



## 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...

