

Healthy Eating for the Endurance Athlete

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Roadmap

- # Food for endurance exercise
- # Pillars of healthy eating
 - Whole food
 - Nutrient dense
 - Plant strong
 - Healthy fats
- # Organic foods
- # Sample daily menu



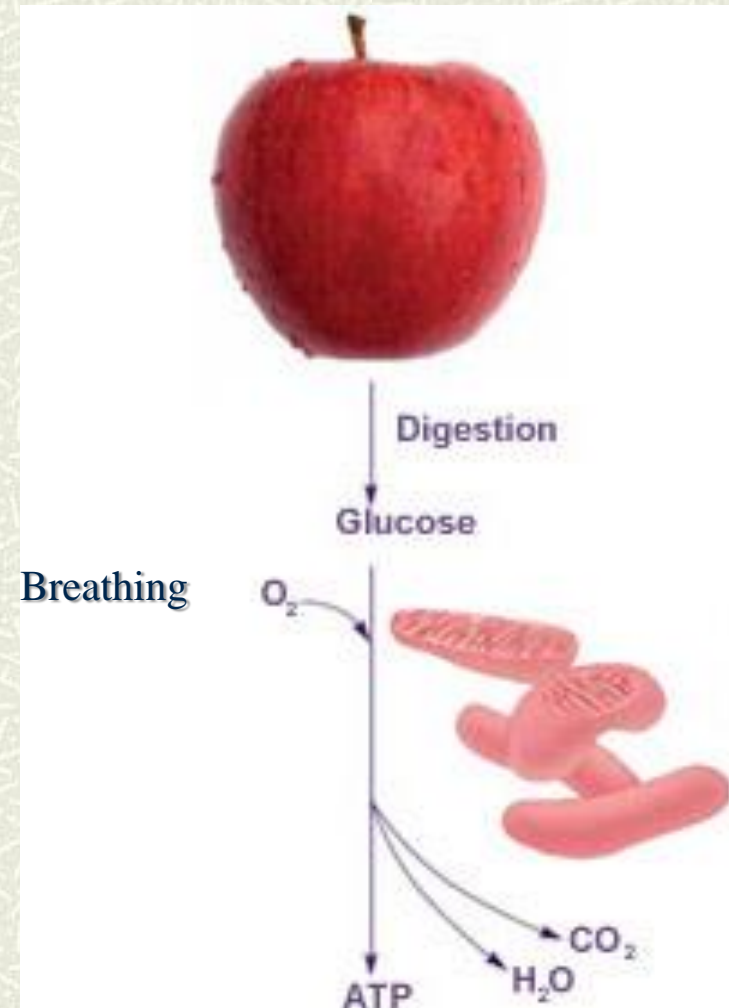


Food For Endurance Exercise



Food is Fuel for Exercise

- # Body converts food into ATP
 - ATP is fuel necessary for muscle contraction → exercise
- # Carbohydrate and fat both converted to ATP
- # Carbohydrate delivers ATP two times as fast as fat



Carbohydrate, Fat, and Exercise Intensity

Running Intensity (% of VO2max)	Percent Carbohydrate Utilized for Fuel	Percent Fat Utilized for Fuel
50%	60%	40%
60%	72%	28%
80%	80%	20%
90%	88%	12%
100%	98%	2%



Carbohydrate for Exercise

- Preferential fuel of body during aerobic exercise
- Only supplier of ATP during anaerobic activity
 - 3 days of low carbohydrate intake will decrease exercise capacity



Carbohydrate for Exercise

- # 1 hour moderate aerobic exercise
 - ↓ glycogen stores 55%
- # 2 hours moderate aerobic exercise
 - completely deplete glycogen stores
- # Total carbohydrate depletion
 - “hitting the wall”, “bonk”
- # Only fuel brain and motor nerves can use



Caloric Intake Recommendations

Carbohydrate

- Approximately 60% of daily calories

Fat

- Approximately 25% of daily calories

Protein

- Approximately 15% of daily calories
- 1.2 grams of protein / kg of body weight / day



Pillars of Healthy Eating

Whole Foods
Plant Strong
Nutrient Dense



Pillars of Healthy Eating

- # Choose foods that are whole, fresh, natural, seasonal, and unprocessed
 - Whole foods
- # Choose foods that come from the ground
 - Plant strong
- # Eliminate refined and highly processed foods, and those void of nutrients
 - Nutrient dense



FLEET FEET
Sports

Grains: What

- # Consume approximately 6 or more ounces of grains per day
 - 1 ounce = 1 slice of bread, 1/2 cup of cooked pasta or rice, 1 cup of cereal flakes
- # Ideally all 6 ounces from whole grain sources
 - Whole wheat breads and pastas, oatmeal, brown and wild rice, buckwheat, and bulgur



Grains: How

- # Check nutrition labels on grain products for “whole” or “whole grain”
 - Look for Whole Grain label
- # Choose 100% whole grain breads
- # Substitute whole grain foods for refined grain foods like
 - Many breakfast cereals, white bread, white pasta, crackers, white rice



Grains: Why

Provide dietary fiber

- Reduce risk of
 - Coronary heart disease
 - Colon cancer
- Maintain adequate laxation

Stabilizes blood glucose



Vegetables: What

- # Consume approximately 2.5 cups of vegetables per day
 - 1 cup serving = 12 baby carrots, 1 tomato, 2 cups leafy greens, 1 cup steamed
- # Dark green leafy vegetables
 - Broccoli, spinach, kale, romaine, watercress
- # Choose a variety of colors
- # Keep starchy vegetables to a minimum
 - Corn, peas, white potatoes



Vegetables: How

- # Fresh, frozen, and canned all count
- # Include in lunch, dinner, and snacks
 - Have cut up in refrigerator
- # Prepare main, side, and salad dishes that include them
- # Choose side salad over fried potatoes



Vegetables: Why

- # Provide dietary fiber
- # Part of heart healthy diet
- # Contain nutrients that help reduce risk for diabetes, hypertension, and many forms of cancer
 - Carotenoids, bioflavonoids, beta carotene, lutein, and lycopene



Fruits: What

- # Consume approximately 2 cups of fruits per day
 - 1 cup = 1 large banana, 8 strawberries, 1 small apple, 1 large orange,
- # Focus on whole fruits
 - Limit juices
 - Juices have no fiber
- # Choose a variety of colors



Fruits: How

- # Fresh, frozen, dried, and canned all count
 - Watch “syrops” in canned
- # Use in salads, toppings, as snacks
- # Choose whole or cut up fruits instead of juices
- # Select in season fruits to increase variety



Fruits: Why

- ✦ Provide needed antioxidants, and phytochemicals
 - Heart health, cancer prevention
- ✦ Provide dietary fiber
- ✦ Vitamin A
 - Eye health
- ✦ Potassium
 - Blood pressure regulation
- ✦ Vitamin C
 - Teeth and gum health



Pillars of Healthy Eating

Healthy Fats



Healthy Fats

- # Obtain your healthy fats from whole plant sources
 - Nuts, seeds, avocados, olives
- # Minimize extracted oils and processed fats
- # Minimize saturated fats





Organic Foods



Defining Organic Labels

- # 100% Organic
 - All ingredients must be organic
- # USDA Organic, or Organic
 - 95% of ingredients must be organic
- # Made with Organic Ingredients
 - At least 70% of ingredients must be organic



Cumulative Long Term Effect

Pesticides

- Fruits and vegetables

Hormones and antibiotics

- Meat and dairy products

↑ Health risks

Organic diet greater than sum of its parts

- Like a savings account benefits accumulate over time



The Dirty Dozen

- # Twelve fruits and vegetables found to have the highest levels of pesticides
- # Buy organic to reduce exposure
- # Fruits
 - Apples, cherries, imported grapes, nectarines, peaches, pears, raspberries, and strawberries
- # Vegetables
 - Bell peppers, celery, potatoes, and spinach



Cleaner 15

- ✦ Fifteen fruits and vegetables found to have low to undetectable levels of pesticides
- ✦ Safer to buy conventional
- ✦ Fruits
 - Bananas, kiwi, mangoes, papaya, and pineapple, cantaloupe
- ✦ Vegetables
 - Asparagus, cabbage, broccoli, peas, cauliflower, avocados, onions, sweet corn, and mushrooms





Daily Sample Menu



Eating for Endurance Athletes

Breakfast

- Morning glory overnight oats

Mid-morning snack

- Coconut cherry vanilla granola bar

Lunch

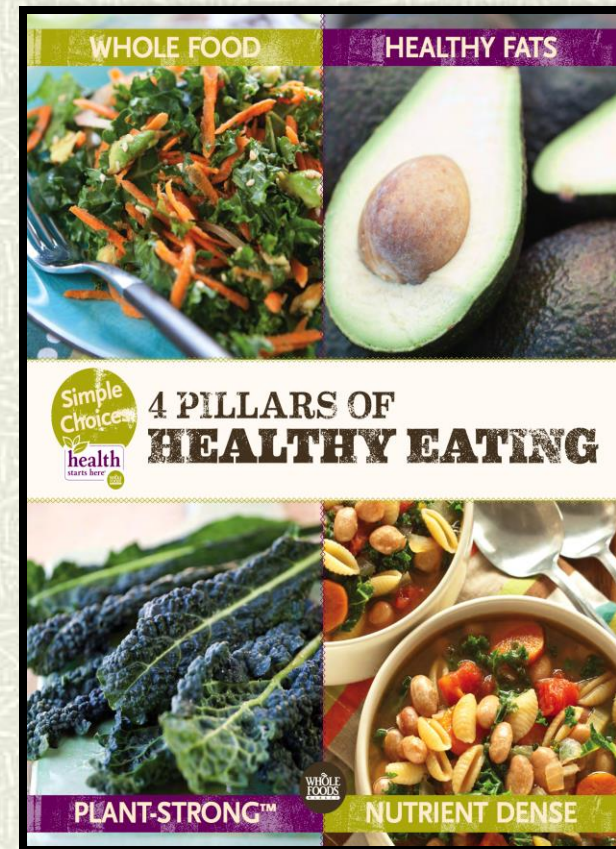
- Barley lentil pilaf

Afternoon snack

- Kale chips

Dinner

- Quinoa and butternut stuffed peppers



Questions

