



QT2 Dietitian Consultation "Cheat Sheet"

Daily Caloric Expenditure For Various Volumes

- Quantitative vs. Qualitative (Brief explanation)
 - NOTE: for a key race an athlete might choose to switch from qualitative to a quantitative approach.
- Quantitative KEY: These numbers are daily averages of the end of each week
 - No exercise week: equilibrium without exercise
 - Basal Metabolic Rate (BMR): demands of body
 - @ Work: 100 kcal for all unless physical demand of job high
 - Thermogenic effect of food: Digestion of food and heat of food

Recommended Calorie and Macro Nutrient Profile

- Notice that as training volume increases, percentage from carbs changes
 - No Training: 20% P, 50% C, 30% F
 - 20 hours volume: 20% P, 60% C, 20% F
 - **Unless on "Diet Plan" or Meal Planning where we prescribe specific macronutrients based on BMI
- "Diet Plan"
 - If more than 10 pounds to lose, we give 500 kcal/day deficit
 - 1-1.5 pounds per week 3,500 kcal = 1 pound
 - As an athlete you don't want to take more of an aggressive approach than this or training will be sacrificed
 - Not sustainable and body starts to "hold" on to calories and store fat
 - Metabolism slows
 - We reel back on CHO/Fat and increase Protein
 - Preserve some muscle protein
 - Fat typically at 17%
 - As an athlete in this plan starts losing weight, RD will adjust Macros if on a support plan with us. Why?
 - For example, during the Run he/she will burn less since it weight bearing
 - Recommend tracking macros for a 2 week period following consult and then return to qualitative approach
 - Helps understand quantities and standard day

General Dietary Guidelines & Suggestions

QUALITATIVE

General: 4 steps of tracking nutrition intake

Step 1: Weight Watchers (points)

Step 2: Calories

Step 3: Tracking macronutrients (PFC)

Step 4: Tracking micronutrients - nutrient density (decrease radical damage by free radical, etc...)

We start with step 3...for athletes!

Glycemic Index

- Grains are ↑ glycemic (even steel cut oatmeal is around 55!)
- Fuels are ↑ glycemic, ↓ nutrient dense
- "Cardinal Sin": athletes fuel with items during workouts, then fill up on pasta/rice between



workouts (benign fuels – they are just like performance fuels lacking nutrient density to support workout recovery)

- Bagel: like a gel (low nutrient density and high glycemic) boosts blood sugar up, and then must come down from sugar “high”.
 - We want to keep blood sugar stable by:
 - Eating frequently
 - Low GI foods (show blood sugar chart)
- Our job as an endurance athlete:
 - Keep blood sugar stable throughout the day
 - Save the low nutrient dense fuel for just before and during workouts
- We want benign foods during workouts to avoid GI issue (low fiber, fat, and vitamin content)

Blood sugar stability & reduce fasting windows

- Objective: to keep BS as stable as possible
- Major problem: going to bed: FAST. (hence breakfast)
 - Our job is to compress the time of fasting at night by eating before bed and when we get up. How?
 - No CHO before bed (increase BS), because you won't be using them. Instead, consume lean proteins like: tuna, cottage cheese, whey protein...
 - BCAA – facilitate muscle recovery while sleeping
- Show example on scrap paper
 - BS response to high vs low response to glycemic food
 - We want overlapping curves with flat BS response
 - When we have high GI foods, we get steeps and valleys
 - On Y-axis: mark a BS that the body is using. The excess beyond that throughout the day is stored as body fat.
 - Low glycemic foods eaten very often meets supply/demand...no more, no less.

Evolution of grains

- We really didn't evolve on grains -- Looking back it was more recently that grains came into the human diet
- It's because of society more recently
 - Cheaper, “natural”, easy, low socioeconomic population
 - Result: increased in disease, people getting sick early in life
- How was problem solved:
 - 100 years ago, FDA realizes that we cannot sustain life on these grains, but it's all many people could afford → Solution: fortify grains!
 - Kids look at cereal boxes with a “star” stating “fortified by 15 vitamins/minerals!” and begin to think this is “healthy”. Society has made us think that it's the healthy thing to look for.
- We need to step back and eat the foods we were meant to consume that sustain life on their own.
- We eat grains and refine sugars only when there is a SPECIFIC PURPOSE. What is that purpose?
 - Look back when man was hunting the wild bore. Maybe sprinted for 30 seconds. He was not born to run a marathon.
 - Extraordinary tasks that athletes do, call for extraordinary fuels. That's the place to consume grains and refined sugars and justifies the use of performance fuels like gels!



- This is why we developed windows
- Problem: Looking at the endurance athlete
 - Too many of these fuels (grains) in public and we are encouraged to eat these between workouts.
 - When an athlete adds that to what they are consuming in training, we are left with no healthy oils/fats, antioxidants, no protein, no nutrient density!
 - Grains tend to displace the opportunity to get in nutrient dense foods.
- Athletes need to focus on CORE foods
 - It's that much more important to the athlete to recover from workouts.
 - Example: Oatmeal. Great food, but there are better sources of carbohydrates like fruits for the athletes. Oatmeal displace the opportunity to get in nutrient dense foods.

****SKIP TO THE "WINDOWS" PAGE AND EXPLAIN WHEN DOING A CONSULT****

- First 2 (pre-workout and workout recovery) and last (during the day) are always the same
- "Post Workout" window gets taken away if:
 - On weight lose plan
 - OR about 6-8 weeks before A race and really need to shed those last few pounds
 - Logic:
 - replace ½ of expended during workout with workout fuels
 - recovery drink replaces another ¼ (now ¾ replaced)
 - last ¼ is replaced by post workout window. When this is removed it creates a calorie deficit for qualitative approach to weight loss and nutrition periodization.

Qualitative Nutrition Periodization

- Assuming within 10-12 pounds of race weight at start of training:
 - Holidays/maintain weight (working out, party)
 - Tighten up post workout window to whole grains after the holidays (maybe 15 weeks from race day)
 - 6-8 weeks from race day, may remove post workout window and switch right back to CORE foods
- Recovery drink:
 - Want high glycemic, easily digestible because of depleted glycogen; cells are ultrasensitive. We want these simple sugars now for the same reason we don't want them during the day → fast push up of blood sugar.
 - If traveling: Low fat choc milk; cherry juice or grape juice with egg whites (CHO and protein) is great!
 - 3-4:1 ratio
- Endurox:
 - Dextrose (high glycemic)
 - Easily digested whey protein
 - Glutamine
 - Antioxidants like C&E help mitigate free-radical damage after training.

Buckets & Levels

- 3 buckets: Fat, CHO, Protein
- Job as an athlete: choose best possible quality for each of them during each meal
- For example: if you goal is 40 g fat. Calorie for calorie this is the same as (even for weight)



a ½ stick butter vs a salmon steak. Salmon gives you the anti-inflammatory benefits needed from the impact of training and butter clogs your arteries. Weight watchers or calorie counters don't capture this.

- 3 levels:
 - Level 1: Weight watchers: only care about body weight. Points system is great for that.
 - Level 2: Counting calories (which is slightly better than WW)
 - Level 3: Counting Macronutrients
 - Level 4 (elites): take the next step → counting micronutrients, such as Omega-3's. Maybe you choose blueberries over honey dew for it's antioxidant benefits, etc.

Taking things out of nature

- Be careful when taking things out of nature even when they are core foods.
- Nuts: yes, healthy oil/fat. However, this is a great example of how we have taken the good out of nature and go to the extreme.
 - Eating nuts should be in the shell. When they are not we over consume, hundreds maybe thousands of calories. If these are not going to be eaten out of the shell, separate in bags ahead of time. Portions can really get screwed up if out of the shell.
- Nature is very good at controlling portion sizes this way.
- Juice: same thing with juices.
 - Glass of OJ = 10 oranges → you would never eat 10 oranges!
- Need to self limit

Antioxidants & importance in athletes – aerobic system

- 3 energy systems (constantly scaling between these):
 - Aerobic: fat oxidation, free radicals formed, need damage control – antioxidants
 - Primary training zone for endurance athletes
 - Glycolic/anaerobic:
 - ATP creatine:

Caffeine and Green Tea vs CORE Foods

- Caffeine undermines athletic performance do to skewed perceived exertion
- High caffeine content foods should be treated as a grain or refined sugar (coffee, caffeinated gels, etc).
 - We want to use it to help us before key workouts or races
- Caffeine affects our perceived exertion, when we are not using as a tool. Go into workouts and under perform because PE is off.
- Save it before a key workout to specifically help you – not particularly concerned with nutrient density at that time.
- Green tea:
 - Same/think as CORE food
 - Need “pick me up” during a “CORE” period during the day? Drink green tea
 - Benefits: ECGC, antioxidants, low glycemic, low BS response
 - Aim for 3-4 cups/day
 - Helps to increase endurance, wt loss, and other potential health benefits
 - Only 35mg caffeine/day (as opposed to 80-120mg coffee/day; coffee should be used for pre-workout fuel, like grains)



Omega-3 importance in athletes and where public is today

- Omega-6 to Omega-3 ratio should be 4-5:1
- Public diet is currently 20-40:1; over abundance of omega-6's
 - High glycemic foods, processed foods made with vegetable oil and soybean oil, high in omega-6
- Omega-3 in an athlete's diet is particularly important: anti-inflammatory response, cushioning for joints. → Walnuts, fish, fish oil supplements as required to get 2 grams of EPA/DHA each day(real food or supplements).

Olive Oil vs others

- Show list of oils
- Olive not "bad", it's great for being mono-unsaturated, but is not high in omega's 3 and we already consume such an abundance of omega-6's. We need to maximize when we can get omega-3's.
- Canola oil: this is why we recommend. Because of its higher omega-3 content.

Why we allow carbs+sugar-fiber/fat+protein less than 2 with a label (CORE RATIO)

- This is okay for any single food item with a label during a "CORE" period.
- carbs (high glycemic impact)
- + sugar (counted again because extra glycemic response)
- - fiber (no impact on BS response)
- fat and protein (slow down response)

Shopping List

- Know when to sacrifice certain macronutrients for others during a diet e.g. 2% cottage cheese vs. 1% can make a person miserable and go off track on a diet even though the actual impact is very small.

++++Notes To Build Plans++++

Always Include "5 Rules to Live by" When it's a diet plan only

In Training Nutrition

- Pre-workout: Not too strict but helps to acclimate digestive system during training. ---? Primarily carbohydrate based.
- During workout:
 - Men > 150 pounds: 1 gel during bike and run every 30 minutes
 - Men < 140 pounds: 1 gel during bike and run every 45 minutes
 - Women >130 pounds: 1 gel during bike and run every 45 minutes
 - Women <120 pounds: 1 gel during bike and run every 60 minutes
 - 24oz of sport drink per hour for all athletes on the bike.
 - Quantitative perspectives adjusted accordingly
- Post Workout
 - See table using Endurox, 1 scoop = 26g CHO
 - Women >130 pounds & Men < 140 pounds, scale up to 3 scoops max for the toughest workouts
 - Women <120 pounds, scale up to 2 scoops max for the toughest workouts
 - Men > 150 pounds, scale up to 4 scoops max for the toughest workouts
 - If workout is < 60min, can also use small CHO snack instead like raisins (high



glycemic)

- Can also use chocolate milk as a recovery drink, use equivalent of 26g CHO

Nutrition Packet Order

1. QT2 Cover Page (word)
2. Daily Caloric Expenditure For Various Volumes (excel)
3. Recommended Caloric and Macro Nutrient Profile (excel)
4. General Dietary Guidelines & Suggestions, 3 pages (word)
5. Day-to-Day General Eating Guidelines (excel)
6. Examples of Recommended Caloric and Macro Nutrient Profile (excel)
7. Current Caloric and Macro Nutrient Profile (excel)
8. Major Dietary Changes/Comments, 3-4 pages (word)
9. Good Food Nutrition Facts (excel)
10. In-Training Nutrition (word)
11. Optimal Race/Workout Recovery Strategy, 2 pages (word)
12. Normal Supplement Schedule (excel)
13. Supplement Nutrition Facts (excel)
14. Shopping List (word)
15. Fat and Blood Sugar Reference, 2 pages (PDF)
16. Green Tea Article, 3 pages (PDF)
17. 7 Rules to Eat By For Weight Loss (PDF)
18. Core Diet Recipes, 16 pages (PDF)