



PAF30-PAF40

PERSONAL FITNESS

NUTRITION



ATHLETES HAVE SPECIAL NEEDS!

- ✓ Require More Nutrients
- ✓ Increase in Protein
- ✓ Increase in Carbohydrates
- ✓ Increase in Vitamins and Minerals

BENEFITS OF PROPER NUTRITION

- Decreased time of recovery
- Increased energy
- Decreased loss of muscle tissue in-season
- Increased stamina
- Decreased percent body fat
- Injury prevention
- Improved health
- **IMPROVED PERFORMANCE!!**

MACRONUTRIENTS



CARBOHYDRATE

- *4 calories per gram.*
- The Good
 - Carbohydrate sources such as fruits and vegetables are very dense in vitamins and fiber. Carbs are also the body's [preferred source](#) of energy other than alcohol, especially for [anaerobic](#) and [long-duration](#) exercise.
 - Starchy complex carbohydrate sources such as potatoes and long-grain rice help [replenish muscle glycogen](#) stores. Muscle glycogen is used as fuel and depletes during strenuous exercise. Starchy foods also contain resistant starch, which resists digestion, functioning similarly to fiber. It is [satiating](#) and promotes health in the [gut microbiota](#).
- The Bad
 - Refined carbohydrate sources such as sugar and wheat- and corn-based products induce [appetite cravings](#) and contributes to [body fat gains](#), [cardiovascular disease](#), [higher LDL cholesterol](#), [higher triglycerides](#), and [lowering HDL \(good\) cholesterol](#). Overconsumption of refined carbohydrates in [combination](#) with fats are the driving forces for the [obesity epidemic](#).



FAT

- *9 calories per gram.*
- The Good
 - Most foods that are naturally high in fat, such as animal sources, nuts, avocados, and coconuts, contain an abundance of [vitamins and minerals](#), as well as essential fatty acids required for body functioning and [health](#). It is also a very good source of [body fuel](#) and contributes to [weight loss](#). Crucial vitamins A, D, E, and K, are fat-soluble which means fats are required for [bioabsorption](#).
 - Monounsaturated and saturated fats from animal sources, eggs, butter, avocados, coconut oil, and extra virgin olive oil are [health-promoting](#).
- The Bad
 - Although [fats are important](#) for weight loss, they are high in energy density, compounded by fried foods.
 - The body functions well with an omega-3 and omega-6 ratio of 1:1 or 1:2. Most of us consume [1:15 or higher](#), which contributes to [inflammation](#) and [oxidative stress](#), leading to a host of [critical diseases](#). Sources high in omega-6 polyunsaturated fats are margarine, canola oil, and vegetable oil.
 - Saturated fat is detrimental to health [when combined](#) with refined carbohydrate sources.



PROTEIN

- *4 calories per gram.*
- The Good
- Protein is the most [satiating](#) macronutrient and is crucial for [weight management](#). Proteins are the building blocks for muscle and is essential to sustain life.
- The Bad
- Proteins are poor fuels for energy.



SPORT-SPECIFIC NUTRITION

EXPLOSIVE ATHLETES

- ✓ Explosive strength and power is required on a sustained, repetitive basis.
- ✓ Muscle glycogen is immediate energy source.
- ✓ *High* protein requirements
- ✓ Constant supply of carbohydrates to refuel bodies glycogen stores.

▪ **Total Caloric Ratio Need**

- ✓ 20% Fat
- ✓ 25% Protein
- ✓ 55% Carbohydrate

ENDURANCE ATHLETES

- ✓ Aerobic pathway is primary energy source.
- ✓ Fatty acids & Muscle glycogen main fuels.
- ✓ *Moderate* protein requirements
- ✓ Constant supply of carbohydrates to refuel bodies glycogen stores.

▪ **Total Caloric Ratio Need**

- ✓ 20% Fat
- ✓ 20% Protein
- ✓ 60% Carbohydrate

MACRONUTRIENT SUGGESTIONS

Caloric Intake



Workout Days Ratio (more calories)



Rest Days Ratio (fewer calories)



Workout Days Ratio (more calories)



Rest Days Ratio (fewer calories)

Portion Sizes

Workout Days
(larger plate)



Rest Days
(smaller plate)



Legend

- Carbs (Vegetables)
- Carbs (Starches)
- Proteins
- Fats

Note

Vegetables are in larger portion sizes since they are low in calories. Fats are higher in calories so smaller portion sizes are suggested.

WHY THESE COMBINATIONS

- Carbohydrates, proteins, and fats are adjusted according to workout or rest days.
- Workout days [require more](#) carbohydrates and calories to fuel workouts.
- In contrast, since we are more sedentary on rest days, we [benefit](#) from lower carbohydrate consumption. Higher protein consumption is used on workout days to improve [protein synthesis](#) and muscle recovery. Higher protein intake is also beneficial in cutting to preserve lean mass and promote satiety.
- The macronutrient ratios do not fit all athletes, however, as endurance and high-performance athletes require [more carbohydrates](#).




GRAINS Make half your grains whole	VEGETABLES Vary your veggies	FRUITS Focus on fruits	MILK Get your calcium-rich foods	MEAT & BEANS Go lean with protein
<p>Eat at least 3 oz. of whole-grain cereals, breads, crackers, rice, or pasta every day</p> <p>1 oz. is about 1 slice of bread, about 1 cup of breakfast cereal, or ½ cup of cooked rice, cereal, or pasta</p>	<p>Eat more dark-green veggies like broccoli, spinach, and other dark leafy greens</p> <p>Eat more orange vegetables like carrots and sweetpotatoes</p> <p>Eat more dry beans and peas like pinto beans, kidney beans, and lentils</p>	<p>Eat a variety of fruit</p> <p>Choose fresh, frozen, canned, or dried fruit</p> <p>Go easy on fruit juices</p>	<p>Go low-fat or fat-free when you choose milk, yogurt, and other milk products</p> <p>If you don't or can't consume milk, choose lactose-free products or other calcium sources such as fortified foods and beverages</p>	<p>Choose low-fat or lean meats and poultry</p> <p>Bake it, broil it, or grill it</p> <p>Vary your protein routine – choose more fish, beans, peas, nuts, and seeds</p>

For a 2,000-calorie diet, you need the amounts below from each food group. To find the amounts that are right for you, go to MyPyramid.gov.

Eat 6 oz. every day	Eat 2½ cups every day	Eat 2 cups every day	Get 3 cups every day; for kids aged 2 to 8, it's 2	Eat 5½ oz. every day
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Find your balance between food and physical activity

- Be sure to stay within your daily calorie needs.
- Be physically active for at least 30 minutes most days of the week.
- About 60 minutes a day of physical activity may be needed to prevent weight gain.
- For sustaining weight loss, at least 60 to 90 minutes a day of physical activity may be required.
- Children and teenagers should be physically active for 60 minutes every day, or most days.



Know the limits on fats, sugars, and salt (sodium)

- Make most of your fat sources from fish, nuts, and vegetable oils.
- Limit solid fats like butter, stick margarine, shortening, and lard, as well as foods that contain these.
- Check the Nutrition Facts label to keep saturated fats, trans fats, and sodium low.
- Choose food and beverages low in added sugars. Added sugars contribute calories with few, if any, nutrients.

WATER & ATHLETIC PERFORMANCE

- Water replenishment is the most important factor during exercise.
- Outside the narrow range of 98-100°F, your body will always sacrifice muscle function for temperature regulation.
- Drink a minimum of 3.5 to 5 litres/day.
 - ✓ Flushes out metabolic waste products
 - ✓ Maintains the bodies cooling system
 - ✓ Prevents muscle cramps, strains and pulls



ERGOGENIC AIDS & NUTRITIONAL SUPPLEMENTATION

- Supplements are just that...**Supplemental!!**
- Whole foods should supply basic total caloric intake of an athlete's diet.
- Choose supplements that are high quality, professional grade. Research!
- **There is no magic pill formula to success!!**

