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# Ten Simple Things to Remember for Optimal Nutrition

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**N**utrition is something that affects everyone. Everyone needs fuel and everyone needs nutrients. Yet everyone eats for completely different reasons. As an athlete on the field or as an athlete competing in the game of life, putting thought behind what goes into your mouth can do wonders for health, but most importantly performance. The thought process behind choosing the right foods or combinations of foods seems to be the most paralyzing for most athletes. There are so many different opinions, ways of doing things, answers to weight loss, answers to weight gain everywhere you turn that it can become confusing to a point where acting on good intentions seems to halt. By no means do I want to downplay the complexity of nutrition, but what does all the science matter if behavior does not change? In working with athletes over the years, we break down our methodology into “10 Rules to Live by” that can be simplified to five categories: eat clean, eat often, hydrate, recover, mindset. These five categories will allow us to assist our clients in streamlining their healthy eating efforts.

## 10 Rules to Live By:

1. **Come Back to Earth.** This simply means to choose the least processed forms of foods, specifically carbohydrates, when building the majority of your meals. Typically the less processed the foods and the closer the food that you are eating is to its natural state, the better it will be for you. An easy way to do this on the carbohydrate side of things is to simply look at the label and the amount of fiber that is in the product. If the product has at least three grams of fiber or more per serving, it is a good choice. If it does not have that amount of fiber, put it back and find something that does. According to the American Heart Association, Americans eat an average of 15 grams of fiber per day, which is far

below the 2005 Dietary Guidelines for Americans of 14g per 1,000 calories consumed) that is recommended (5). The total intake of carbohydrates in general should be based on size and activity level. Typically this will range from anywhere between 3 – 10g of carbohydrates per kg body weight with the lower end (three grams) representing the light training recreational athlete to the upper end (10g) representing the endurance athlete in a heavy training phase. In the real world, if you feel energized, recover fully, are at a healthy performance weight, and are performing—you are probably eating the right amount of carbohydrate.

2. **Eat a Rainbow Often.** The vitamins and minerals that our body's need naturally come from the foods that we eat, specifically fruits and vegetables. Eating a variety of fruits and vegetables in a multitude of colors will help to ensure that you are getting the variety of nutrients that you need. Gone are the days of the “5 a Day” campaign. It has been replaced with simply, “More Matters.” Some of the best fruits based on their total anti-oxidant capacity per size are blueberries, blackberries, raspberries, strawberries, granny smith apples, sweet cherries, and black plums. In terms of vegetables, the Harvard school of public health is a bit more general in its guidelines by recommending to reach for stewed tomatoes, dark leafy greens, and anything that is rich in yellow, orange, and red color. It all sounds so simplistic, but still the average American only consumes about three out of the five to 15 recommended servings per day. The athlete needs the nutrients in these foods to enhance recovery, serve as intermediates in energy production, and an improved immune system.

- 3. The Less Legs the Better.** Protein is a critical part of the diet for the athlete and the active person, specifically the type and the amount. When focusing in on the type of protein, typically the less legs the animal has before you actually consume it, the better the source. Fish, turkey, and chicken rank high. You need to be more selective with dairy, red meat, and pork products. Low-fat dairy, lean cuts of pork and beef, and grass fed four legged animals are best. For people who are active in both strength and endurance training, more protein is needed; however, the constant debate always appears as to how much protein people need. Research suggests 1.2 to 1.7g/kg for both strength training and endurance athletes (7). Meeting the upper level of protein needs while decreasing calories is important to maintain muscle mass while trying to lean out. Protein also has a higher “thermic effect” meaning more calories burned, which can further help the leaning out effort (8). Protein can help to increase the satiety of meals and should also be included as part of your recovery meal or snack. Splitting the total protein intake over the course of the day by including some in each meal will help to ensure absorption and utilization.
- 4. Eat Fats That Give Something Back.** Diets too low in fat can be detrimental to active people; however, diets too high in fat (as with anything) will lead to increased fat accumulation. It is recommended that 20 – 30% of the total calories come from fat. The best types of fats to include are raw nuts, seeds, olive oil, nut butters, and fatty fish. The forgotten fats in the US are the essential fatty acids, specifically the omega-3 fatty acids. These fatty acids help with decreasing inflammation and due to their essential nature, must come from the diet. You should consume fish high in omega 3 two to three times per week. Those who do not consume fish regularly may want to consider supplementing with fish oil.
- 5. Three for Three.** Eating consistently maintains energy levels (blood glucose), keeps

Eat Clean	1	2	3	4	5
Eat Often	1	2	3	4	5
Hydrate	1	2	3	4	5
Recover	1	2	3	4	5
Mindset	1	2	3	4	5

## Table 1

Performance Nutrition Assessment

(5 = “Great,” 1 = “Not So Great”)

the body in a fed state, and prevents mood swings and binging. Keeping the body fueled will prevent extreme hunger, which will make healthier food selection easier. Combining the three main nutrients (carbohydrates, protein, fat) every three hours (hence the three for three) will keep you fueled and keep you on track. Planning out meals and snacks ahead of time will ensure that you stick with your fueling regimen. Keeping healthy snacks, bars, and ready to drink meal replacements with you at all times will ensure you have fuel on hand to keep you going.

- 6. Eat Breakfast Everyday.** There is a lot of debate on this in the literature, but I still believe that eating breakfast everyday is critical and find it to be an absent habit for most of us. “There isn’t enough time,” “I’m not hungry in the morning,” and “it’s too complicated” are all things that I hear come out of the mouths of athletes and in my own brain at times. Breakfast does not have to be buckwheat pancakes and an egg white omelet. Breakfast could be a blend of yogurt, flax, whey protein, and frozen berries or whole wheat toast, peanut butter, and a banana. Eating breakfast will give the body the fuel it needs, jumpstart the metabolism, and set people up to consume the number of calories they should be eating throughout the day.
- 7. Hydrate.** Dehydration = Decreased performance. The 2007 American College of Sports Medicine (ACSM) position stand on exercise and fluid replacement states that the goal of drinking while exercising is to prevent a 2% loss in fluid and an ex-

treme disruption of electrolyte balance. (1) However, we need to ensure that we are hydrated before we step onto the field or into a training session. A case study performed at Athletes’ Performance in 2008 on NFL combine preparation athletes found 98% of them to be dehydrated (by means of urine gravity) prior to their am training session. This resulted in a quick review of the athletes hydration. When we think of hydration we need to think of it in terms of all day and during training. We recommend drinking ½ oz to 1 oz per pound of body weight per day. Fluids should consist of primarily water and other naturally low or non caloric beverages, followed by 100% fruit juices (depending upon calorie requirements). This is a good range that helps people reach baseline recommended fluid intakes of 2.7L/day for women and 3.7L/d for men. In order to prevent dehydration during exercise, it is recommended by the ACSM to create an individual approach to minimizing fluid loss during training by weighing in and out of sessions and tracking how much fluid is consumed. A general place to start as recommended by the National Athletic Trainers Association (NATA) is to drink 17 – 20oz prior to exercise, 7 – 10 oz every 10 – 20 minutes during exercise, and 17 – 24oz for each pound lost during exercise (3). During times of intense activity, extreme temperatures, and long duration, a carbohydrate electrolyte beverage is optimal in addition to water because it is imperative to replace both water and salts lost from sweat. The fluid replacement is critical for those training two or more times

per day in order to maintain performance at subsequent training bouts.

**8. Don't waste your workout.** Even with the plethora of research available on the benefits of post workout nutrition, I still see athletes and workout warriors skipping the recovery meal or snack. The mindset of many still involves a hesitation to consume calories after just burning them. In order to optimize the benefits of a training session and jumpstart recovery for maximal gains, it is critical to consume a post workout recovery meal that blends both carbohydrate and protein within 45 minutes after training. This recovery meal should contain a repletion factor of 1.2 – 1.5g/kg bodyweight that combines both carbohydrate (1.0 – 1.2g/kg bodyweight) and a blend of whey and casein protein (0.3 – 0.4g/kg bodyweight) in a ratio that ranges from 2:1 to 4:1 depending upon the intensity and duration of the training. By consuming this snack, meal, shake, or bar that hits your protein and carbohydrate requirements as quickly as possible after training, glycogen repletion, lean body mass gains, performance on a subsequent training bout and immune function will be optimized (2,4,6).

**9. Supplement wisely.** There are so many supplements on the market that it becomes difficult to decipher which ones are needed. Supplements should “compliment” the diet and a mentality of food first supplement second should be employed; however, there are a number of situations that warrant a basic supplementation protocol. Those who do not get the recommended three servings of fatty fish per week should consider supplementing with an Essential Fatty Acid supplement. Those who do not get the calcium they need, especially female athletes, should consider a calcium supplement. Supplements that reach beyond that scope can be taken, but should be chosen only after an evaluation with a doctor and dietitian. When choosing any supplement, make sure that it has a Good Manufacturing Practice

Time	Meal
5:00 AM	Wake-up
5:15	Whole wheat toast w/peanut butter, yogurt
6:00 – 7:15	Workout
7:30	Post Workout Shake w/ Carbohydrate and Protein
9:30	Oatmeal w/berries and walnuts, egg whites scrambled with veggies, low fat cheese and olive oil
12:30 PM	Turkey sandwich on whole wheat with large spinach salad and low fat dressing
3:30	Plum w/raw almonds
6:30	Grilled salmon, brown rice, steamed veggies, large green salad w/low fat dressing
9:30	Low fat cottage cheese and ½ c berries

## Table 2

Sample “Perfect Day” Nutritional Plan

(GMP) symbol, is free of banned substances, and has accuracy in labeling. Utilizing websites such as consumerlab.com, nsf.org, and informedchoice.org can be very helpful.

**10. Get back in the kitchen.** In a world of convenience, travel, and life on the go, we turn to restaurants, fast food, and “quick” food for our nourishment. Restaurants, regardless of the type, do not take into consideration your calorie needs or your health when deciding upon their menu. Eating out is tricky as the majority of items are oversized and have significantly more fat and calories than similar dishes made at home. At the end of the day, if you really want to maximize your body composition, hit your nutrient and calorie goals, and just eat cleaner, you are your best ally. The more you can prepare your own food, the more control you will have in the nourishment of your body.

We simplified this further by breaking the 10 Rules down into 5 categories: Eat Clean, Eat Often, Hydrate, Recover, and Mindset. Each category represents a very important piece when it comes to fueling the body for performance and for health. In order to stay on track, we ask our athletes and clients to gauge how they are doing with a simple “Performance Nutrition Assessment” on a daily basis (table1). We have them rank on a scale of 1 to 5 each of those 5 categories. This daily check point serves as a time to reflect on how well they are nourishing their body despite the busy nature of life.

When it comes down to nutrition, there is not one answer, one magic pill, one supplement, or one tip that will give you the results you are looking for. It involves taking the 10 tips above and creating “Perfect Days” (table 2) and mastering the consistency of implementing the strategies listed above into daily life until it becomes a habit. So, how are you doing? ■

## References

1. American College of Sports Medicine. Position stand: Exercise and fluid replacement. *Med Sci Sports Exer*, 28(1): i – vii. 2007.
2. Berardi, JM, Price, TB, Noreen, EE, Lemon PW. Postexercise muscle glycogen recovery enhanced with a carbohydrate-protein supplement. *Med Sci Sports Exerc*, 38(6):1106 – 13. 2006.
3. Casa, DJ, Armstrong, LE, Hillman, SK, Montain, SJ, Reiff, RV, Rich, BSE, Roberts, WO, Stone, JA. National Athletic Trainers' Association position statement: Fluid replacement for athletes. *Journal of Athletic Training*, 35(2): 212 – 224. 2000.
4. Coyle, E.F. Timing and method of increased carbohydrate intake to cope with heavy training, competition and recovery. *Journal of Sports Sciences*, 9(suppl.)Spec No:29 – 51; discussion 51-2. 1991.
5. Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids (Macronutrients). National Academies Press. 2002.
6. Ivy, JL, Katz, AL, Cutler, CL, Sherman, WM, Coyle, E. Muscle glycogen synthesis after exercise: effect of time of carbohydrate ingestion. *Journal of Applied Physiology*, 64, 1480 – 1485. 1988.
7. Manore, A, Barr, S, Butterfield, G. Position Stand of the American Dietetic Association, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and athletic performance. *Journal of the American Dietetic Association*, 12: 1543-1556. 2000. Phillips, S. Dietary Protein for Athletes. *Appl. Physiol. Nutr. Metab*, 31: 647 – 654 2006.