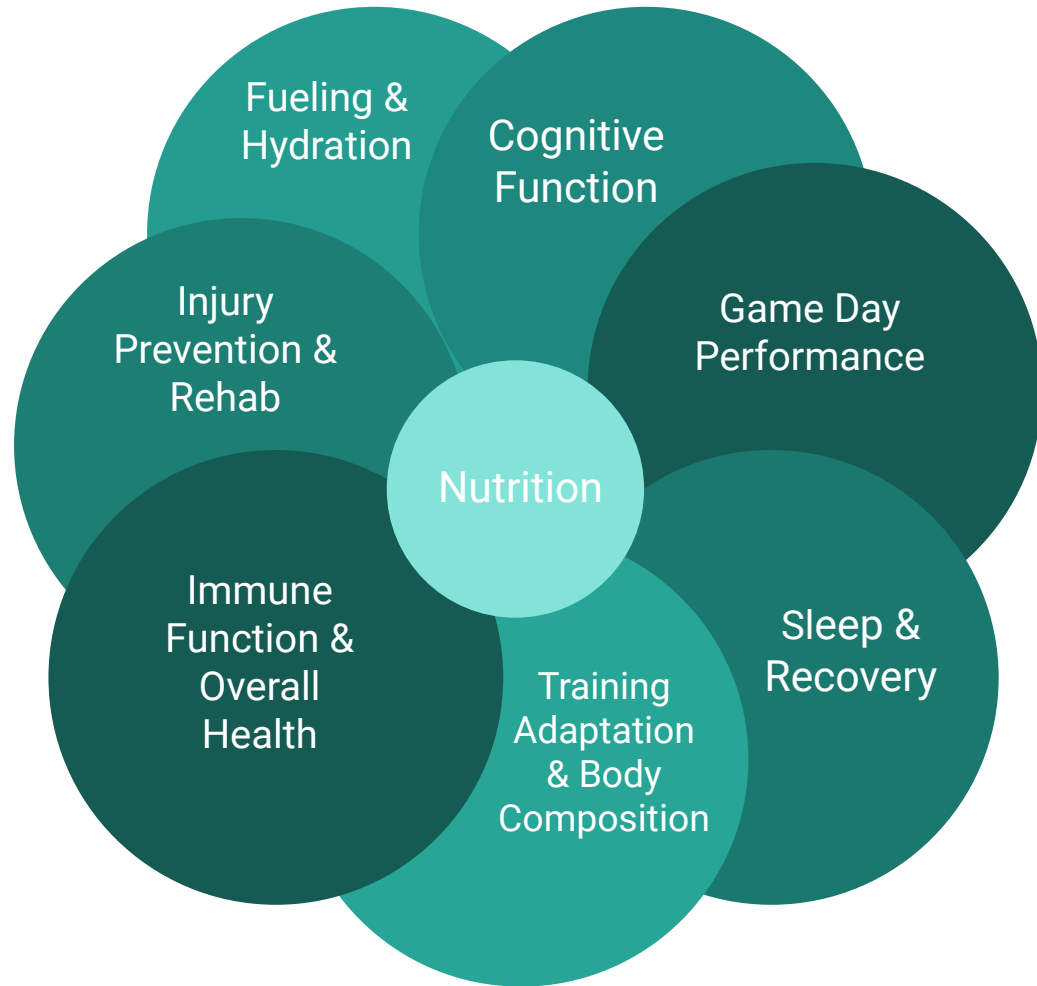
Safety

Optimal
Performance

Optimal
Energy
Stores

Enhanced
Recovery

Why Nutrition Is Important for the Soccer Athlete?



Soccer & the Body



Outdoor
Heat

Physical
Strength

Condensed
schedules

Sprinting &
covering
longer
distance

Limited
Breaks

May vary
depending
on position

Focus &
Concentration



Common struggles for Student Athletes

- *Not knowing what to eat around training & competition*
- *Not eating or drinking enough (underfueling & dehydration)*
- *How to fit food into their busy schedules (home & on-the-go)*
- *Getting information from non-credible sources*
- *Connecting how they feel w/what they did or did not eat or drink*
- *Post exercise or stress related appetite suppression*



Section 2

The What & Why of Sports Nutrition

Lecture 2

Michele Fumagalli, RD, LDN



What is Sports Nutrition?

An athlete's application
of *nutrition knowledge*
for optimal training,
recovery, performance
& health.

Components of Sports Nutrition

Nutrient
Timing



Energizing
Snacks

Hydration

Supplements

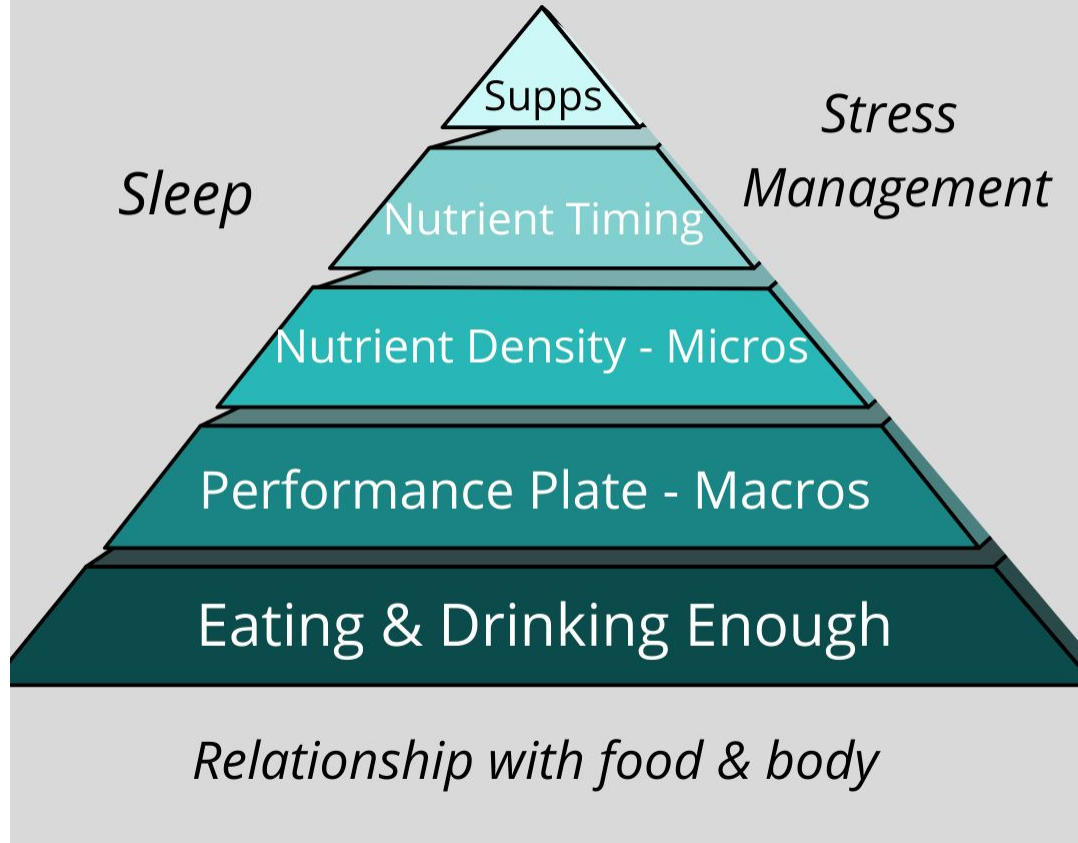
Balanced
Meals

Adequate
Energy Intake

Nutrient
dense foods

Sleep*

Nutrition For Athletes



Healthy Relationship with
Food & Body image

Emphasizing
Food Over
Supplements

Vegetables
& Fruit

Eating enough

Breakfast of
Champions

**Optimal
Fuel for
Youth
Athletes**

Proper
Hydration

Consistency

Fueling Snacks

Protein at
every meal
& snack

Connecting 'How I feel &
performance' with Nutrition

Name one thing you
do well with your
nutrition?

Name one or two
things you can
improve upon with
your nutrition?



If you are finding you need more help at any time during the course...



ADD ON AN
INITIAL CONSULT &
FOLLOW-UP WITH
MICHELE

- 60 minute initial consult + follow up email with recommendations
- 35 minute follow-up session + email

Discounted price of \$199

For this more individual approach, email Michele for schedule initial consult



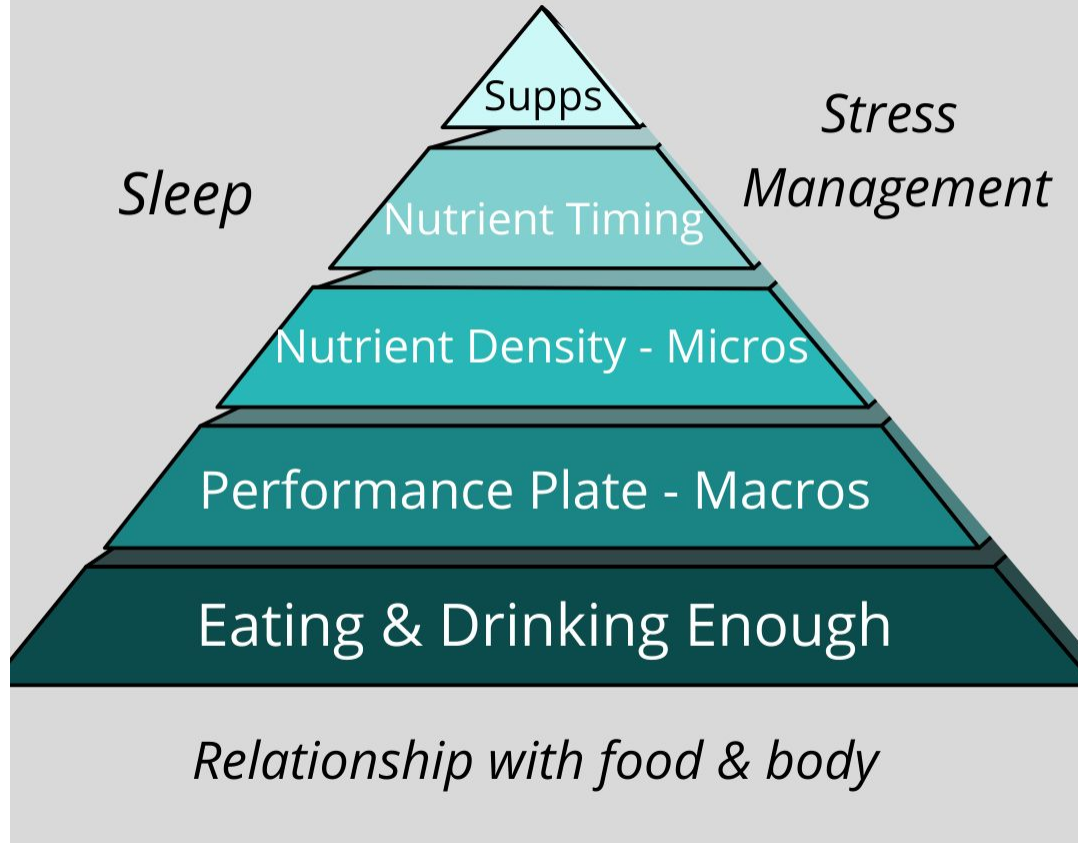
Section 3

The BASE of the Sports Nutrition Pyramid

Lecture 1

Michele Fumagalli, RD, LDN

Nutrition For Athletes



Hydration



Hydration

Body weight
divided by 2
+ Sweat/fluids lost
= fluids in ounces
to consume/day



If there was ONE area to work on first, it would be hydration. Water makes up more than 60% of our body and if the body does not receive enough fluids various mechanisms will suffer. We need a MINIMUM of 64oz/day. Water,

Hydration

What Happens to Your Performance When You Are DEHYDRATED

Body weight
÷ by 2
+ Sweat/fluids lost
= Fluids in ounces
to consume/day



Early Fatigue,
Decreased Endurance



Decreased
Alertness



Increased risk of
injury



Muscle
Weakness



High Perceived
Exertion



Decreased
Cognitive Function

**Overall Athletic Performance is DECREASED when
an Athlete is Dehydrated**

Image Cred: @fueling.young.athletes

Hydration is NOT Just Water

- Safety & Performance
- Electrolytes
 - Sodium
 - Potassium
- Electrolytes beverages usage
- Salty sweater or heavy sweater
- For every lb lost (sweat) need to rehydrate with 16-20oz



Hydration Tips

1. **Start your day with water** (1st thing)
2. **Bring water bottle with you to school**
3. **Add flavor** - fruit, juice, electrolyte powder
4. **Water check:** Pause in afternoon and review your hydration for the day so far
 - Look at the color of your urine :-)
5. Water before Practice
6. Water Station while studying





Section 3

The BASE of the Sports Nutrition Pyramid

Lecture 2

Michele Fumagalli, RD, LDN

EATING ENOUGH: Keeping a Full Gas Tank



FOOD IS YOUR FUEL SOURCE

EATING ENOUGH: Keeping a Full Gas Tank



How keep gas in your tank?

- 1. Performance plate & Balanced meals*
- 2. Fueling snacks, packing snacks*
- 3. Meal Planning*
- 4. Eating every 2-3 hours*

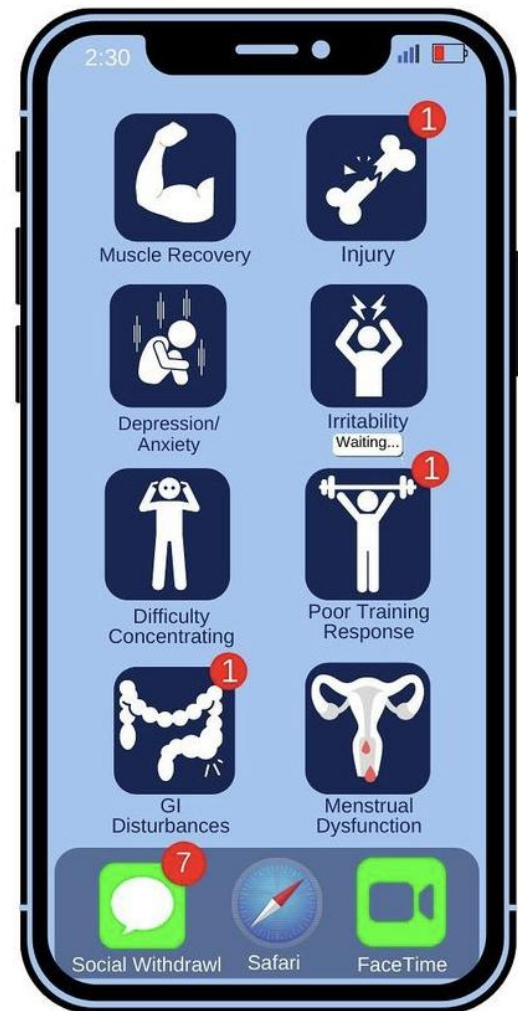


How many calories should I be eating?

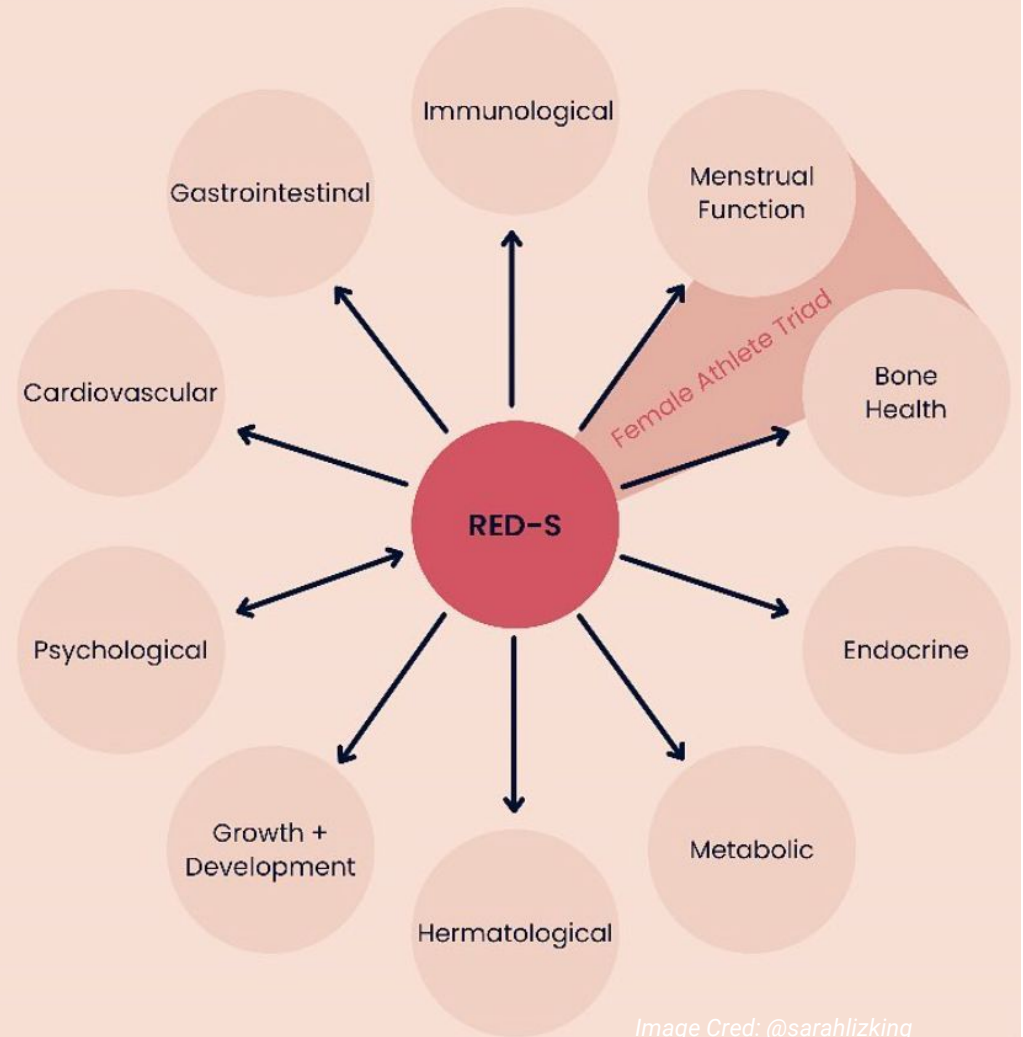
- (Youth) Athlete's do not need to track your food.
- This can bring about disordered eating as athletes are busy enough.
- You can be confident you are fueling your body with enough by...
 - Eating every 2-3 hours
 - Eating balanced (performance plate) snacks & meals
 - Checking in with hunger throughout day & evening
 - Check in with energy throughout day

Consequences of Underfueling

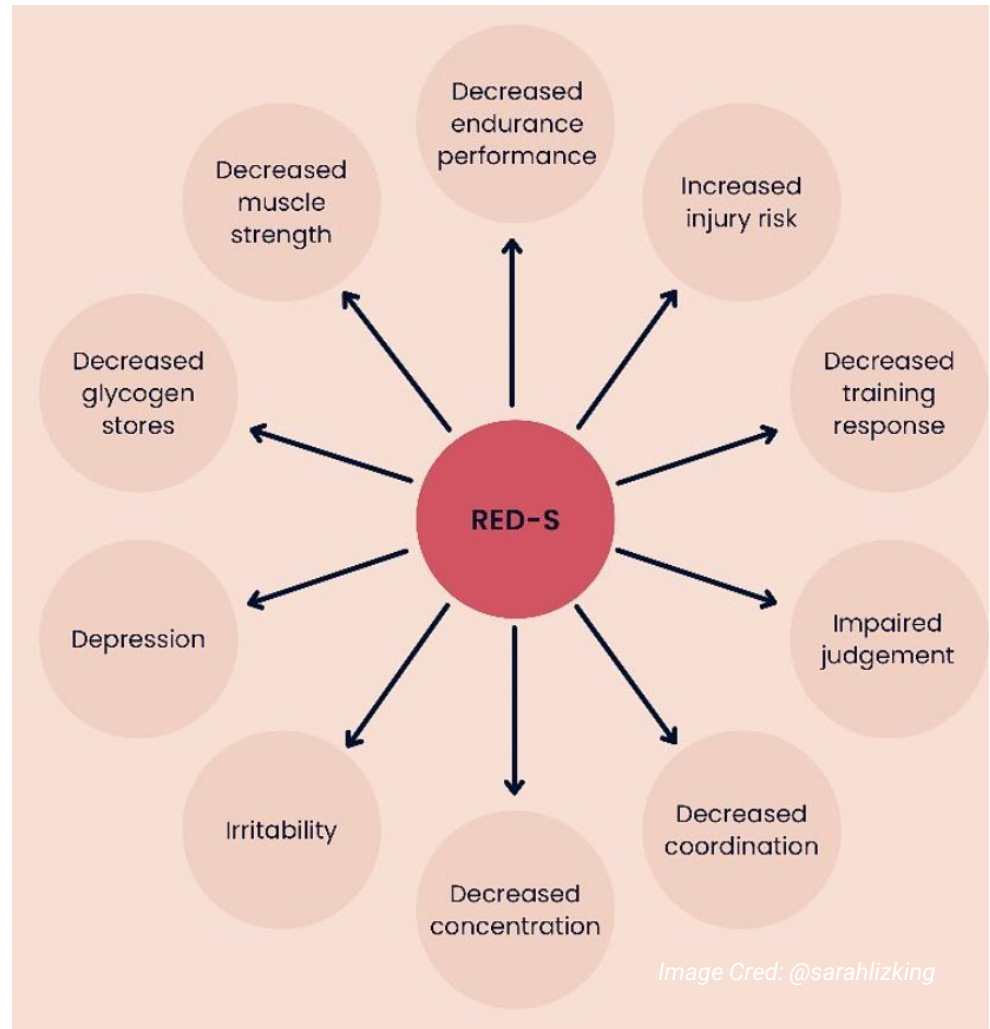
- We need to 'recharge' our body just like we do our phone.
- If consistency not getting enough fuel, the body will figure out ways (less optimal) to keep going .
- **Relative Energy Deficiency in Sport** or RED-S is a syndrome that results in physiological compensations & impaired performance due to low energy availability (LEA)



Health Consequences of RED-S



Performance Consequences of RED-S





Section 4

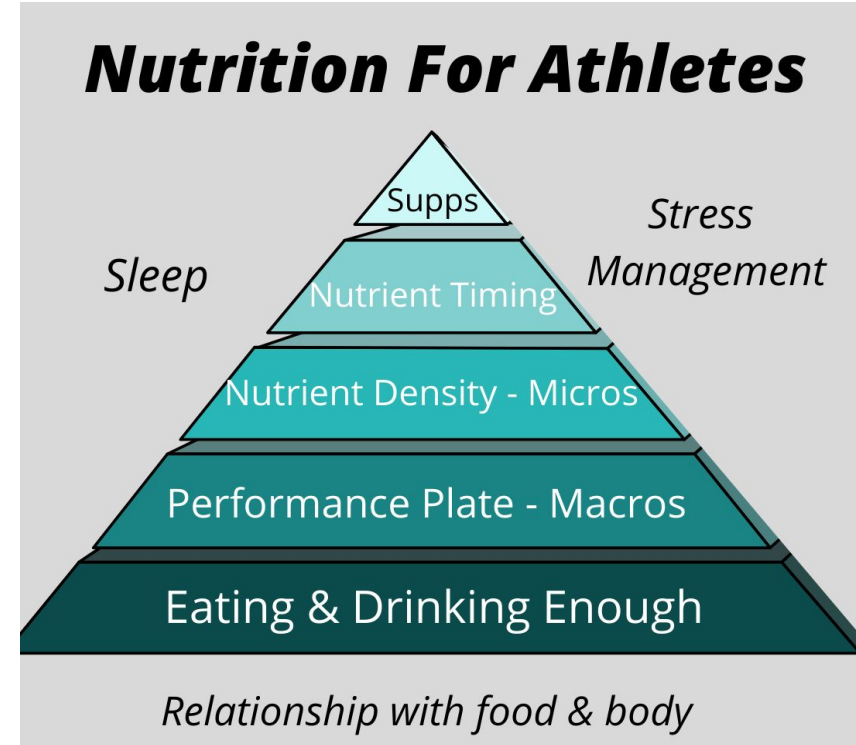
Performance Plate & How to Build your Own

Lecture 1

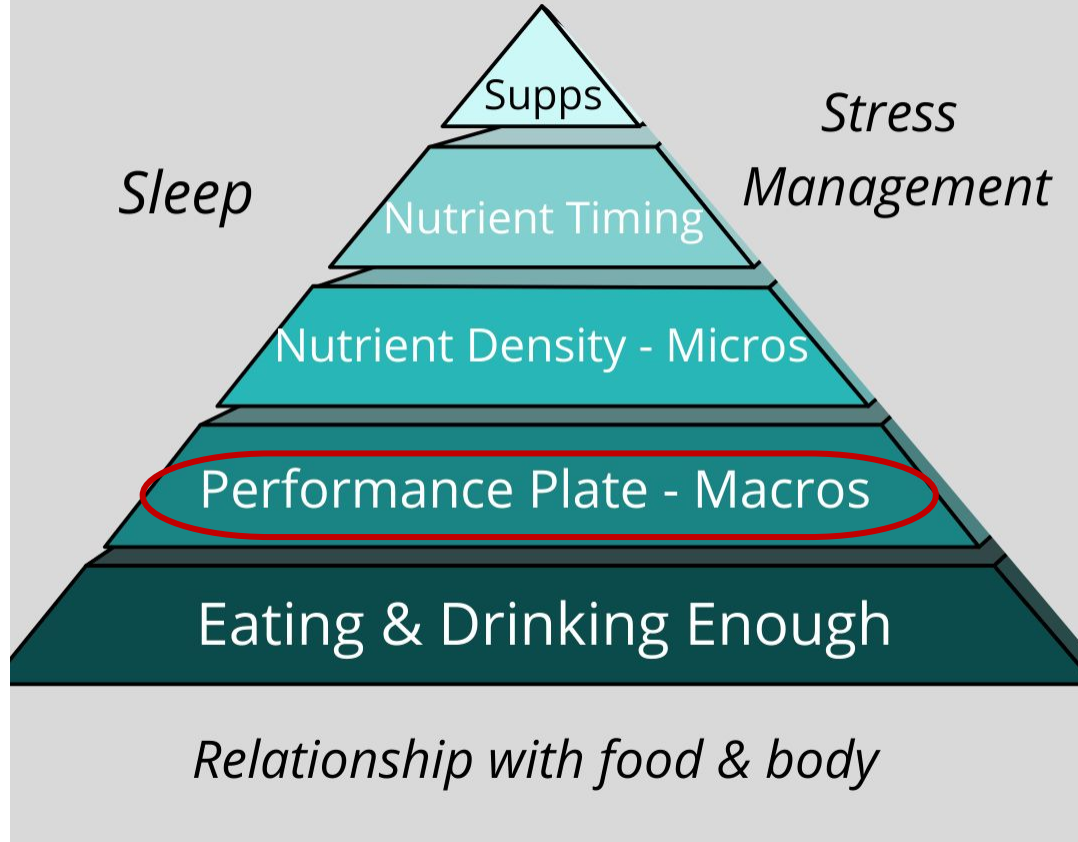
Michele Fumagalli, RD, LDN

Welcome to the Course!

- ✓ Section 2: The What & Why of Sports Nutrition (specific to soccer)
- ✓ Section 3: Hydration & Fueling body with enough energy
- Section 4: Building your Performance Plates
 - Fueling Snacks
- Section 5: Nutrient Timing
 - Pre & During Nutrition
 - Post-Training Nutrition
 - Game Day & Tournament Nutrition
- Section 6: Supplements & Extras



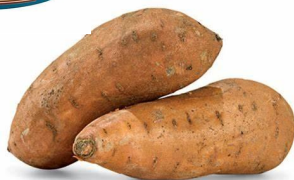
Nutrition For Athletes



Building balanced plates to fuel & recover optimally depending on activity level

The 3 Fuel Components

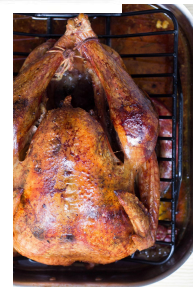
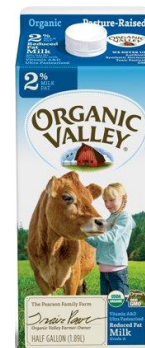
Starchy Carbs Whole Grains



Color Veg/Fruit



Protein



Carbs: Starches / Whole Grains

- Rice, Quinoa, Lentils
- All Potatoes
- Hard Squashes
- Breads, Tortillas, Bagels
- Corn, Peas
- Pastas
- English muffins, Wraps
- Black/White Beans, Chickpeas
- Oats, Oatmeal
- Crackers, Pretzels



Why do we Need Carbohydrates?

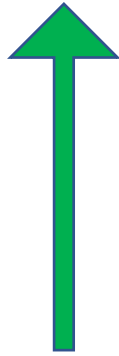
- Main **Energy** source for soccer players.
- Stores in muscles as glycogen (**stored energy!**) plus a little also stored in liver that is used up by 30 minutes.
- Brains preferred fuel source
- Often contains **fiber, vitamins and minerals**



COLOR: Fruits & Vegetables

*raw, frozen, steamed,
sauteed, grilled, roasted*

Immune system
Recovery
Energy
Focus
Fiber/Digestion

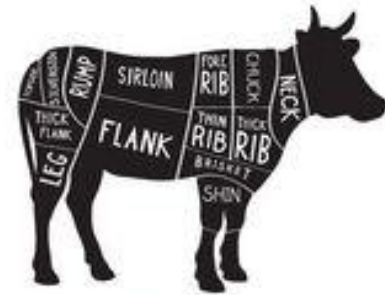


Inflammation
Illness
V&M deficiency



Protein Sources

- Chicken, Turkey, Beef, Pork
- Deli Meat, Chicken Sausage
- Canned Tuna, Salmon, Shrimp
- Greek Yogurt
- Cottage Cheese, Cheese
- Eggs, Protein powder
- Tofu, Soy milk, Edamame
- Nuts, Nut Butters
- Beans, Chickpeas, Lentils, Edamame
- Seeds
- Chickpea/edamame/lentil pasta
- Hummus



LESS LEGS = MORE LEAN

Protein can be animal & plant-based

Animal-Based Protein Sources



Poultry



Seafood



Eggs

Beef

Pork

Dairy



FIT PLATE NUTRITION

Plant-Based Protein Sources



Quinoa



Tofu / Soy

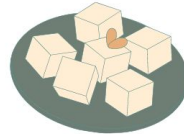


Lentils

Nuts & Seeds

Tempeh

Beans



FIT PLATE NUTRITION

Why do we Need Protein?

- Recovery from training
- Helps build and repair muscles
- Building block for muscles, tendons, and skin
- Satiety/Fullness
- Helps regulate blood sugar

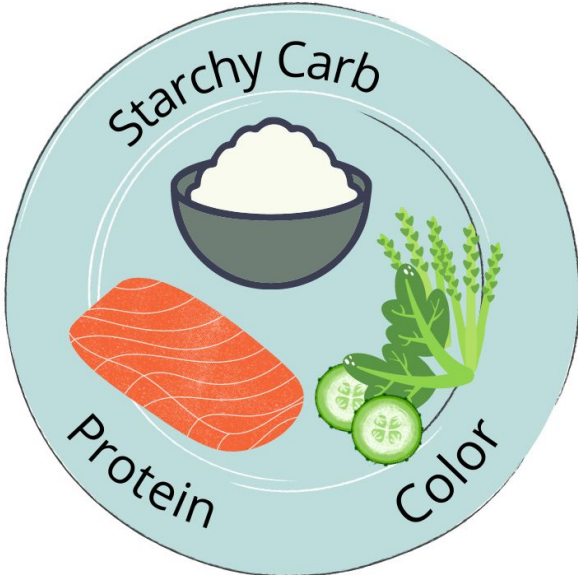
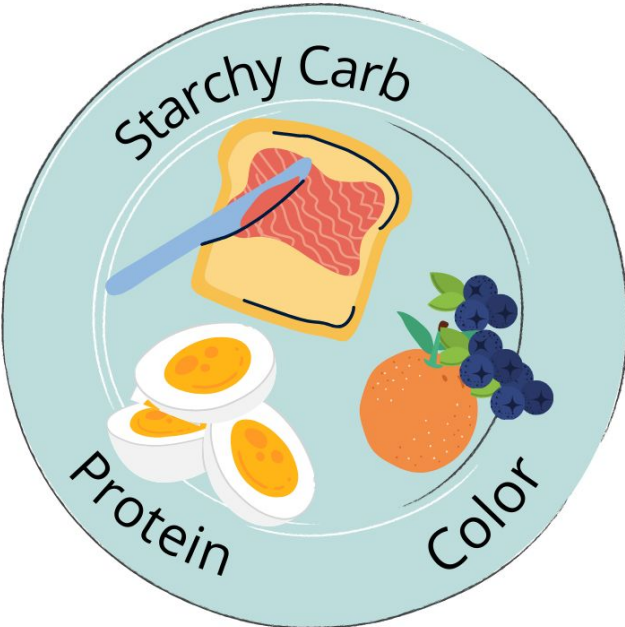
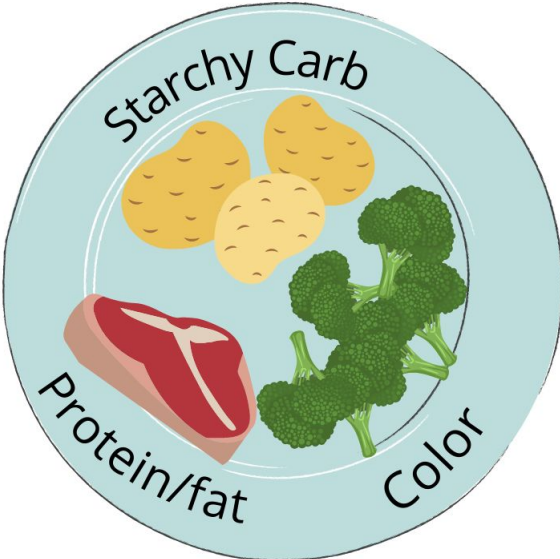


What about Fat?

- Fat is an energy source for low-intensity training, is important for hormonal health, required for the absorption of certain vitamins, slows digestion, and increases satiety.
- Fats have twice the energy as carbohydrates and protein.
- Higher fat protein foods include:
 - Nuts, nut butters, seeds, egg yolks, fatty meats (pork shoulder, ground beef), full fat dairy.
- Goal is to choose leaner protein options majority of time



Balanced Plates





Section 4

Performance Plate & How to Build your Own

Lecture 2

Michele Fumagalli, RD, LDN

Building Your Performance Plate

*Three Components
of the plate*

+

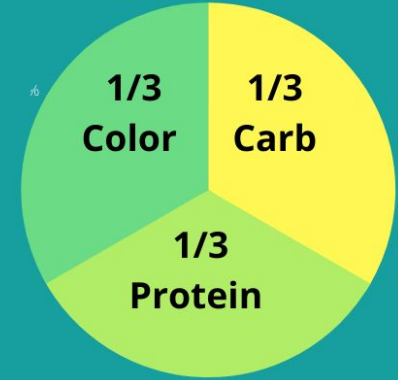
Three Activity levels

How to Build A Performance Plate

Hard Training / Game Day
2-3+ hrs strenuous activity



Moderate Training Day
1-2 hrs mod strenuous activity



Light Training or
Rest Day
*< 1 hr of non-
strenuous activity*



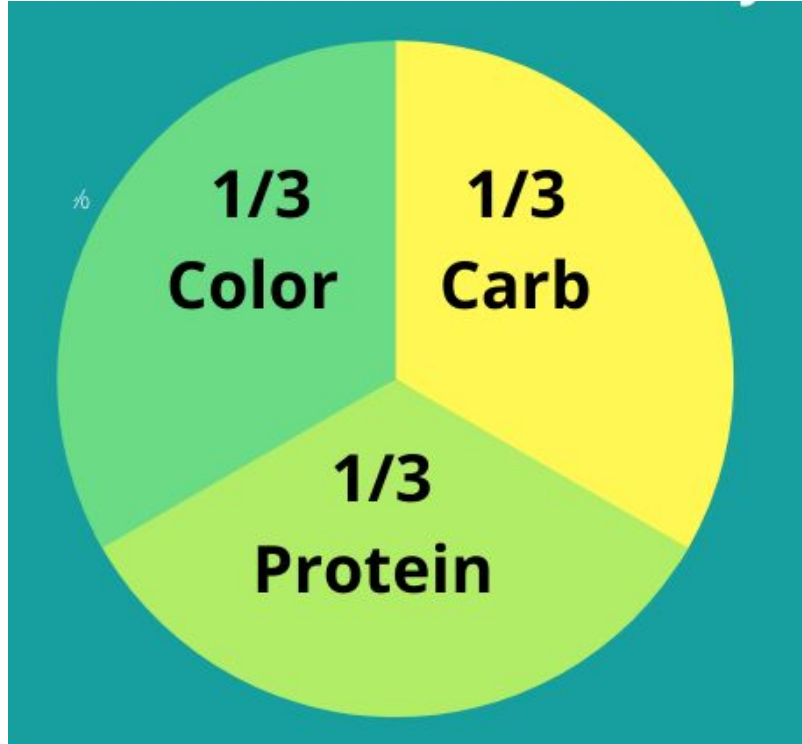
Light Training / Off Day



1 hour or less of non-strenuous activity

- Light jog or lift
- Skill work
- Stretching or prehab

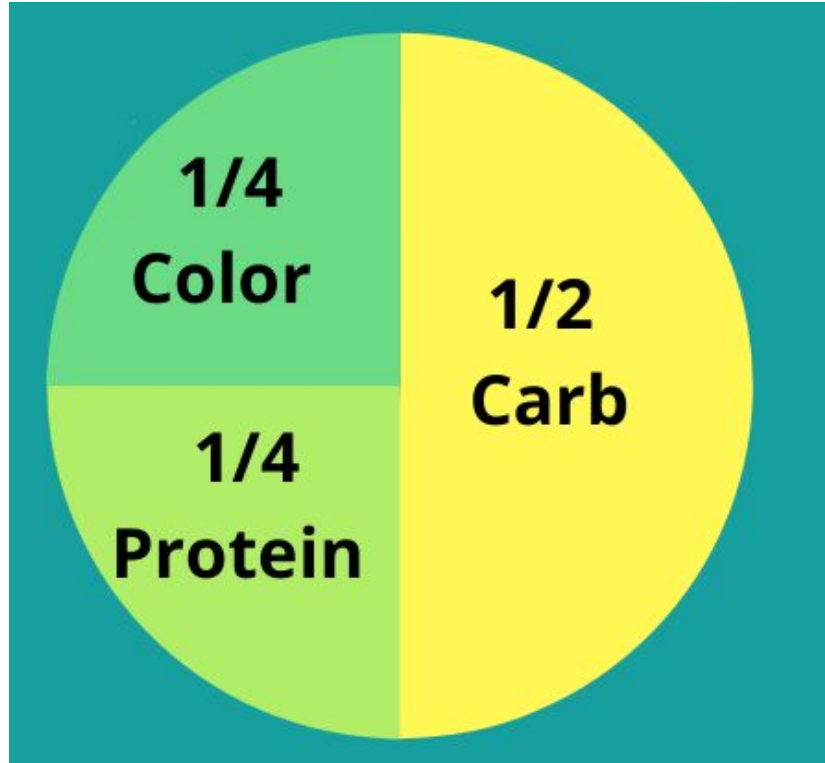
*Moderate Training Day



1-2 hours of moderately strenuous activity

- Conditioning
- Hard lift
- Sweating
- Elevated heart rate

Hard Training Day / Game Day



2-3+ hours of strenuous activity

- Multiple training sessions
- Prolonged heavy conditioning/lifts
- Tournament play
- Reaching max heart rate at times
- 1 Day before Game

Week Plates Example

Monday:	Off day		<i>Moderate Day refueling weekend games</i>
Tuesday:	2 hour practice	➔	<i>Moderate day plate</i>
Wednesday:	footwork/pers. training		<i>Moderate day plate</i>
Thursday:	2 Hour practice	➔	<i>Moderate day plate</i>
Friday:	light pre-game movement		<i>Hard Training day (prep for weekend)</i>
Saturday:	Game	➔	<i>Hard Training Day</i>
Sunday:	Game		<i>Hard Training Day</i>



**Tip: Build Your
Performance Plates with
foods YOU enjoy.**

Building Your Performance Plate



Fuel Target Food List

1. Protein/Fat	2. Fruits/Vegetables	3. Whole Grains Starches	Misses 10-20%
			Foods we love but body does not love

First fill out
with protein,
color, starch
foods you
enjoy

What does 100g of protein look like?



Bfast: egg on toast with slice of ched cheese, fruit, coffee+oatly



Snacks: apple+pb, yogurt+muesli, & dark choc covered pretzels



Lunch: 2 tbsp hummus, 1/3c edamame, 5 crackers & color



Brown Rice with 4oz skinless chicken thigh and broccoli

How much **protein** do you need?

1.4-2.0 g/kg

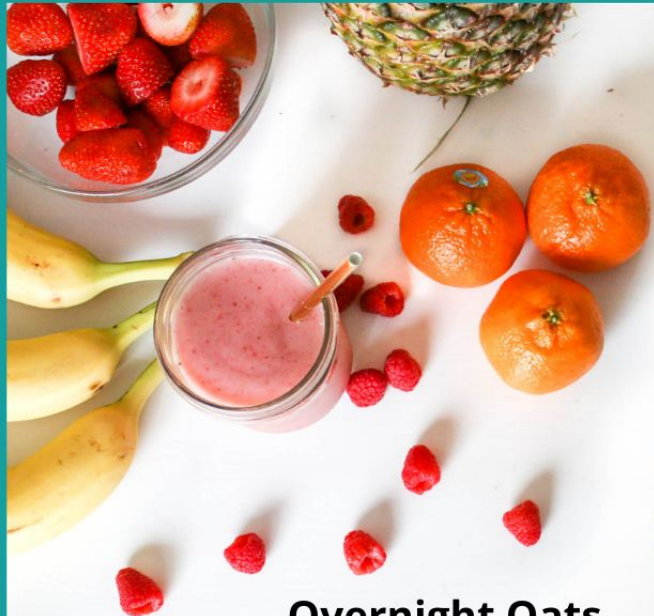


20-35g

4-6x / day

Prioritizing protein at every meal & snack

QUICK & EASY BREAKFAST IDEAS



Oatmeal Bowl:
Oats + berries +
milk + nut butter

Yogurt Bowl:
Grk Yogurt + fruit
+ nut butter +
muesli or granola

Breakfast Sandwich
egg, cheese, ham, on
WG english muffin

Overnight Oats

BreakFastable
cheese stick, fruit,
crackers, nuts

Eggs on Toast
+ piece of fruit

VANS waffle or
pancake topped with
nut butter, fruit &
little syrup

For optimal cognition
function & balanced
energy at school/work and
training, start the day with
a balanced breakfast

This will also help if
extremely hungry in
evening/late half of the
day.

Meals-on-the-Go: DIY Lunchables



Turkey Sandwich



Apple + Peanut Butter



Cookie



Baby Carrots

Apple



Cheese Stick



Cookie



Trail Mix



Sugar Snap Peas

PB&J Sandwich



Greek Yogurt



Clementines

Protein to add to lunches at school



1 oz. meat or
seafood



¼ cup tofu



½ oz. nuts



1 Tbsp. nut butter



1 granola bar



1 yogurt cup (6 oz)



6-8 oz. milk



2 Tbsp. hummus



1 oz. cheese



¼ cup beans/lentils



1 egg



½ cup roasted
chickpeas

Building Your Performance Plate



Breakfast	Lunch	Snacks	Dinner

Begin to build meals from your target food list with each component.

Breakfast	Lunch	Dinner	Snacks
1/3c Oats, water, milk, cinnamon, ½ banana, berries, nuts/pb butter, hemp seeds, chia seeds	Bistro Box: hard boiled egg(s), fruit, cucumbers, mini peppers, crackers	Chicken, ½ Baked Potato w/sour cream/grk yogurt, cheese & broccoli + zucchini	-88 acre bars, Lara Bars Macro Bars -crackers+cheese+fruit
2 eggs, slice cheese on whole grain toast with piece of fruit	Bistro Box 2: Hummus + veggies + tortilla chips + fruit + cheese	3/4c cooked lentil pasta, tomato sauce, ground chicken, roasted veg	-Skinny Pop(+choc.chp) -toast with pb -2 Eggs w/fruit
Greek yogurt with ¼ cup cereal/muesli or 2 tbsp granola + berries	Open face cheese meat sandy or wrap + fruit + roast chickpeas/salty	Burrito bowl with quinoa, ground turkey, corn, salsa, avocado	-Mini meal (smaller breakfast or lunch) -Hummus+pretzel+veg
1 egg, Van waffles with nut butter and berries on top	Loaded salad (greens, chickpeas, hemp seeds, tomatoes, hb egg etc.)	Asian Bowl: Rice, teriyaki chicken, carrots, snap peas, cucumbers	-Yogurt w/ 2 tbsp cereal/muesli + berries -Trail mix or pb/fruit



Section 4

Performance Plate & Snacks

Lecture 3

Michele Fumagalli, RD, LDN

EATING ENOUGH: Keeping a Full Gas Tank



How keep gas in your tank?

- 1. Performance plate /balanced meals*
- 2. Fueling snacks, packing snacks*
- 3. Meal Planning*
- 4. Eating every 2-3 hours*

Snacks for Athletes



- Banana/Apple + Nut/Seed Butter
- Cheese Stick + WG Crackers
- Chobani Greek Yogurt + Trail Mix, Muesli, Granola, Nuts or Dried Fruit
- Trail Mix + Piece of Fruit
- Pretzels + Carrots + Hummus
- 88 Acres Seed Bar / RX Bar / Lara Bar
- Rice Cake + Peanut butter + Fruit
- Energy Balls
- Egg & Cheese on open-face WW English Muffin
- 1/2 PBJ or Turkey Cheese Sandwich
- Hard Boiled Eggs + Fruit

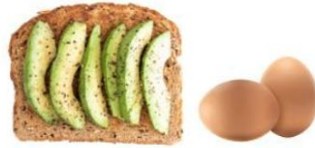


See snacks as a mini meal (Protein + Carb and/or Color)

It is difficult to get optimal fuel just in the three typical meals (BLD)

Snack between meals or eat multiple snacks for a meal

Snacks for Athletes prioritizing protein



Sprouted Grain Toast with Avocado & 2 Eggs



Fruit and Protein Smoothie



Protein Waffles with Nut Butter



"Snack Plate"
Raw Veggies, Hummus,
Shredded Chicken



Edamame with Fruit



Greek Yogurt with Fruit and Nuts

Benefits of Protein Between Meals:

- Aids in satiety
- Assists in meeting daily protein needs
- Promotes MPS

Protein Food Sources:

Chicken, turkey, fish, eggs, jerky, Greek yogurt, cheese, milk (*dairy*, *Ripple*, *soy*), nuts, nut butters, tofu, edamame

Protein to add to Snacks



1 oz. meat or
seafood



¼ cup tofu



½ oz. nuts



1 Tbsp. nut butter



1 granola bar



1 yogurt cup (6 oz)



6-8 oz. milk



2 Tbsp. hummus



1 oz. cheese



¼ cup beans/lentils



1 egg



½ cup roasted
chickpeas

After School Snack Ideas

FIT PLATE NUTRITION



Apple Slices +
Peanut Butter



Pretzels +
Hummus



Yogurt + Granola
and Berries



Cheese +
Crackers

Snack to Fuel athletes

Yogurt, pb, frozen berry
smoothie

Celery + pb + raisins

Peaches + cottage cheese

Banana + nuts/nut butter
(on toast/rice cake)

Pears + cheese

Greek yogurt + fruit

English muffin pizza

On-The-Go Snack Ideas

FIT PLATE NUTRITION



Banana + NutButter



Trail Mix



Bars



Drinkable Yogurt

Bar Recommendations

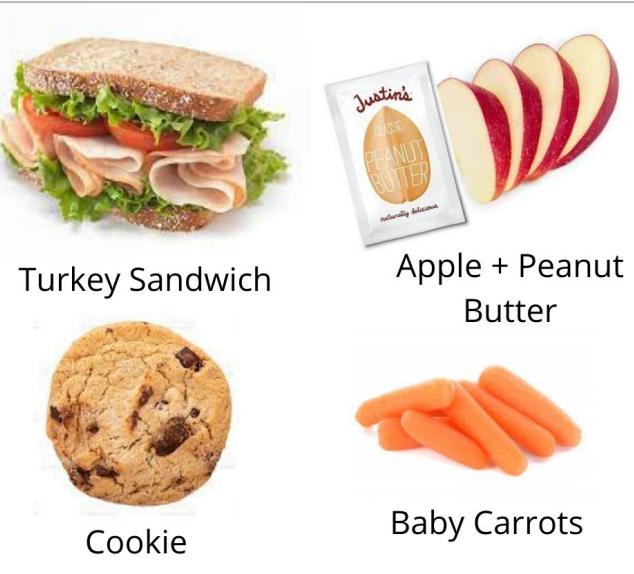
KIND bars, 88 acres (nut free), Gomacro, ClifBars, BOBO Bars, RX bars, Lara Bars

Travel Snacks to pack

Apple sauce packets, dried fruit, trail mix, instant oatmeal, beef jerky, nut butter packets, nuts, granola, rice cakes, snack bars, whole wheat crackers/pretzels, shelf stable protein shakes

Smaller meal can be a snack

Multiple snacks can be a meal



Turkey Sandwich



Apple + Peanut Butter



Cookie



Baby Carrots

- ½ sandwich
- Apple + nut butter
- Carrots + deli meat + toast

- Cheese stick + apple
- Cheese stick + crackers
- Trail mix + apple



Apple



Cookie



Trail Mix



Cheese Stick



Sugar Snap Peas



PB&J Sandwich



Greek Yogurt



Clementines

- yogurt
- ½ pbj
- Halo orange + pb toast

Night Snacks for Athletes

PRIORITIZE PROTEIN



SATISFY CRAVINGS



BONUS: ANTIOXIDANTS



Goals:

- Fiber rich carb
- Protein
- Satisfying

Bonus Nutrients

- Melatonin
- Magnesium
- Tryptophan



Yogurt topped with fruit and/or granola

TART CHERRY SMOOTHIE



YOGURT, BERRIES, CRUSHED GRAHAM CRACKERS & NUTS



PB BANANA TOAST



Hot chocolate or a turmeric latte with milk or a protein-rich plant-based milk



Trail mix-sweet or salty!



Fruit with nuts or cheese

CHOCOLATE PROTEIN OATMEAL



EDAMAME + CHOCOLATE CHIPS



Glass of milk or smoothie



Handful of crackers with peanut butter or cheese

*Hard-boiled eggs with fruit

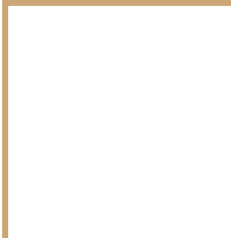
*Almonds, dark chocolate & raspberries

Building Your Performance Plate



Breakfast	Lunch	Snacks	Dinner

Begin to build meals from your target food list with each component.



Section 5
Nutrient
Timing

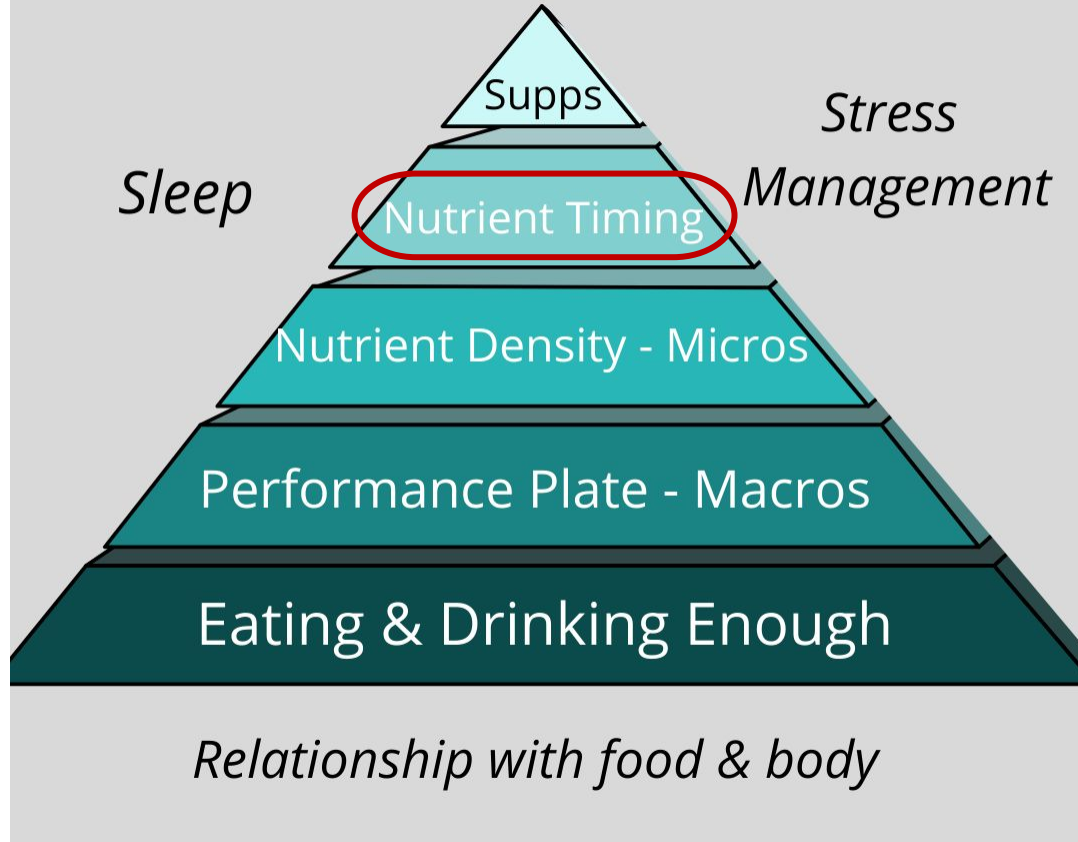
Lecture 1



Michele Fumagalli, RD, LDN

Nutrition For Athletes

***What athletes eat
and how much
needs to change
the closer he/she
gets to warm up***





Nutrient Timing

3-4 hours before warm-up: *Fuel with Performance Plate Meal*

1-2 hours before warm-up: *Less food, fiber & fat. Carbs are King.*

15-30 minutes before & during: *Simple, easily digestible carbs, fluids and electrolytes*

<60 minutes after: *Carbs, Protein and Fluids*

<3 hours after: *Fuel with Performance Meal*

Hydration Timeline



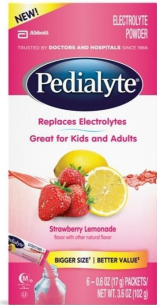
**2-3 hours
before**



16-32 oz water

**1 hour
before**

8-10 oz
Electrolyte drink



During



8 oz fluids every
20 minutes
Sports Drink

After

20 oz per #
body weight lost



Pre Training/Game Goals



1. Avoid GI distress
2. Top off muscle energy stores (glycogen) with Carbohydrates
3. Maximize hydration with fluids + sodium
4. Eat enough to prevent feelings of hunger



The 3 F's to decrease the closer we get to go time

Fat

slowest energy
source to
breakdown

Fiber

Filling, harder to
breakdown

Food Volume

Full stomach

*to limit GI distress

Pre Training/Game Fuel

**1-2 HOURS BEFORE
CARBS ARE KING**

**60-90 MIN
BEFORE**



**Nutrition Bars
or Energy Balls**



**Salty
Snacks**



Fruit



PB&J



**1/4c Oatmeal
with fruit**

Carbohydrate rich
with Less fiber &
fat and more
snacks vs meals.

Plus hydration &
possible
electrolytes

Pre Training/Game Fuel



15- 30 MIN
BEFORE

PRE & DURING FUEL

Easily digestible carbs shortly before a workout can provide an energy boost to the body for longer or greater intensity workouts



1/2 Banana or piece of fruit

Applesauce (pouch)



Gummie Bears / Fruit Snacks

Other Options:

- Dates
- Carb rich granola bar
- Sport Gels / Blocks & Waffles
- Carbohydrate Drinks
- Low fiber Fruit
- ½ Nutrigrain Bar
- ½ Fig Bar

During Training & Half Time

- Hard training days over 60-90 minutes water alone does NOT cut it.
- We need to **REfuel** (carbs) & **REhydrate** (water + electrolytes)
- Easiest way to do this = Sports Drinks
 - Body Armour does not have sufficient sodium amount



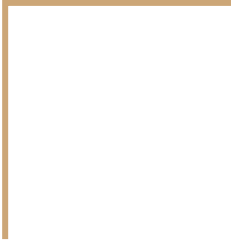
**During is same as 15-30 min before*

Refueling/Hydrating at Half Time

**Soccer's ONLY break is during half-time (unlike volleyball, basketball etc.)
Thus, Halftime is even MORE important for continued energy 2nd half.



Simple Carbs
***Fresh Fruit**
***Dried Fruit**
Fruit Snacks
Apple Sauce
Fruit Squeezes
H2O + Fruit Juice
H2O/Carb/Electrolytes
Low fat/fiber Granola Bars
KIND Fruit pressed
**too much could cause GI upset*



Section 5
Nutrient
Timing

Lecture 2



Michele Fumagalli, RD, LDN

The 3 R's Post-Game/Training



ReHYDRATE

Fluids +
Electrolytes

ReFUEL

Energy stores with
calories & carbs

RePAIR

Muscles with
Protein & Carbs



The 3 R's Post-Game/Training

1. **Rehydrate** with 16-24 oz of water for every 1 hour of intense activity or every 1lb of body weight lost if you're getting really sweaty.
2. **Refuel** carbs with about 1.5g/kg in the hour post-exercise (especially if you went in fasted). Your body uses glycogen aka stored carbs for energy while you workout? Just like our get more gas in car when low, we need to refill our tank aka refuel
3. **Repair** with protein to help your muscles recovery and repair from all the crazy, fun things your muscles did in the workout. Aim for at least 15 to 30 grams post-workout.

Post-Game/Training Recovery



Consume snack or meal 30-45 minutes after training and again 2 hours after exercise for optimal recovery

Low appetite? Try liquids like chocolate milk or smoothie



Post Training/Game Fuel



**QUICK &
EASY**

POST-WORKOUT FUEL

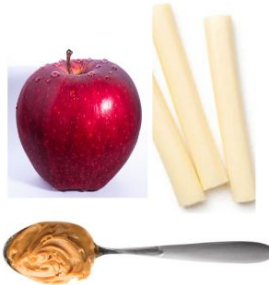
Smoothie/Shake

Greek Yogurt & frozen fruit



**Yogurt w/ fruit
* granola**

**Apple w/PB
+ String cheese**



Low Fat Chocolate Milk

Post workout can be a snack, a substantial snack, or full meal if you are really hungry.

The key is to get in some sort of carbohydrate (starch/color) and protein with fluids

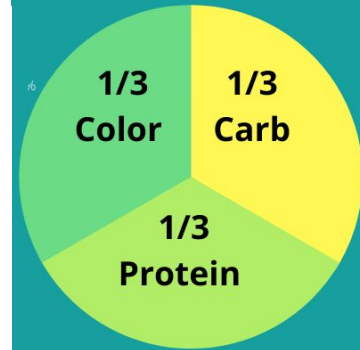
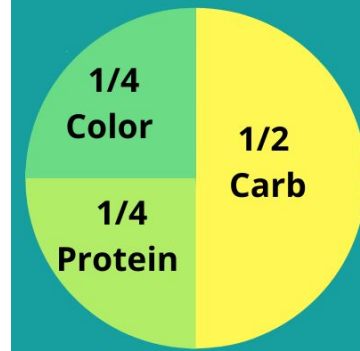
Eat Protein & Carb rich snack 30-45 minutes after training and a meal within 2.5-3 hours

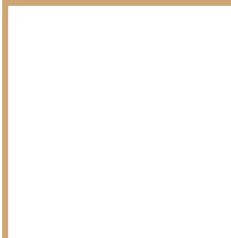
Post Workout Meal Ideas

Focus on Starchy Carbs & Leaner Protein, Color is a plus!

Don't forget the performance plate

- Baked Salmon, brown rice, roasted asparagus
- Breakfast scrambler (2 Eggs, deli ham, sauteed peppers/onions, tbsp shredded cheese) on 2 toast
- Chicken sausage, whole grain noodles, pesto sauce, sauteed zucchini or broccoli on top.
- Burrito bowl - chicken/shrimp with rice, cheese, beans, tomatoes/salsa, lettuce
- Baked sweet potato with shredded chicken sauteed in buffalo sauce, tbsp butter, chopped celery & carrots
- Shrimp stir-fry (grilled shrimp, sauteed peppers, onions, cauliflower, brown rice noodles & soy sauce)





Section 5
Nutrient
Timing

Lecture 3



Michele Fumagalli, RD, LDN

Evidence-Based Sports Nutrition: WHAT?



Susie

- 3 days of soccer per week
- Picky eater
- Lactose Intolerant
- 3-4:30pm Practice time + 1-2 weekend games



Abby

- 5 days of soccer per week
- Likes all food
- Allergic to nuts
- 4-6:30pm practice + weekend tournaments

Do you think these athletes have the same fueling needs?

Tournament Nutrition

An aerial photograph of a soccer field. The field is green with white markings for the center circle, penalty area, and goal lines. A green safety net is stretched across the top of the field. The field is surrounded by lush green trees and a paved path. In the background, a red and white running track is visible.

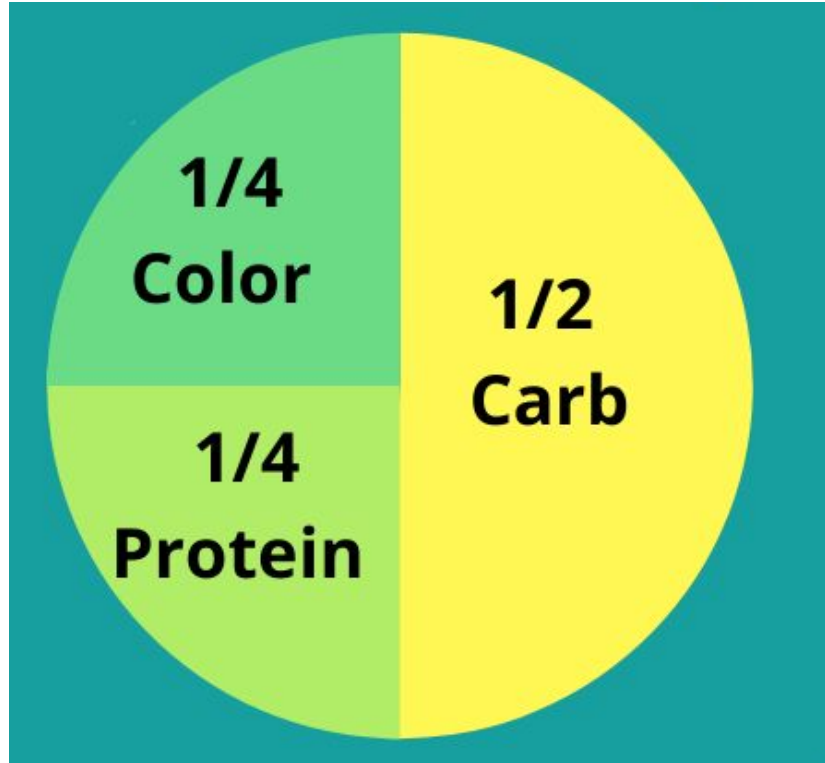
GOAL:

- Recover body as best so last game is as close to performance of first game to decrease risk of injury, cramping, heat stroke, depleted energy stores
- Replenish body with proper hydration & nutrition post game (recovery) PLUS ReFuel & Rehydrate for upcoming game
- Avoid gastric distress

TIPS:

- Day before fuel and hydration
- Think (big/small) snacks through day if multiple day games with fueling breakfast & recovery dinner meal.
- Sports drink to help reach carbohydrate and hydration goals
- Create Fuel Plan
- Pack snacks/meals to bring with you just like you bring equipment.

Hard Training Day / Game Day



2-3+ hours of strenuous activity

- Multiple training sessions
- Prolonged heavy conditioning/lifts
- Tournament play
- Reaching max heart rate at times
- 1 Day before Game

Making Your Fueling Plan

1. What time is your practice/game(s)?
2. Think about the fueling and hydration you need before, during, and after.
3. Make sure you have these foods and drinks prepared and ready to go!
4. Commit to your plan.
5. And lastly, analyze how it went & what other changes could be made. Learn & improve



Hydration Timeline



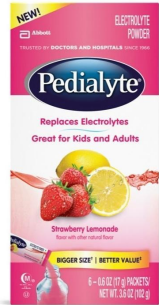
**2-3 hours
before**



16-32 oz water

**1 hour
before**

8-10 oz
Electrolyte drink



During



8 oz fluids every
20 minutes
Sports Drink

After

20 oz per #
body weight lost



*If you do not have 2.5-3 hours to eat before game

Day before Lunch, Dinner and hydration is even more important.

Think 60-90 minute smaller meal/snacks before game.

Less fat, fiber & food volume



Pre-game meal 2.5-3 hours before warm-up

Snack(s) 60-90 min before warm-up + electrolytes

Rehydrate & Refuel at halftime

Post Game Snack 30-45 min after + **Game day plate** 2 hours later

Large snack/mini meal followed by another small snack (esp if game next day)

Weekend Games Fuel Plan

SATURDAY

8:30am Breakfast

3.5 hours before warm-up
1/2c oats + toppings & 1-2 eggs



PreGame Snack 11:00am

Closer to warm-up
less fiber/fat



1:00 Game

Half-time

Refuel & Rehydrate
Simple carbs



Post Game

Rehydrate & Refuel
with carbs/protein



Post Game Meal 3:30

50% plate Carbs



Large Snack



Bedtime Snack




Schedule

- 6:30am Wake up
- 7:30 School starts


- **3:30-5:30 Practice**

- 6:00 Home
- 8:00 Homework/relax


Fuel




Glass of water + breakfast (*Bring water bottle, lunch & snacks*)



10:00 Snack (if later lunch)
10:30-1:15 Lunch (refill water)
1:00 snack (if early lunch)



3:00 Pre-practice snack



6:00 Dinner or post practice snack
8:30 Evening snack

Schedule

- Wake up
-
-
-
-
-



Fuel

-
-
-
-
-

Schedule

- 6:30am Wake up
- 7:30 School starts

- 3:00 Home
- **Practice 5-7:00**
- 7:30 Home
- 8:00 Homework/relax



Fuel

Glass of water + breakfast (*Bring water bottle, lunch & snacks*)

10:00 Snack (if later lunch)

10:30-1:15 Lunch (refill water)

1:00 snack (if early lunch)

3:15 Pre training mini meal

7:10 Post training Snack

8:00 Dinner

9:30 Evening snack (if hungry)

Schedule

- 6:30am Wake up
- 7:30 School starts

- 3:00 Home
- **Practice 7:00-9:00**
- 7:30 Home
- 8:00 Homework/relax

Fuel

- Glass of water + breakfast (*Bring water bottle, lunch & snacks*)
- 10:00 Snack (if later lunch)
10:30-1:15 Lunch (refill water)
1:00 snack (if early lunch)
- 3:15 Snack
- 4:30-5:00 Meal (smaller dinner)
- 9:00 Post workout snack/meal or...
- 9:30 Mini recovery meal

Create a Routine

1. Set an alarm: What time to start your day
2. Get dressed in real, clean clothes.
3. Eat regular meals rather than grazing to maintain energy levels & focus.
4. Eat to Train
5. Go to bed to get 7-9 hours of sleep each night

WAKE UP

Breakfast

Protein, Carb, Fruit



Protein. Color or Carb

AM Snack



Lunch

Protein, Carb, Color



Pre workout

Carbohydrate



Post workout

Protein, Carb, Fluid



Dinner

Protein, Carb, Color



PM Snack

Protein, Carb

GO TO BED

Game/Practice Fuel Bag



Practice & Game Bag Fuel



Heading to practice/game...
You pack your gear i.e. shin guards, running shoes, cleats, socks, additional clothes etc
BUT what about your fuel?
Your hydration?

This needs to begin to be top of mind for optimal performance



In Summary...

- **Eating regularly** - every 2-3 hours
- Follow **Performance Plate** (no skipping meals)
 - Alter *carb* intake around activity level/intensity
 - *Protein* at every meal & snack
 - Variety of foods to get variety M&V
- Connect how you feel with what did or did not eat/drink**
- **Plan Ahead:** Alter what eating around training/competition
- **Constantly Hydrate:** water & electrolytes
- ***Practice Makes Progress! Practice Makes Permanent***



Section 6

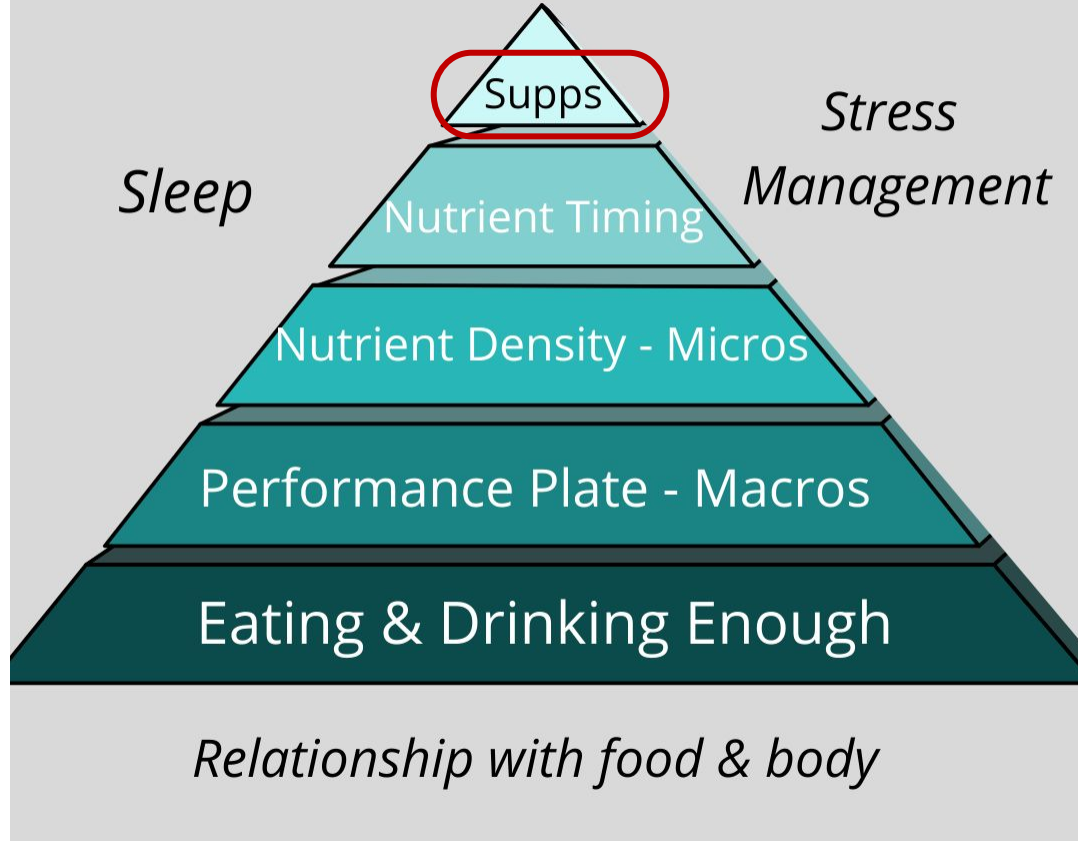
Supplements & Extras

Lecture 1

Michele Fumagalli, RD, LDN

Nutrition For Athletes

When we can't get enough energy, protein or certain minerals and vitamins into our diet



Supplements



- **What are they?** A manufactured product intended to supplement one's diet by pill, powder, or liquid.
- **Do you need them?**
 - Do you have any vitamin/mineral deficiencies?
 - Lab tests
- **Safety** - NSF Certified
- **Certain populations**
 - Injured athletes / vegetarians/vegans



Evidence Based & Safe Supplements

01	Beetroot/Beet Juice (Food)	<ul style="list-style-type: none">• Dilates blood vessels in exercising muscles, reduces oxygen use and improve energy production• Might improve performance and endurance to some degree•
02	Creatine	<ul style="list-style-type: none">• Helps supply muscles with energy for short-term, predominantly anaerobic activity• Numerous clinical trials show benefit for high-intensity intermittent act.• May increase strength, power & work & help body adapt to training regimens for repeated high intensity exercise (team sports)• 3-5g/day (in food but hard to get enough in diet)
03	Protein (Food/Supp)	<ul style="list-style-type: none">• Builds, maintains and repairs muscles• Numerous clinical trials to support• Optimizes muscle training responses during exercise & subsequent recovery period• 1.4-2.0 g/kg FOOD FIRST
04	Tart or Sour Cherry (Food)	<ul style="list-style-type: none">• Phytochemicals in tart cherries may facilitate exercise recovery by reducing pain and inflammation• May aid in muscle strength recovery, reducing soreness and/or inflammation shown to help with inflammation and improve recovery, especially during short recovery periods between games.
05	Collagen	<ul style="list-style-type: none">• A protein found in tendons and ligaments which one can get in diet but possibly not enough. Even more beneficial for injured athletes during recovery.• Important for tendon/ligament health (extremely important for soccer)• 15g dosage 45 min before training or PT (with 50mg Vit C = 12oz OJ)

Supplements

- Multi-vitamin
- Vitamin D3 (if deficient)
- Omega 3 (if not eating cold water fish 1-2x/week)
- Collagen + OJ for injured players
- NSF certified Protein shake if unable to get adequate protein in
- Electrolytes for hydration

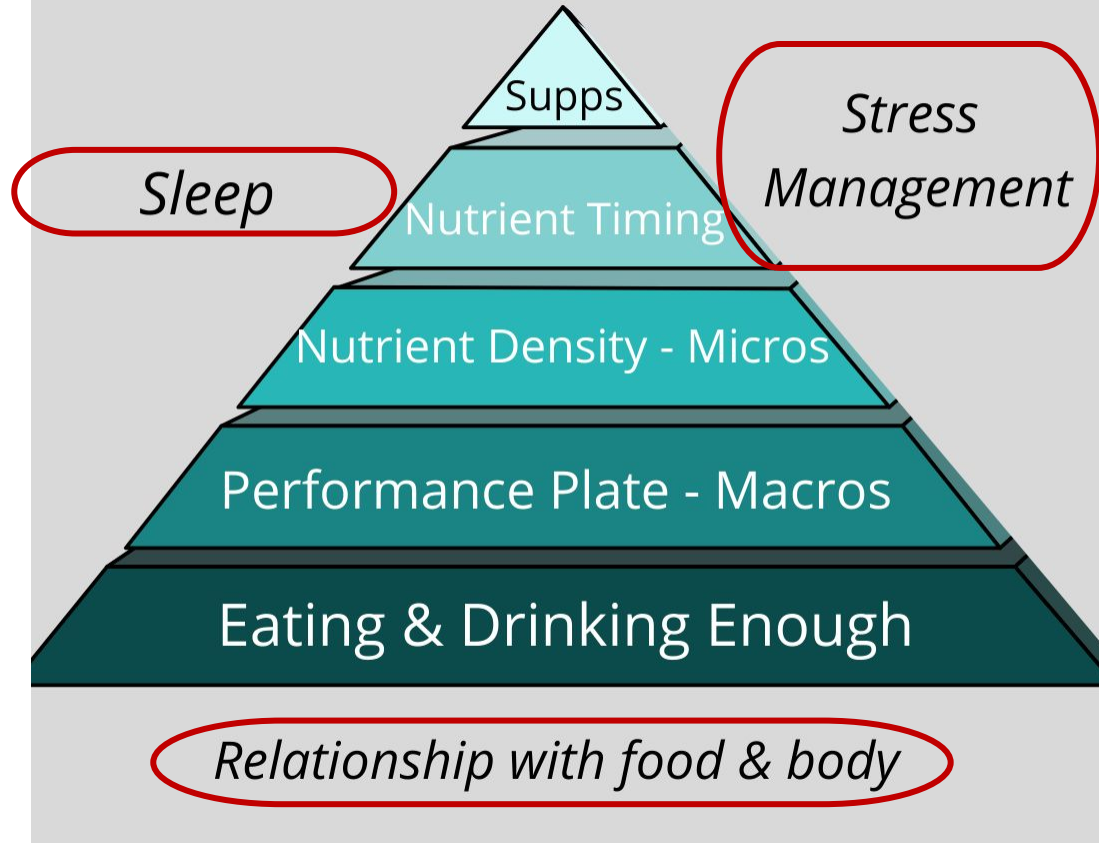
<https://ods.od.nih.gov/factsheets/ExerciseAndAthleticPerformance-HealthProfessional/>

Vegetarian / Vegan Athletes

- Vegetarian/Vegan athletes at all levels *can meet their energy and nutrient needs when consuming a variety of foods*, including grain products, fruits, vegetables, protein-rich plant foods, and (if desired) dairy products & eggs.
- Important to pay attention to *fiber & fat* (veg, nuts, seeds, beans) with nutrient timing
- Nutrients found less abundantly in plants and thus, potential needed to *supplement*:
 - a. Protein, omega-3 fatty acids, calcium, vitamin D, iron, zinc, iodine, vitamin B12



Nutrition For Athletes



Sleep

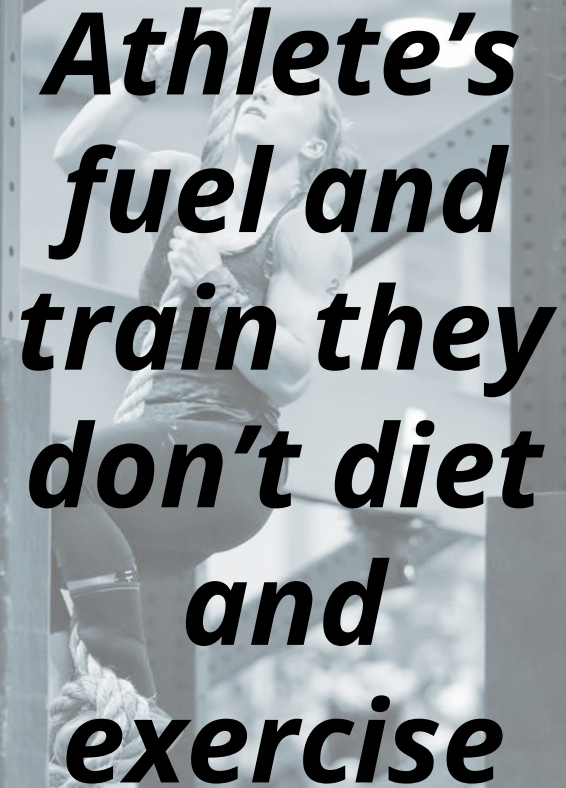
- Why is sleep important?
 - Recovery
 - Prevent injury/illness
 - Mental clarity
- Goal: 7-9 hours of sleep per night
- Tips:
 - Bedtime routine
 - Quiet, dark room
 - Limit screens and bright light before bed



Relationship with Food & Body

- Diet culture worshipping certain look, size, body type etc. etc.
- All different body types on your team
- Body neutrality, acceptance & appreciation

**Eat to Train don't
Train to Eat**



***Athlete's
fuel and
train they
don't diet
and
exercise***

Relationship with Food & Body

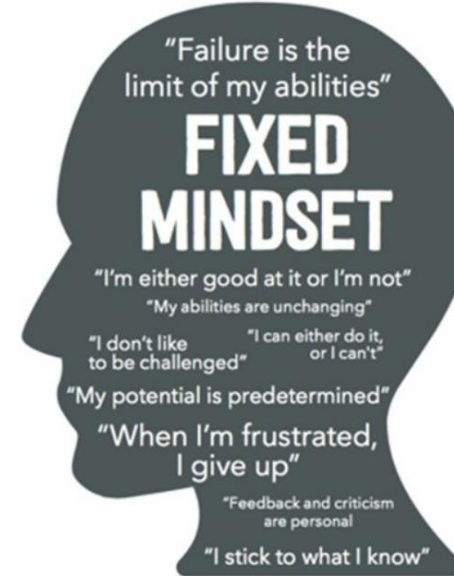
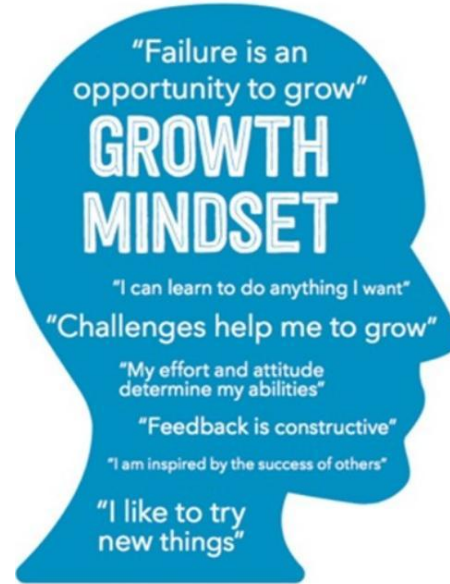
My low-point in my nutrition & performance

- Pressured to look a certain way in order to be successful
- Poor body image
- Restricting then later binging
- Not seeking professional help from a nutrition expert
- Not understanding the what & why of nutrition



Stress Management

- What's in your **stress management tool box?**
 - Journal, breathing exercises, call up a friend, go for a walk, bake, comfort foods, out with friends, yoga, get outside etc. etc.
- **Growth Mindset**
 - We are human, we will make mistakes, it is learning from them and striving to be better, take risks, be open to failure.
- **Self Compassion**



CONGRATS on Completing the Course!

- Section 2: The What & Why of Sports Nutrition (specific to soccer)
- Section 3: Hydration & Fueling body with enough energy
- Section 4: Building your Performance Plates
 - Fueling Snacks
- Section 5: Nutrient Timing
 - Pre & During Nutrition
 - Post-Training Nutrition
 - Game Day & Tournament Nutrition
- Section 6: Supplements & Extras

