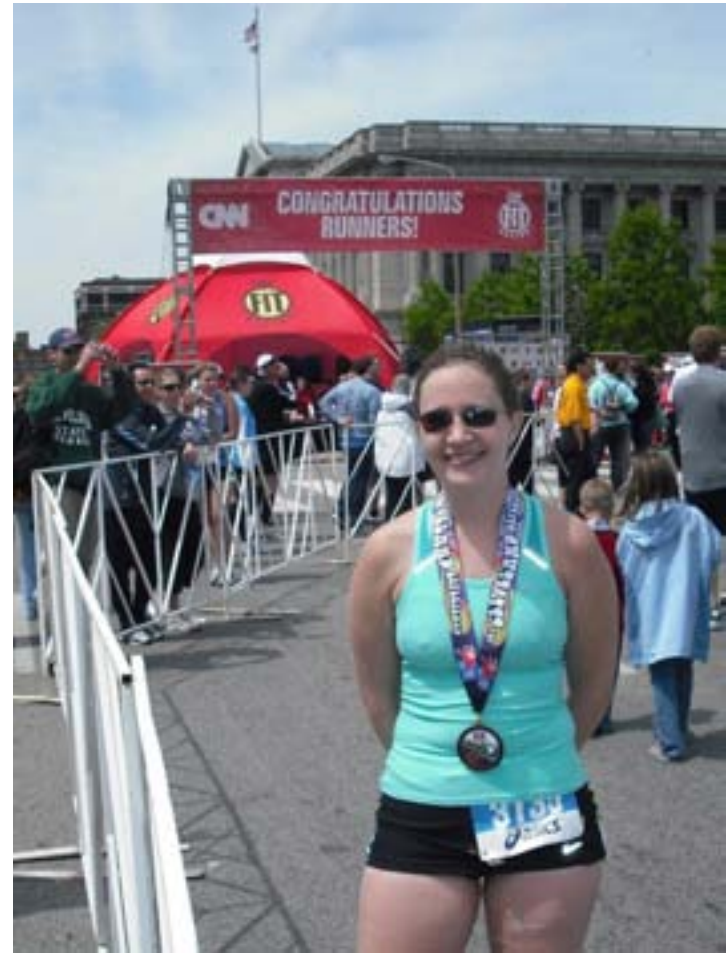





Nutrition for a Healthy Athlete: Distance Running

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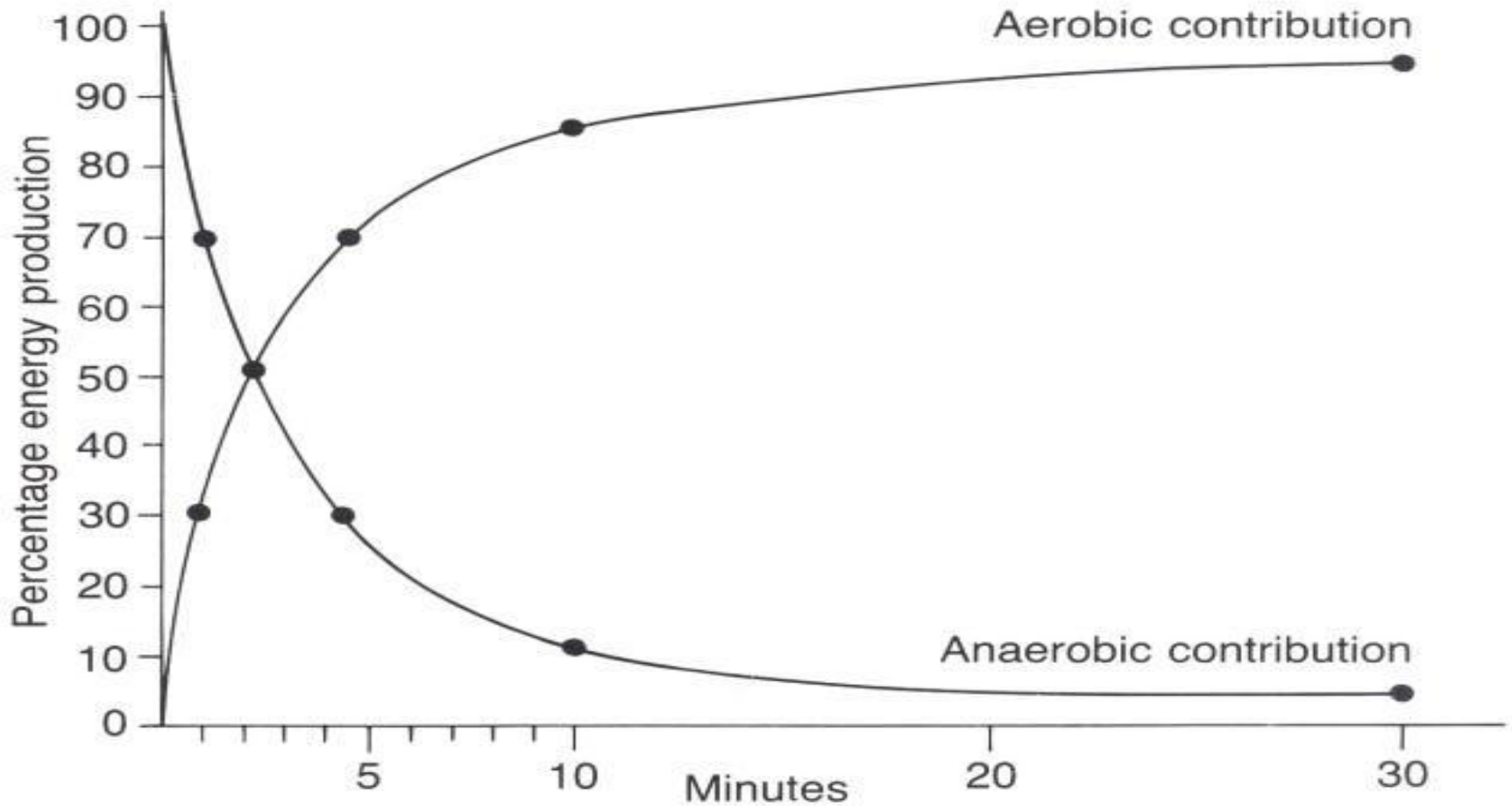
About Me



Components of a Healthy Diet

- ▶ Water & Fluids
 - At least $\frac{1}{2}$ your body weight in fluid ounces
 - ▶ Carbohydrates
 - Whole grains vs. Refined grains
 - ▶ Protein
 - Lean sources
 - ▶ Fats
 - Unsaturated vs. Saturated
- 

Aerobic/Anaerobic Exercise



Contribution of energy systems to time of movement

Hydration

- ▶ How much is enough?
 - Consume a minimum of half your body weight in fluid ounces daily.
 - Example: if you weigh 150 pounds, you should consume a *minimum* of 75 ounces of fluid daily
- ▶ How do I know if I am well hydrated?
 - Urine color is a good (and simple) indicator
- ▶ Water should be the **PRIMARY** source of hydration
 - Caffeine containing drinks may have a dehydrating effect on the body
 - Sugary drinks may add ‘empty’ calories to your diet

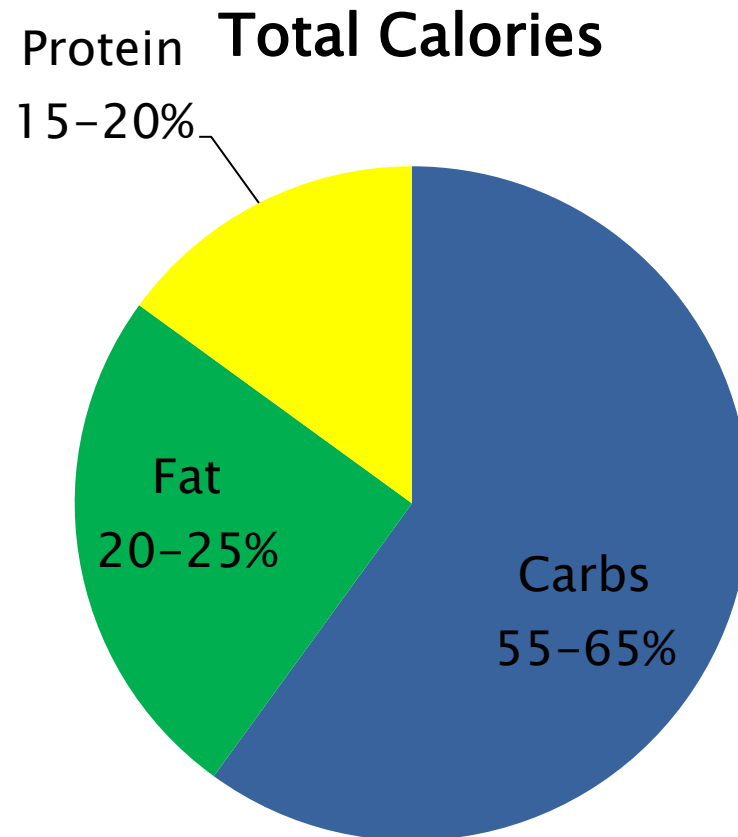
Hydration

- ▶ Two hours prior to a run or event:
 - Consume at least 2 cups (16 ounces) of fluid
- ▶ During a run or event:
 - Consume $\frac{1}{2}$ cup to 1 cup (4 to 8 ounces) of fluid every 15 to 20 minutes
- ▶ For runs or events exceeding 60 minutes:
 - Sports drinks may be alternated with water to replace electrolytes lost through sweat
- ▶ Post run:
 - Consume 16 ounces of fluid for every pound lost during exercise

Hydration and Energy Gels

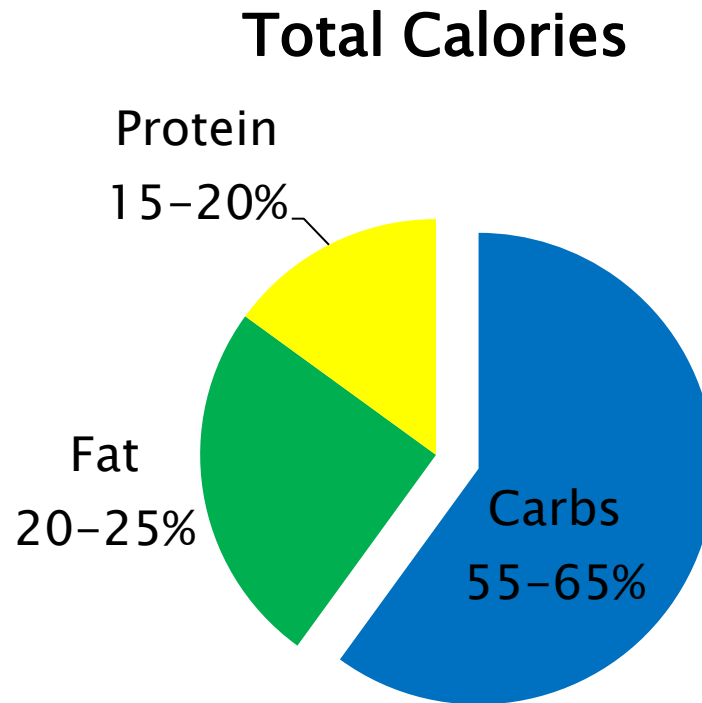
- ▶ For runs or events exceeding 90–120 minutes:
 - Provide carbohydrates and electrolytes for immediate and sustained energy
 - Approximately 100 calories per packet/serving
 - Similar to sports drinks, but highly condensed
 - Should be consumed with 6 – 8 ounces of water
 - Alternatives:
 - Energy chews (i.e. Shot Blocks)
 - Sport Beans by Jelly Belly

What should your plate look like?



Carbohydrates

- ▶ 55–65% of total Daily Calories from Carbohydrates

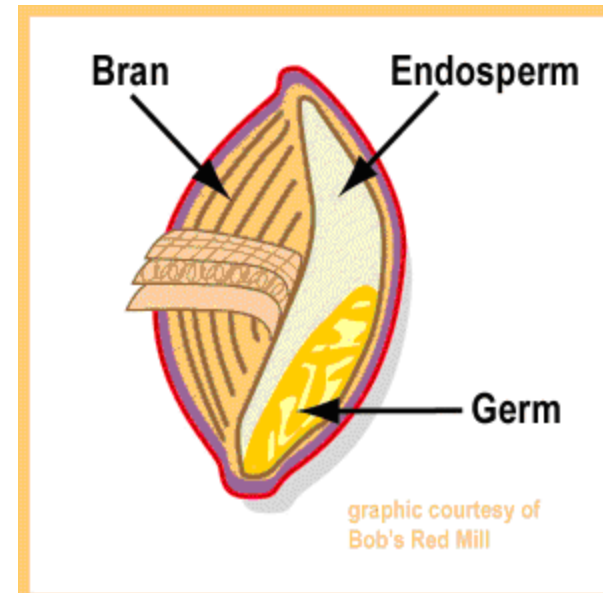


Carbohydrates

- ▶ Carbs are the primary energy source for *everyone* – NOT just distance runners!
 - ▶ The body is able to store ~2000 calories worth of carbohydrate (glycogen) – about the amount needed to run 20 miles
 - ▶ Endurance athletes often try to maximize the storage of glycogen in the liver and muscle tissue by eating a high carbohydrate diet
 - ▶ Good sources: Grains (make at least half whole grain), fruits, vegetables, beans and legumes (which also include protein) and dairy products

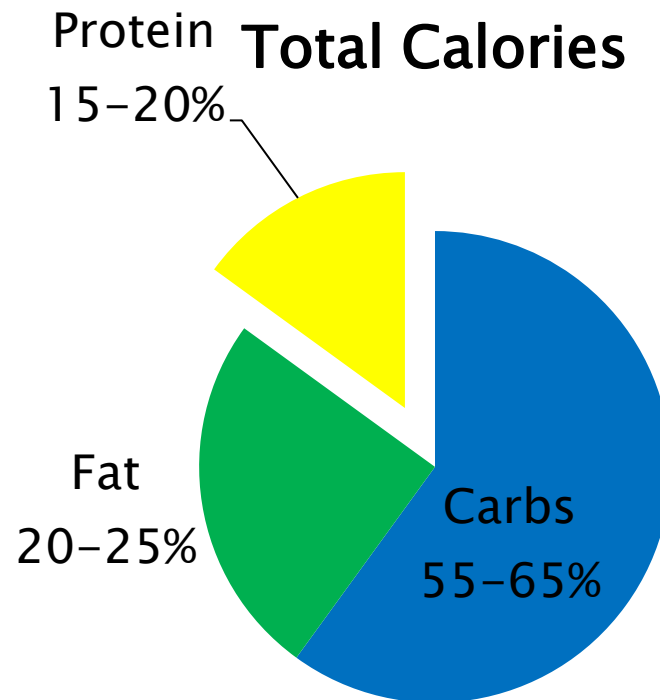
Why and When Whole Grains?

- ▶ Whole grains provide the feeling of fullness, which lasts longer than refined or enriched grains
- ▶ The refining process removes the bran and germ from whole grains
 - With them removes: fiber, vitamins, minerals and antioxidants
- ▶ Time to avoid whole grains:
 - Several hours prior to a run
 - During a run



Protein

- ▶ 15–20% of Total Daily Calories from Protein

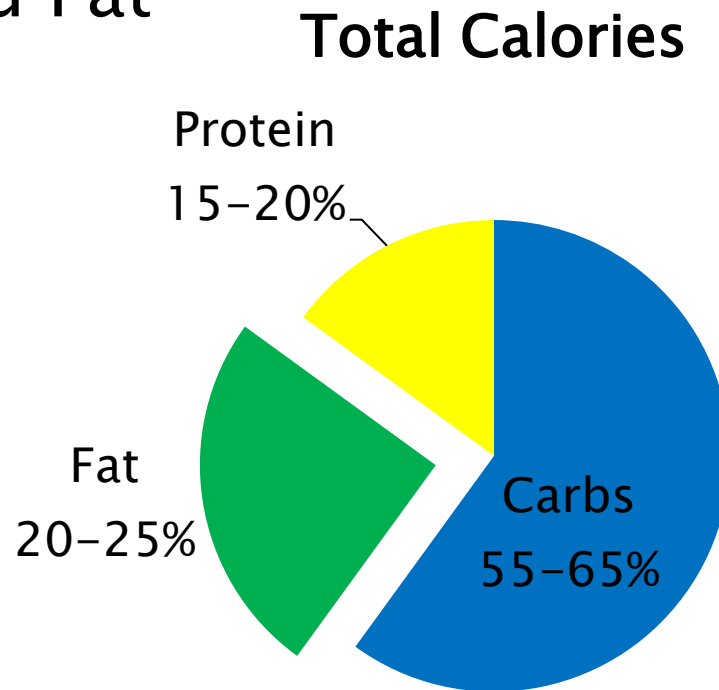


Protein

- ▶ Protein is essential to rebuild and maintain muscles in the body
- ▶ Many Americans eat far more protein than is necessary
 - ~6–8 ounces of meat, in addition to protein found in whole grains, dairy and vegetables is more than sufficient for most endurance athletes
- ▶ Protein supplements are NOT necessary for endurance athletes who consume a healthy, balanced diet

Fat

- ▶ 20–25% of Total Daily Calories from fat, with less than 10% of total Daily Calories from Saturated Fat



Fat

- ▶ Your body **NEEDS** fat!
- ▶ Eating fats will not make you fat!
- ▶ Fat aids in the absorption of certain essential vitamins (A, D, E and K)

Fat

- ▶ What are the fats to focus on?
 - Unsaturated fats (mono- and poly-unsaturated) are healthier for your heart
 - These fats are generally liquid at room temperature
 - Olive oil
 - Canola oil
 - Nuts & nut butters
 - Seeds
 - Avocados
 - Fish

Fat

- ▶ What fats to consume in moderation or avoid?
 - Saturated fats are less healthy for your heart in the long run – less than 10% of daily calories
 - These fats that are solid at room temperature
 - Lard
 - Animal fats
 - Trans fats
 - Should be avoided as much as possible
 - Shortening
 - Shelf stable baked goods

Before a Long Run or Event

- ▶ A light meal should be 1–4 hours prior to an event, so the stomach is empty during event, for rapid water and nutrient absorption during an event
 - Low in fiber
 - Ex: Bagel with peanut butter, yogurt, fruit juice, energy bar and/or milk
 - The closer to race time, the smaller the meal consumed
- ▶ Two hours prior to a run or event:
 - Consume at least 2 cups (16 ounces) of fluid
- ▶ 15–20 minutes prior to event, a sports drink or energy bar may be consumed to provide additional energy (carbohydrate) and electrolytes which are lost through sweat

During a Long Run or Event

- ▶ Focus on Hydration and Carbohydrates
 - Consume $\frac{1}{2}$ cup to 1 cup (4 to 8 ounces) of fluid every 15 to 20 minutes
- ▶ For runs or events exceeding 90–120 minutes
 - 30 – 60 grams of carbohydrate per hour
 - Ex: 1 – 2 gel packets, sport beans, gummies, etc. (25 g/serving) and 4 – 8 ounces of sports drink (~14 g/8 ounce serving)

After a Long Run or Event

- ▶ Immediately after (within 30 minutes)
 - Replace glycogen stores with a high carbohydrate snack, including a small amount of protein and fat
 - This is the time period in which the muscles are most receptive to energy (carbohydrate) replacement
 - Ex: Chocolate milk, fruit, smoothie, yogurt, energy bar
- ▶ Soon after (within 1–2 hours)
 - Post race meal
 - Ex: High carbohydrate meal (Pasta, rice, bread) with ~3 ounces of meat to aid in muscle repair

Energy Balance

- ▶ Calories in = Calories out
- ▶ Becoming a distance runners *is not* a free pass to eat anything you would like!

Any
Questions??



References

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