



Power Nutrition: A Chef's Perspective

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"For athletes, food is the fuel that enables them to achieve their dreams."


Chris Carmichael



Nutrition is....

...the process of eating and converting food into structural and functional body tissues such as skin, muscle, and hair.


It is required for growth, maintenance, repairs, **performance**, and health.



➤ With **POWER NUTRITION** the focus is

- * **Performance**
- **Strength**
- **Output**

How to sustain, recover and even **enhance** athletic endeavor through diet



4 Key Culinary Objectives

- **Anabolic Weight Gain for Power**
 - Increase lean body tissue
 - Decrease body fat
- **Delay Mental & Physical Fatigue**
 - Maximize glycogen (CHO) stores for anaerobic effort, stamina, & recovery
 - Proper hydration (incl. electrolytes)
- **Keep Body Healthy**
 - Help reduce exercise-induced inflammation and oxidation
 - Increase bioavailability of nutrients
 - Strengthen immune system
 - Make "tummy happy"

Increase Anabolic Weight (building for "power")

- **Correct Calorie and Macronutrient Ratio**
 - **CHO** (50-70% of total energy)
 - 7-10 grams/kg
 - **Pro** (15-25% of total energy)
 - 1.5-2.0 grams/kg
 - **Fat** (15-25% of total energy)
 - 1.0-1.5 grams/kg
- **Note: 1 kg = 2.2 lbs.**

For example:

200 lb. (91kg) female discus thrower who trains 3hrs/day

➤ **CHO reqs:**

– 7grams x 91kg = 637g x 4 = 2548kcal

➤ **Pro reqs:**

– 1.7grams x 91 = 155g x 4 = 620kcal

➤ **Fat reqs:**

– 1.0 grams x 91 = 91g x 9 = 819kcal

➤ **Total Kcal = 4000; 63/16/20**

**Typical CHO kcal servings
15 grams**

- 1 ea bread/tortilla
- ½ cup rice/pasta
- 12 pcs corn chips
- 1 small fruit
- 8 oz gatorade
- 1 Tbl raisins
- 8 oz milk
- 1/3 cup beans/hummus
- 4-6 oz juice
- 1 Tbl jelly/honey
- 1/3 energy bar
- 2 pcs Clif Shot bloks
- A whole lotta veggies

**Typical Fat kcal servings
5 grams**

➤ **Animal-based:**

- 1 tsp butter
- 1 slice bacon
- 1 cup whole milk
- 1 tsp heavy cream
- 2 oz meat/1 egg
- 1 fried chick leg
- ¼ cup ice cream

➤ **Plant-based:**

- 1 tsp olive oil
- 1 tsp mayo
- 2 tsp peanut butter
- 2 slices bread
- ½ cup granola
- 1 energy bar

**Typical Protein Kcal
7 grams**

➤ **Animal-Based:**

- 1 oz meat/fish
- 8 oz milk
- 1 oz cheese
- 1 TBL whey
- 2 egg whites

➤ **Plant-Based:**

- 1 oz peanut butter
- 4 oz firm tofu
- ½ energy bar
- ½ - 1 cup grains
- ½ cup beans
- 2 slices bread

➤ **Whole lotta veggies**

➤ **Note: amino acid
supp= 250 mg**

Protein quality

based on Biologic value

➤ Egg white	100
➤ Whey protein	100
➤ Fish	83
➤ Casein	80
➤ Beef	80
➤ Chicken	79
➤ Soy protein concentrate	74
➤ Amaranth & Quinoa	72
➤ Wheat gluten	54

Kissing your “biceps”

➤ **To add 1 lb. muscle**

- Add 500-600kcal/day (balanced ratio)
- Prepare & eat nutrient-dense foods
 - Bag of GORP; add nuts/dried fruits to meals & snacks
 - Extra slice of lean meat; bigger portions of CHO to fuel extra training
 - Use milk powders for batters/hot cereal
 - Eat often

Menu Planning Dynamics (Putting the pieces together)

- ✦ **Primary Objective:**
 - Do not compromise activity/recovery
 - Plan menus around core activities
 - Think as a continuum and plan beyond 24 hours
- ✦ *Be Practical!*

Preparation:

- ✦ **3-4 hrs before (base meal):**
 - Sizeable kcal count (as tolerated)
 - Appropriate macronutrient ratio
 - ✦ 100-150g CHO for max. glycogen stores
 - ✦ Focus on low/moderate glycemic index foods (refer to)
 - Think... whole grains/legumes/beans & fresh fruits/veggies; nuts & seeds
 - Lean entrée protein: Yogurt, Chicken, Fish, Tofu
 - **Drink as tolerated** (no sports drinks)

Preparation (con't)

- ✦ **1 hour -30 minutes Before:**
 - Limited Kcal count: Focus on CHO
 - 1 gram CHO/kg
 - Choose higher glycemic index foods
 - Extremely lean protein; low fiber
 - **Drink "sports drinks"** as tolerated (Rec: 4-8oz q 15min)
- ✦ **No experimentation!**
- ✦ **Immediately Before (< 5 min):**
 - 45g high index CHO can be tolerated

Recovery

- ✦ **Eat & Drink ASAP !**
 - **Within 30 minutes**
 - ✦ 3:1 (CHO: Pro); 1 g CHO/kg
 - Ex: sports drink and energy bar; choc milk w/banana
 - ✦ Focus on higher index CHO
 - **Within 2hrs**
 - ✦ Well balanced ratio: 60/20/20
 - ✦ Moderate- to high-CHO index
 - ✦ Choose foods loaded with antioxidants, digestives, and anti-inflammatory properties (refer to)
- ✦ **Drink as tolerated**

Glycemic Index

.... is a ranking of food based on their **measured blood glucose response** compared to a reference food.

.... reflects **rate of digestion & absorption**

.... **is influenced by** form, degree of process., and presence of impurities

Suggested: that manipulating may enhance athletic performance

High Index

- ✦ Glucose, sucrose, maltodextrin
- ✦ Sport/energy "foods"
- ✦ Syrups, honey
- ✦ Raisins, melons, tropical fruits,
- ✦ Potato, rice, cereal, squash, bread, corn
- ✦ Processed flour & sugar, starchy foods

Moderate- to Low- Index

- ✦ Soy beans & legumes, nuts
- ✦ Dairy & yogurt
- ✦ Apples & pears, grapefruit, cherries, apricot, oranges
- ✦ Vegetables
- ✦ Some grains: barley, rye, spelt, rolled oats
- ✦ Protein powders
- ✦ Fructose

Inflammation....

- **Anti-inflammatory**
- Omega 3 rich foods: Walnuts, flax, cold water fish, grapeseed oil
- Fresh Pineapple, grapes, blueberries & most berries
- Ginger, garlic, tumeric
- Onions, sweet potato, spinach (dark green), alfafa sprouts, broccoli, apples
- Tea (red, green, white)
- Low fat Yogurt (acidophilus)

- **Inflammatory**
- Red meats
- Nightshade: Tomato, potato, eggplant
- Over-consumption of Omega 6 fats
- Gluten???
- Transfats
- Saturated animal based fats
- Refined sugar/flours

Final Words

- There are no bad foods... only bad portion sizes

- Eat & Drink by schedule not by hunger!

- Remember, the more you know about nutrition...

