



Making Sports Nutrition WORK for YOU

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Nutrition Self-Guide

- Create your personal
Sports Nutrition Playbook



- In high level soccer, nutrition can provide a big-time **competitive edge!**

Why Try?

- Nutrition is key for:
 - Supporting training and recovery
 - Preventing injury/ maintaining health
 - Maximizing performance
- &
- MANY PLAYERS WAIT UNTIL LATE IN THEIR CAREERS TO IMPLEMENT SPORTS NUTRITION STRATEGIES

Why Try?

- Healthy eating for regular kids can be very different than healthy fueling for competitive soccer kids.
- You're putting TOO MUCH into your sport not to!

Primary Keys to Success

- Establish a **FUELING SCHEDULE**
 - For athletes:
 - Energy needs don't always depend on hunger
 - Fluid needs don't always depend on thirst
- Plan ahead
- Aim for consistency
 - Athletes are best fueled by taking in similar nutrients and amounts at similar times each day, each practice, each game
- **ENJOY food** — don't eat it if you don't like it.

Common kid nutrition issues and dilemmas

- Multitude of special occasions...all with food!
- Rules and guidelines at schools
- Developing independence in food choices
- Emphasizing nutrition without being pushy
- Promoting body image and power of food
- Food used as rewards/incentives/punishments
- Difficulty in seeing long-term picture of health and body composition
- Culinary and grocery shopping — challenged kids!

Outline

- Game-day nutrition
= Training-day nutrition
- Sports Nutrition basics
- Tricky situations

Pre-Game Meal

SKIPPING is not an option!

WHAT to EAT

- Lots of carbs, *some protein*, little fat
- At least 1 fruit or veggie (for antioxidants)
- Add salt, pick salty foods
- Lots of fluids

WHAT NOT to EAT

- greasy or fried foods, sugary foods, spicy foods, entrée salads, foods never eaten before, caffeine,
- too much or too little



What about players who "can't eat" before playing?

- LIQUIDS**
 - Fruit smoothies, meal replacement drinks, lowfat or skim milk, juices, sports drinks
- Bland carbohydrate foods can settle the stomach:**
 - Crackers, pretzels, pieces of bagel/bread, plain cereals, plain pasta

Pregame Meal: TIMING

Morning game (before 11am)

- Start at least 2 hours before
 - Small meal when you wake up + "top off" snack
 - Makes night-before meal more important

Afternoon game (noon-4pm)

- 3 fueling times
 - Small meal as soon as you wake up
 - PRE-GAME 3-4 hours before
 - "top off snack"

TOP OFF SNACK:

Have fueling snack or sports drink
1 hour before start time

Sample morning Pre-Game Meals

- Eggs, oatmeal, berries, fruit juice
- OR egg/cheese sandwich on bagel or Eng muffin, fruit cup, fruit juice or milk
- OR cold whole grain cereal with milk, raisins, fruit juice
- OR peanut butter and jelly/honey on wheat bread or whole grain waffles, chocolate milk
- OR yogurt cup, pancakes or french toast, fruit juice
- OR breakfast shake and crackers (for those with queasy tummies)

Mimic Game-Day Nutrition on Training Days!

- LUNCH should be considered the "pre-training meal"
 - Pack lunches that meet criteria
 - Educate players to buy (and eat) lunches that meet criteria
- Then remember the fueling snack within an hour of practice!

Fueling Snacks Before Training

Have a PLAN for the MINI-VAN!



supported initiative

Fuel with carbohydrates within 1hr of training

Make it a team effort! team efforts = team results

Establish a team or personal
FUELING STATION



Pre-practice Fueling Suggestions

Goal:
250-500 calories of
carbs;
>15 ounces fluids

- cereal bar, fresh fruit or fruit cup, water
- 1 cup dry cereal, small box raisins, water
- Granola bar, 100% fruit juice box
- Wheat bagel, honey or jelly, water
- ½ cup wheat crackers or pretzels, 16 ounces sports drink
- oatmeal packet or bites, 100% fruit juice box
- Graham crackers, pudding cup, water

Half-time Nutrition

- Finish stronger, reduce the risk of injury, and promote better recovery by hydrating and carb-ing-up at halftime.

- Include:

- **Fluids:** Sports drinks, water
- **Carbs:** Sports drinks, fruit, honey, gels, gummy fruit snacks, graham crackers, goldfish or oyster crackers

*=Powerade or Gatorade

Recovery Nutrition

Goal:
250 calories of
carbs & protein;
>16 ounces fluids



- Honor the 30-minute window
- Replace energy stores, repair muscle, and make more athletic gains by eating & drinking within 30 minutes of finishing practice and games
 - ½ cup trail mix and 12 ounce chocolate/strawberry milk box
 - ½ peanut butter and jelly on wheat, 16 ounces sports drink
 - Regular or drinkable yogurt (ie: "gogurt"), water
 - Half (3") turkey or ham & cheese sub, 16 ounces sports drink
 - ¼ cup nuts, fresh fruit, water
 - String cheese, 1 cup grapes, water
 - Pre-packaged sweet cereal with skim milk, water

Tournaments/ Post-Game

- If more than 1 game/day:
 - Recovery snack
 - + 60grams carbs/hour if game is <2hours away
 - + 60grams carbs + 15grams protein if > 2 hours
- Recovery snack "buys" you 2 hours before you need to eat again
- If recovery snack is good, post-game meal can have occasional splurges

Soccer Nutrition Basics

- How many calories?
 - 15 to 25 calories per pound
 - Ex: 150-pound player needs 2200 to 3500 calories
 - Consider BIG individual differences!
 - Calorie counting is discouraged, but introduce the concept of nutrition periodization
 - When you're training hard, eat more calories & carbs
 - Protein and fat needs stay pretty stable
 - Establish fueling TIMES with the right foods and eat the amount that FEELS RIGHT

Soccer Nutrition Basics

- **60% carbohydrates (ENERGY)**
 - Ex: bread, cereal, rice, pasta, fruits, veggies
 - Soccer players need more than average kids
 - Don't avoid carbs – pick the healthiest types

WHAT ABOUT SUGAR?
- **15% protein (MUSCLE GROWTH/RECOVERY)**
 - ...up to 1g/pound body weight
 - Ex: lean meats, eggs, dairy, nuts, beans
 - Include some in each meal
- **≤ 25% fat (HEALTH & PROTECTION)**
 - BEST Choices: fish, oils, oily salad dressings, nuts, seeds, peanut butter, hummus, guacamole, avocado

**Make each meal a
combo of
carbs & protein**

Many soccer players under-eat protein

- ~10 grams protein in:
 - 1 ounce meat or equivalent
 - 2 eggs
 - 1 cup milk/yogurt or 1 ounce cheese
 - 2/3 cup beans
 - 1/3 cup nuts or 2T peanut butter

Consequences:
Weakness
Poor recovery
Weak bones
Impaired growth



Animal sources



Plant sources

These **DON'T COUNT** as lean protein!

bacon
sausage
Bologna
hot dogs
fried meats
whole milk
ice cream

Food and fluids are **FUEL** for fast engines



Keep the fuel tank full.
Don't let the gas light come on!

Metabolic Differences

- Just because you **CAN** eat "anything" doesn't mean you **SHOULD**!
- **Quality** of fuel should be priority

Follow the 10% RULE

10%

...of your calories can come from "empty calories" as long as the rest of your diet is in good shape!

Frequent Fueling Works Best

- Athletes should eat about **5** times/day
 1. BREAKFAST
 2. LUNCH
 3. PRE-TRAINING FUEL
 4. REFUELING SNACK
 5. DINNER
(NIGHT SNACK IF NEEDED)
- Get 2/3 of calories BEFORE TRAINING

Practical Points

- Avoid BOTTOM HEAVY DIETS
 - Fuel all day!
- Meal SIZE should be...
 - Amount to be hungry again in 3 hours
- Most Critical Fueling times:
 - Breakfast, Recovery Nutrition



Most often missed!

Breakfast

Sleep and time are precious to athletes

- Educate that athletes who eat breakfast have:
 - Better weight control
 - More appropriate caloric intake
 - Greater academic performance
 - Greater energy availability
 - Improved hydration status
 - Better intake of fiber, calcium, iron, zinc, fruit, and whole grains

Breakfast

combination of protein & quality carbs

- Home
 - Whole grain cereal/1% or skim milk/fruit
 - Hard boiled eggs (pre-boil)/oatmeal packets/fruit juice
 - Oatmeal with nuts & berries
 - Omelet (eggs/whites) with veggies, cheese
 - Canadian bacon or turkey sausage, wheat toast w/ healthy margarine, fruit
 - Pancakes with fruit preserves/yogurt or milk
 - Leftover dinner...cold pizza (no meat)
- On-the-Go
 - Homemade or fast food egg & cheese sandwich on english muffin or wheat bread
 - Scramble eggs in microwave!
 - Drinkable yogurts/cereal bars
 - Fast food yogurt parfaits or pancakes/milk
 - Fruit/yogurt or protein smoothie
 - Carnation Instant Breakfast or Gatorade Shake plus dry cereal
 - PBJ sandwiches
 - Trail mix

Fast Food Education

- Popular, realistic, only option sometimes
- Small changes, big difference:
 - Egg and cheese on...
 - ...English Muffin = 10 grams of fat
 - ...Biscuit = 25 grams of fat
 - ...Croissant = 32 grams of fat



Poor Quality Breakfast Choices

- Croissants or biscuits
- Donuts or pastries
- Sugary cereals
- Whole milk
- Poptarts or sugary breakfast bars
- French toast with butter/syrup
- Grits with lots of butter/cheese
- Regular bacon or sausage
- Flavored coffee drinks or frappuccinos
- Non 100% fruit juice



Sluggish,
poor energy

Packable Nutrition

• Pack snacks

Back-pack, locker, glove box, travel bags

Snack ideas (high energy, lean protein):

- Trail mix (nuts, cereal, dried fruit, choc chips)
- Wheat bread sandwiches or subs with PBJ or meat/cheese
- Dry cereal & drinkable yogurt
- String cheese or cheese cubes & fresh fruit
- Beef jerky & applesauce/fruit cup
- Nuts or Sunflower seeds & granola bar
- Leftover cheese pizza or English muffin pizza
- Beans and rice (in tupperware)
- Bagel with sliced cheese
- Yogurt-covered raisins or pretzels
- Sports bars
- Fruit smoothies



- There ARE good options in vending machines and school cafeterias!

Most Important Vitamins & Minerals for Young Soccer Players

1. Iron

- Iron is a critical component of hemoglobin, the protein responsible for carrying oxygen throughout the body
- Low iron stores = decreased aerobic function, fatigue, poor focus & concentration, slow recovery, increased illness/injury



▪ High iron foods:

- beef
- dark chicken or turkey
- pork
- green veggies
- healthy cereals
- dried fruits

•Soccer players need at least 3 high iron servings each day.

•Use the Vitamin C rule!

•Consider a multivitamin

Most Important Vitamins & Minerals for Young Soccer Players

2. Calcium

- Component of bones and teeth; deficiency can increase risk of stress fractures and other injuries
- Bone density continually increases until age 25ish
- Considerations down the road with menstrual abnormalities



▪ High calcium foods:

- Milk
- Cheese, cottage cheese
- Yogurt
- Fortified juice
- Fortified cereal
- Salmon
- almonds

•Soccer players need at least 3-4 servings of calcium each day.

•Consider calcium supplements if not possible.

Most Important Vitamins & Minerals for Young Soccer Players

3. Antioxidants

- Defend the body from stress, damage
- Help reduce soreness and risk of respiratory infections
- Promote heart health



▪ High antioxidant foods:

- Brightly colored fruits or juices
- Brightly colored veggies
- Nuts

•Soccer players should aim for as many naturally colorful foods each day as possible.

The "I hate vegetables" kid

- Use creative strategies for obtaining the same nutrients:

- Fruits: fresh, frozen, dried, smoothies
- Salsa, tomato sauce, and veggies in soups count
- Have veggies on sandwiches, in pasta, on pizza
- Try "sneaking in" pureed veggies
- Get fast food fruit cup side dishes; select baked potatoes; order bean dishes
- A little Ranch dressing never hurts to make those carrots taste better.
- Use Flintstones as a backup!



Dehydration...

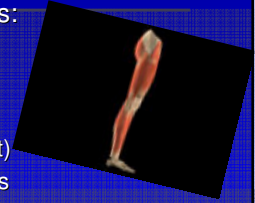
- One of the most common nutrition problems I see with young soccer players
- Dehydration can impact:
 - SAFETY
 - mental performance
 - physical performance
 - recovery
 - injury-risk
 - immunity



DEHYDRATION ALLOWS THE BODY TO HEAT UP FASTER!

Muscle Cramping

- Nutrition-related causes:
 - It's not about bananas!
- 1. Inadequate fluids
- 2. Inadequate sodium (salt)
- 3. Low carbohydrate stores
- 4. Low levels of other electrolytes



Hydration Check-Points

- ✓ Drink water & sports drinks at all opportunities throughout the day
 - Pale yellow urine & absence of thirst = well-hydrated
 - Carry fluids whenever allowed. Don't pass a water fountain w/o drinking.



- ✓ Train your body to drink before, during, and after practice and games
- ✓ Be sure cool, appealing fluids are available
- ✓ Drinks should be cool, not ice cold
- ✓ During hot training sessions, weigh before & after to assess fluid replacement (lose <2 pounds!)
- ✓ Players who cramp frequently or seem to sweat out a lot of salt may need special intervention

Use the 3-H rule for Sports Drinks

Sports drinks = Powerade, Gatorade-types
(not Vitamin Water, Red Bull)

Sports drinks favor water when training is:

3-H

Hard
Hot
& over an Hour

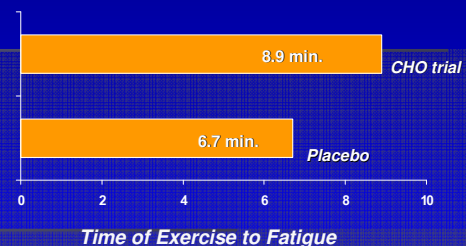
Soccer Simulation



- One week apart, 9 male players completed 75 minutes of shuttle runs followed by intermittent running to fatigue (performance trial).
- These intermittent, high-intensity shuttle runs were designed to replicate activity patterns of stop and go sports. They consisted of intermittent running, including maximal sprinting interspersed with less intense periods of running and walking.
- The athletes drank either a 6.9% carbohydrate-electrolyte drink or placebo immediately prior to exercise (5 ml per kg) and every 15 minutes thereafter (2 ml/kg).

Nicholas et al., *J Sports Sci.* 1995; 13(4):283-290

RESULTS: Shuttle Run Test



- Conclusion:** A carbohydrate-electrolyte drink improved performance during intermittent, high-intensity exercise.

Nicholas et al., *J Sports Sci.* 1995; 13(4):283-290

Key Beverage Points for Athletes

- BEST hydrators are water & sports drinks
- Fitness waters should only replace water, not sports drinks for athletes
- Potential dehydrator: caffeine
- Juice can be a healthy source of vitamins & carbs
 - select 100% fruit juices
 - Hawaiian Punch, Lemonade, and Hi-C do not count!
- Many young people get too little calcium
 - drink 1% or skim milks
- Sodas, sweet teas, & coffee beverages can be source of extra *empty calories*

Invasion of the Energy Drink



- Energy drinks are different from sports drinks
 - Contain caffeine, other stimulants, sometimes sugar, herbs, vitamins, etc.
 - Safety concerns for athletes! Kids should NOT use.
 - Use nutrition, hydration.
- *Energy drinks do not provide REAL energy...they just help athletes feel energized.*

Nutrition Pep Rally

- Provide optimal fluids and foods for players whenever possible. Eat well as a team.
- Create HABITS...then the exceptions aren't a big deal
- 5 minutes of nutrition goes a long way
 - Target points
 - Objects of interest
 - Nutrition in the news
- Weekly goals and challenges
 - Who can eat the most fruit; cooking contests; quizzes
- Signs and buttons
 - "Do you have a drinking problem?"
 - "Today I am FUELED!"
- Highlight well-known players and their commitment to nutrition
- Schedule consultations with Registered Dietitians

Small Changes, Big Gains

- Women's National Team Member
- Normal Daily Lunch:
 - McDonald's Quarter-Pounder with cheese, Large Fries, Cola, Apple pie
- Revised Lunch:
 - McDonald's Quarter-Pounder with cheese, Large Orange Juice PLUS Cereal bar, Banana, water (kept in bag)

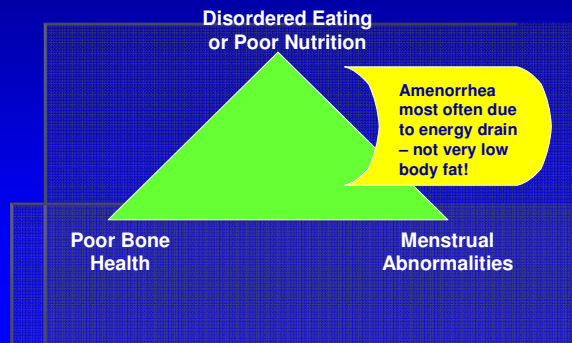
Small Changes, Big Gains

- Women's National Team Member
- Normal Daily Lunch: **90g carbs, 60g fat**
 - McDonald's Quarter-Pounder with cheese, Large Fries, Cola, Apple pie
- Revised Lunch: **130g carbs, 18g fat**
 - McDonald's Quarter-Pounder with cheese, Large Orange Juice PLUS Cereal bar, Banana, water (kept in bag)
- Impact:
 - Reported feeling less sluggish and "heavy" at practice, better speed at drills at end of practice

Important teaching concept

- Fitness is more important than fatness!
 - In a survey of women health club members, subjects said they would rather have a car accident, lose a job, go through a divorce, and even get cancer than gain 50 pounds.
 - GLAMOUR Magazine, 2005
- **TODAY'S YOUTH ARE EXPOSED TO A LOSS OF PERSPECTIVE!!**

Female Athlete Triad



Strategies for Reducing Body Fat %

- Match the amount of carbs you eat to your training level
- Make the off-season your nutrition ON-season
- Limit sugary foods and drinks (ie: soda, juice!)
- Stop eating just before you feel full
- Eat smaller meals more frequently
- Fill up on fruits, veggies, and lean protein
- Avoid snacking after dinner or snack smart if you do so
- **Limit high fat and fried foods**

Weight Gain Basics

- Eat more than you burn!
- Be consistent – weekdays & weekends
- Eat every 2-3 hours; avoid skipping meals
- Consume 1000 calories when you wake up and 1000 calories right before bed.
- Get extra calories from beverages.
- Honor the recovery window
- Remember that quality counts even when you're trying to gain weight

Make wise restaurant choices

- www.healthydining.com
- www.fastfoodfacts.com
- www.dietfacts.com

Fast Food Facts

- No need to AVOID fast food restaurants...
- Just make good choices when you're there!

Burger Places

- 2 sandwiches is better than a sandwich and fries
- Watch sauces like mayo, tartar sauce, ranch dressing; catsup, mustard, barbeque sauce OK
- Grilled = better than fried
- Sandwiches are better than



Steakhouses/ American Food

- Best steak choices end in "loin" or "round"
 - Avoid ribeye, T-bone
- There are always other side choices than French fries!
- Don't LOAD your baked potato...pick 1 topping!

Pizza

- Dominos, Papa John's are much better than Pizza Hut and others
- Watch the toppings!
 - Pepperoni and sausage add 150 calories per slice!

Serving size differences!

- Small french fries = 210 calories
- Medium french fries = 400 calories
- Large french fries = 660 calories



Chicken Wings

- VERY high calorie, high fat food:
 - 150 calories, 15 grams fat PER WING
 - 20 wings = 3000 calories, 200 grams fat
- Make these a SIDE DISH
- Limit sauces!

Chinese Food

- 1 order General Tso's Chicken
 - 1600 calories
 - 60 grams of fat
- 1 order Chicken & Veggies or Szechuan Chicken
 - 800 calories
 - 22 grams of fat



Mexican Food

- Limit:
 - fried shells, hard shells
 - sour cream
 - excessive chips and cheese
 - Many places FRY their tortilla chips!
- steak, chicken, or beans are better than ground beef

***Nutrition is never
NEUTRAL...***

***It's either helping your game
or holding you back!***