Additional Nutrition Analysis:

Reports generated online by MyFitnessPal do not include values for Saturated Fat, Trans Fat, Vitamin A, Vitamin C, Iron and Calcium but via the app, I produced the following table for the missing data:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Sat. Fat** | **Trans Fat** | | **Vitamin A** | | **Vitamic C** | **Iron** | **Calcium** |
| 10/8/2017 | 22 | 0 | 10 | | 8 | | 39 | 55 |
| 10/9/2017 | 15 | 0 | 409 | | 552 | | 40 | 26 |
| 10/10/2017 | 23 | 0 | 25 | | 0 | | 72 | 37 |

**Total Energy Expenditures** (based on RMR)

My RMR according to the Shofield formula is 1519. The following is my weekly average TEE.



Using 0.7g/lb for my protein needs, 0.45 g/lb for my fat needs and the remaining calories to determine my carbohydrate needs; my macronutrients should be around: 108.5 grams of protein, 69.75 grams of fat, and 339 grams of carbohydrates.



Using 0.7g/lb for the softball player’s protein needs, 0.45 g/lb for the softball player’s fat needs and the remaining calories to determine her carbohydrate needs; her macronutrients should be around: 108.5 grams of protein, 69.75 grams of fat, and 314 grams of carbohydrates.



Using 0.7g/lb for the softball player’s protein needs, 0.45 g/lb for the softball player’s fat needs and the remaining calories to determine her carbohydrate needs; her macronutrients should be around: 108.5 grams of protein, 69.75 grams of fat, and 462 grams of carbohydrates.

**Diets**

The Softball Player #1

Breakfast:

* 1 cup of Quaker Oatmeal
* 1 cup of Dannon Light and Fit Greek yogurt
* 1 medium apple
* 2 tablespoons Jiff Natural peanut butter

Lunch:

* 2 cups of Spinach
* 6 oz of baked sweet potato
* 2 oz organic chicken breast
* 2 tbsps cilantro lime dressing
* 3 tbsps shredded parmesan
* ½ cup (uncooked) Jasmine brown rice

Pre-Workout Snack:

* Chocolate Chewy Granola Bar

Post-Workout Snack:

* 11oz Chocolate Protein Shake (Muscle Milk)
* 1 large banana

Dinner:

* 2 oz organic chicken breast
* 1 cup of broccoli
* 4 oz baby carrots
* ½ cup sliced almonds
* 2.5 oz French baguette

Totals: 113 grams of Protein, 315 grams of Carbohydrates, 43 grams of fiber, 69 grams of sugar, 70 grams of fat, 11 grams of Saturated Fat, 0 grams of Trans Fat, 124 mgs of Cholesterol, 1712 mgs of Sodium, 711% vitamin C, 140% vitamin A, 109% calcium, 91% iron.

Total Calories: 2278

The Softball Player #2

Breakfast:

* 1 ½ cup Quaker oatmeal
* 1 cup 2% Milk
* 1 large banana

Lunch:

* 5 oz French baguette
* ¼ cup lettuce
* 6 slices of turkey
* 2 slices cheddar cheese
* ½ beef steak tomato
* 16 medium strawberries

Pre-Workout Snack:

* 2 rice cakes
* 2 tbsps peanut butter or almond butter

Post-Workout Snack:

* 1 scoop Pescience Protein shake (24 grams of protein)

Dinner:

* 4 oz salmon
* 1.5 medium baked potatoes
* 1 cup green beans
* Dessert: 200 grams of watermelon

Totals: 127 grams of Protein, 333 grams of Carbohydrates, 40 grams of fiber, 72 grams of sugar, 59 grams of fat, 16 grams of Saturated Fat, 0 grams of Trans Fat, 165 mgs of Cholesterol, 2800 Sodium, 65% vitamin A, 169% vitamin C, Calcium 121%, 93% Iron

Total Calories: 2300

The Softball Player #3

Breakfast:

* Quaker High Fiber Maple Oatmeal Packet
* 2 slices Nature’s Own Butter Bread
* 2 tbsp Jiff peanut butter
* 200 grams blueberries

Lunch:

* 3 scrambled egg whites
* 1 slice of cheddar cheese
* 1 everything bagel
* 2 tbsp of pesto
* 2 oz avocado

Pre-Workout Snack:

* Whole wheat bagel
* 4 tbsp cream cheese

Post-Workout Snack:

* 1/2 scoop Pescience Protein shake (12 grams of protein)

Dinner:

* ¼ cup tomato sauce
* ¼ cup bread crumbs
* 2 oz organic chicken breast
* 1 cup of pasta
* 28 grams shredded mozzarella

Totals: 113 grams of Protein, 305 grams of Carbohydrates, 39 grams of fiber, 77 grams of sugar, 76 grams of fat, 20 grams of Saturated Fat, 0 grams of Trans Fat, 131 mgs of Cholesterol, 3346 mgs Sodium, 50% vitamin A, 78% vitamin C, Calcium 120%, 104% Iron

Total Calories: 2280

The Cross Country Runner #1

Breakfast before 6 am:

* 2 tbsp cream cheese
* 2 whole wheat bagels
* 1 large banana
* ¼ cup almonds

During Workout:

* 1 bottle of G2 Gatorade

Post-Workout Snack:

* 1/2 of 11 oz Muscle Milk protein shake
* 100 grams of watermelon

Lunch:

* 6 inch roast beef sandwich from Subway
  + Italian bread
  + Roast beef
  + Provolone cheese
  + Lettuce
  + Olives
* 1 fruit cup

Mid-Day Snack:

* Peanut Butter and Jelly Sandwich

Dinner:

* 2 oz salmon
* 1 cup broccoli
* 4 oz avocado
* 1 ½ cups of pasta

Additional Snacks:

* ½ cup brown rice
* 200 grams of watermelon

Totals: 122 grams of Protein, 474 grams of Carbohydrates, 48 grams of fiber, 123 grams of sugar, 72 grams of fat, 15 grams of Saturated Fat, 0 grams of Trans Fat, 90 mgs of Cholesterol, 2347 mgs Sodium, 59% vitamin A, 160% vitamin C, Calcium 73%, 98% Iron

Total Calories: 2912

The Cross Country Runner #2

Breakfast before 6 am:

* 16 medium strawberries
* ½ cup granola
* ½ cup Dannon Light and Fit Greek Yogurt
* 12 cashews
* 1 ½ cup Quaker oatmeal

During Workout:

* 1 bottle of G2 Gatorade

Post-Workout Snack:

* 1/2 scoop Pescience protein shake
* ½ cup quinoa

Lunch:

* 1 croissant with 4 slices of turkey breast and 1 slice of cheddar cheese
* 1 cup Mediterranean pasta salad
* 6 oz baked sweet potato

Mid-Day Snack:

* 2 slices whole wheat bread
* 2 tbsp peanut butter

Dinner:

* 1 ½ cup cooked fetuccine
* 2 tbsp parmesan
* 2/5 cups tomato sauce
* 3 slices whole wheat bread

Totals: 119 grams of Protein, 449 grams of Carbohydrates, 51 grams of fiber, 95 grams of sugar, 79 grams of fat, 17 grams of Saturated Fat, 0 grams of Trans Fat, 30 mgs of Cholesterol, 3220 mgs Sodium, 498% vitamin A, 49% vitamin C, Calcium 78%, 148% Iron

Total Calories: 2901

The Cross Country Runner #3

Breakfast before 6 am:

* 1 ½ cup Quaker Oatmeal
* 1/8 cup walnuts
* ½ raspberries

During Workout:

* 1 bottle of G2 Gatorade

Post-Workout Snack:

* 1 cheese stick
* 4 oz baby carrots
* 4 tbsp hummus

Lunch:

* 2 whole wheat tortillas
* 1 ½ cup mango
* 3 oz salmon
* 2 oz avocado

Mid-Day Snack:

* 1 large banana
* 3 slices whole wheat bread
* 2 tbsp Nutella

Dinner:

* 2 oz organic chicken breast
* 1 ¼ cup quinoa
* 1 cup green beans

Totals: 117 grams of Protein, 452 grams of Carbohydrates, 65 grams of fiber, 114 grams of sugar, 91 grams of fat, 20 grams of Saturated Fat, 0 grams of Trans Fat, 96 mgs of Cholesterol, 1751 mgs Sodium, 245% vitamin A, 236% vitamin C, Calcium 71%, 190% Iron

Total Calories: 2987

**The Differences**

All people have different nutritional needs. I have been an avid weightlifter for over a year now which leads my Total Energy Expenditure to reach at least 2400 calories on average; however, my lifting schedule changes weekly so it is hard to say how many hours or days I truly spend lifting. After many months of restricting my diet, I recently began trying to simply eat intuitively and put on some more muscle mass. Being off a meal plan lead my diet during the three days of recording to be sporadic – there were times where I would miss a meal and under eat – but this is okay for me because I am not an athlete in training for competition.

Unlike me, a softball player or cross country runner needs to be careful to not miss meals and meet their nutritional requirements. Since the softball player and the cross country runner are the same weight as me, about 155 pounds, their protein and fat needs end up being the same as mine. The differences in our exercise patterns then create differences in our caloric and carbohydrate needs. Unlike myself or the softball player, a cross country runner needs an extremely high amount of carbohydrates (462 grams) to maintain their body and fuel the amount of cardio they complete weekly.

Fulfilling my carbohydrate needs is usually fairly simple since I choose to eat almost whatever I want, but an athlete does not have this luxury and needs healthy carbohydrate sources to fulfill the 314 grams of carbohydrates needed by the softball play and the 462 grams needed by the cross country runner – this leads to a lot of whole wheat pasta, whole wheat bagels, whole wheat bread, oatmeal, quinoa, and potatoes. The hefty amount of carbohydrates needed by these athletes made it difficult to construct meal plans that are low in sugar. During the three days of my recorded diet, I failed to meet the required amount of carbohydrates, but I also did not consume excess sugars.

By using many whole foods in constructing the athletes’ diets, their micronutrient requirements were satisfied better than mine were. My diet is typically low in vitamin A, vitamin C, Calcium and Iron, but the meal plans written for the athletes are much closer to meeting those recommended values.

Since the cross country runner is assumed to have training at 7 am, their breakfast is set to serve as their pre-workout snack. I noted that it should be eaten before 6 am so that the athlete would have time to adequately digest the carbohydrates. I also provided that the cross country runner should be consuming Gatorade during their runs because they will be burning through their glycogen stores and needing to replenish their electrolytes and carbohydrates.

The athletes’ diets have similar protein sources and make use of snacks unlike my daily diet. After my workouts, I consume a protein shake that is usually at least 32 grams of protein and tend to treat that shake as a meal replacement. Since the athletes’ caloric needs are so high, the post workout protein shake is not a meal replacement, it is just a snack. For the cross country runner, there is also some protein source in their post workout snack as well as a carbohydrate source. While the softball player could also consume carbs post workout, in order to fit the diet’s restrictions they were only given a protein source post-workout in the three day meal plan.

Fulfilling the nutritional needs of athletes is difficult. An average person does not put much thought into whether they are getting proper fuel before their workout or meeting the macronutrient needs throughout the day. For an athlete, eating correctly is important for recovery and advancement in training.