

## Nutrition for the Track Athlete

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### What Fuels Our Bodies?

Proper NUTRITION and HYDRATION contribute to overall performance as much as training

Enhance TRAINING & PERFORMANCE  
Speed RECOVERY & HEALING  
Prevent INJURY  
Promote improved HEALTH  
Support GROWTH & DEVELOPMENT  
Improve BODY COMPOSITION

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### What Fuels Our Bodies?



- Athletes often do not know:
  - **What** to eat
  - **When** to eat
  - **How** much to eat

Put the right amount of good gas in your car to go as FAR as you want as FAST as you want as OFTEN as you want!



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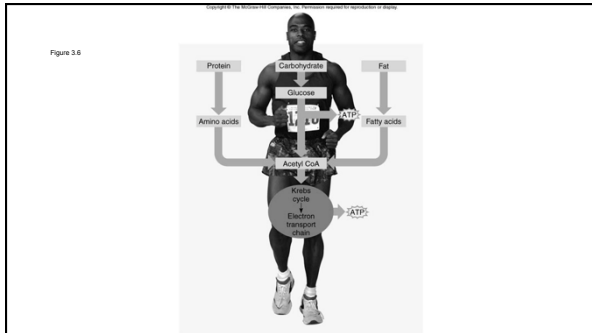
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### What Fuels Our Bodies?

Put the right amount of good gas in your car to go as FAR as you want as FAST as you want as OFTEN as you want!



- Athletes often do not know:
- **What to eat**

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### What Fuels Our Bodies?

**MACRO**nutrients

- Carbohydrates
- Protein
- Fat
- Water

**MICRO**nutrients

- Vitamins
- Minerals



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### What Fuels Our Bodies?

#### What is A Carbohydrate?

\* 1 gram = 4 calories

\* Examples: bread, cereal, rice, grains, fruits, vegetables, dairy products

\* Primary fuel and typically the limiting factor for most high intensity exercise  
\* stored in liver & muscles as GLYCOGEN

\* Target: 55-70% of athletes' diets

#### Amount required:

- Minimum of 3 grams/ pound body weight
- 2/3 of the plate (or tray!) at each meal

• Ex: 100-lb. athlete needs 300 grams of carbohydrates

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### What Fuels our Bodies?

<b>Breakfast</b>	
• 1 slices bread	15g
• 1 cups milk	15g
• 1/2 cup fruit juice	15g
<b>Snack</b>	
• 1 cup fruited yogurt	45g
<b>Lunch</b>	
• Bagel Sandwich	70g
<b>Practice</b>	
• 2 cups Gatorade	30g
<b>Dinner</b>	
• 1 cups pasta w/ sauce	60g
• 2 starchy veggies	60g
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300 grams	




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“I am going to rely on my fat for fuel, it’s carb-free for me!”

High-fat diets are not recommended for athletes. Here’s why:

- Studies: Ingest a high-fat (40-70%) diet for 1-3 weeks
- Responders and non-responders
- Greater fat utilization and sparing of muscle glycogen
- Faster time in cycling time trial
- Suggest performance at 60-80 % VO2max may be improved in distance
- Increased exercise time to exhaustion at moderate intensity
- May impair cognitive function
  - Attention, speed, and mood

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"I am going to rely on my fat for fuel, it's carb-free for me!"

- athletes may adapt to high-fat diets, but training becomes more psychologically stressful

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### What Fuels Our Bodies?

#### What is Protein?

\* 1 gram = 4 calories

\* Examples: meat, poultry, fish & seafood, eggs, soy, dairy products, nuts

\* Building block of muscles; growth & repair

\* Proteins are made up of amino acids  
\* 20 total; 8 considered essential

• Amount required:  
Target: 1.2-1.8 g/kg  
body weight (athletes)  
= (3/4 weight in lbs  
= \_\_\_ g pro needed per  
day)

• Ex: 100-lb. athlete needs 75 grams of protein

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### What Fuels Our Bodies?

#### What is Protein?

10 grams protein=

- 1 ounce meat
- 1 cup dairy
- 2 eggs
- 2 T peanut butter
- ½ cup beans
- ¼ cup nuts
- 1 cup yogurt

Breakfast	
• 1/2 cup almonds	10
• 2 eggs	10
Snack	
• 1 cup milk	10
• 1 string cheese	10
Lunch	
• 3 oz. turkey	30
• 1 oz. cheese	10
Snack	
• Peanut butter	10
Dinner	
• 6 oz. chicken	60
150 grams	

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### What Fuels Our Bodies?

#### What is Fat?

\* 1 gram= 9 calories

\* Examples: oils, margarine, lard, dairy fat, beef tallow, animal skin

\* 3 types:  
• saturated  
• unsaturated  
• trans fats

\* Fat's functions: organ insulation, fat soluble vitamin absorption, satiety, energy

\* Target: less than 20-25% of calories

\* Fat stores are plentiful in almost everyone  
\* Slow digestion rate  
\* Weight control  
\* Heart health  
\* Cancer prevention

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### Hydration & Performance

\*Water's functions: temperature regulation, nutrient transport, metabolic processes

\*Fluid needs:

- \* Daily: 8-10 cups *outside* of exercise (check urine!)
- \* Before exercise: 16 oz. 2 h prior, 8 oz. 15 min. prior
- \* During exercise: 1 cup every 20 minutes
- \* Post-exercise: 2 cups for every pound lost

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### Hydration & Performance

\*Wait! It's not just water!

Other needs:

- Electrolyte losses must be matched
- Eat salty foods, add salt to foods
- Eat fruits & veggies

• Athletes in warm environments rarely need to worry about restricting salt or sodium

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### Hydration & Performance

Dehydration of just 3% = a 10% decrease in contractile strength & 8% decrease in speed!

That's just 6 pounds in a 200# athlete, or 3 pounds in a 100# athlete!

Water + Electrolytes + CARBOHYDRATES = total HYDRATION

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### What Fuels Our Bodies?

#### What is A Micro-Nutrient?

- Anti-Oxidants & Anti-Inflammatory
- Beta-carotene, Vit C, Vit D, Vit E (antioxidants, aid in healing, iron absorption, strengthen bones, cartilage, & skin)
- Anti-oxidant foods
- Anti-inflammatory foods: Salmon, walnuts, almonds, beets, berries, dark green leafys, whole grains, flax & chia seeds, tart cherries

\* Involved in turning food into energy

\* Variety of other structural & health functions

\* Food vs. Supplements?

- Consider other benefits from foods
- Consider risk of toxicity

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### When do we Fuel our Bodies?

• Athletes often do not know:

• When to eat

Put the right amount of good gas in your car to go as FAR as you want as FAST as you want as OFTEN as you want!



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### **When** do we Fuel our Bodies?

Put the right amount of PREMIUM gas in your car to go as FAR as you want as FAST as you want as OFTEN as you want!

- ✓ Eat within ONE HOUR of waking
- ✓ Eat within 30 minutes of workouts
- ✓ Eat every 3-4 hours
- ✓ Include protein at each meal & snack

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### **How Much** Fuels Our Bodies?

• Athletes often do not know:

• **How much to eat**

Put the right amount of good gas in your car to go as FAR as you want as FAST as you want as OFTEN as you want!




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### **How Much** Fuels our Bodies?

*Pre-Season Phase : Where Champions are Made!*  
▪ 20/25 calories/pound body weight

*Competition Phase: Recovery & Replenishment*  
✓ 15-20 calories/pound

*Off-Season Phase : Time for Changes!*  
✓ 10-30 calories/pound

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**How Much Fuels our Bodies?**

20 calories per pound  
ex. 100 pounds x 20 = 2000 calories /day

**Low Energy Availability:**

- *Impairs body's ability to use glucose efficiently*
- *Increases fat & cholesterol stores in body*
- *Decreases metabolic rate*
- *Decreases production of growth hormone*

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**How Much Fuels our Bodies?**

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**Energy Meter:**

- Chronic Fatigue
  - Anemia
- Recurring Infections/Illness
  - Depression
- Disordered Eating thoughts/patterns
  - Poor Performance
- Irregular/absent menstrual cycles
  - Stress fractures
- Decreased muscle strength
  - Irritability
- Training hard with no improvement
  - GI disorders
  - Weight loss

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**Nutrition through the Training Cycle**

Track and field athletes train at different intensities and stages throughout the year according to their specific event and individual needs. While these differences exist, the year for all track and field student-athletes can be broken into three major phases: preseason, competition/championship and offseason.

- Preseason
- Competition Season
- Off season

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Preseason training is the time of year when the most strenuous and vigorous workouts occur. Whatever the training entails, proper fueling and hydration strategies are key for daily improvement and optimal performance.

Preseason

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**Preseason**

"I'm trying to decrease body fat and increase lean muscle, so I skip breakfast, eat some fruit for lunch and have a large dinner at night. I'm having a tough time making it through my preseason training sessions, and I'm not achieving my body composition goals. How should I be eating during this intense training phase?"

Fueling the body frequently and consistently throughout each day ensures that you receive adequate amounts of carbohydrate for energy purposes, proper protein intake for repairing and building muscle tissue, and healthy portions of fat for enhancing endurance and healing potential.

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**Preseason**

- Time to experiment
- Time to learn planning techniques
- Consistent Routine

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### Preseason

**Breakfast**

- ✓ Variety of nutrient dense foods
- ✓ May need to start small or with liquids

**Snack**

- ✓ quality carbohydrate & lean protein
- ✓ Stabilize bloods sugar & control portions later in the day

**Lunch**

- ✓ Top off glycogen stores
- ✓ Optimal energy for an intense training session after school

**Pre-workout snack**

- ✓ May be needed if lunch falls more than 4 hours before practice

**Post-workout snack**

- ✓ Reload (energy reserves), Repair (broken down tissue), Rehydrate

**Dinner**

- ✓ Lean proteins, quality carbohydrates, heart healthy fats, & veggies
- ✓ Helps to continue recovery process
- ✓ Ensures needed overall calories are achieved

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When the season begins, home & travel meets are pretty much nonstop; this leaves little to no time to figure out which nutrition and hydration plan works best. Therefore, it is important to develop your nutrition strategy during the preseason so that it can

be carried over into the competition phase.

### Competition Phase

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### Competition Phase

- Modify Portions
- Plan Ahead for travel
- The Perfect Pre-Meet Meal

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### Competition Phase

Pre-Meet Meal Purpose:

✓top off carbohydrate stores in the body for optimum energy

✓Mental focus

✓ensure the athlete is in a completely hydrated state

\*\*\*one nutritious pre-meet meal does not make up for poor nutrition habits throughout the week.

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### Competition Phase

Every track and field athlete is unique, the timing and type of pre-meet meal may vary. Common rules of thumb to assist all track and field athletes in optimizing their energy and performance potential:

- Eat a small snack or meal 1-2 hours before the event, or eat a larger snack or meal 3-4 hours before the event.
- Focus on high-carbohydrate foods and drinks, moderate amounts of lean protein, and small amounts of foods with fat and fiber.
- Stick with simple and familiar foods consumed during the pre-season. Do not try anything new on meet day.
- Continue to hydrate normally with water and/or electrolyte beverages.

#### STAYING ON TRACK WHILE ON THE ROAD

- Plan and pack healthy snacks for long bus trips.
- During bus stops, choose an eatery that offers grilled/lean meats, salads, wholesome carbohydrates, and vegetables.
- Before departing, research restaurants close to the hotel and plan which meals you will order during your stay. Variety and balance are keys for the competition season. Entire food groups should never be eliminated because each plays a vital role in energy production and recovery.

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### When do we Fuel Our Bodies?

Time Prior	Recommended Food	Examples
30 min-1 hour	Mostly liquids	Sports Drinks/ Water
1-2 hours	Small snack and liquids	Sports Bar/Orange
2-3 hours	Small meal and liquids	Turkey Sandwich, banana, H2O
3-4 hours	Moderate-size meal and liquid	Pasta & meat sauce, mixed veggies, fresh fruit, whole grain rolls, water

Poor Pre-Exercise Fuel:  
fried foods, high-fat meats, creamy sauces, soups, or gravy, creamy dressings (e.g. ...Ranch or mayonnaise), biscuits, spicy foods, entree salads, cakes, pies, regular ice cream, sugary cereals, soda, whole milk, foods you have never tried before!

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This period of time presents the perfect opportunity to focus on modifying nutritional habits, practicing meal preparation and learning how to cook new recipes. In addition, the offseason is when athletes can concentrate on altering body weight and composition according to individual goals.

Offseason

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**Offseason**

Offseason training tends to be less intense and shorter in duration. When training decreases, energy expenditure correspondingly decreases; therefore, it's important to:

- ✓ modify portions & food choices to prevent unwanted weight gain
- ✓ Focus on lean sources of protein & vegetables and less on carbohydrate-based foods.

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**Thank You!**

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