

For Example Use Only

Nutrition Challenge:

1. My dietary challenge to attempt for 6 weeks was first, to calculate my daily caloric value, and then secondly to maintain, or slightly surpass this goal through healthy food choices. In this case healthy food choices meant following the Acceptable Macronutrient Distribution Range (AMDR) by having the total daily calories being composed of 45-65% carbohydrates 10-35% protein and 20-35% fats (consisting of unsaturated fats, or certain saturated fats) (Schiff, 2011). Based on my age, height, weight, gender and activity level my estimated energy requirement (EER) was calculated to be 2846 kcal/day (Schiff) and therefore it was my goal to maintain a daily caloric intake of between 2800-3000 kcal/day.
2. I chose this challenge since while I maintain an active lifestyle, I often neglect my diet, not by choosing more highly processed foods, but by having an insufficient caloric intake which is counterproductive to my job as a Strength Trainer at the Ian Stewart Complex (ISC). I recently excluded gluten from my diet, and have also lived for several years avoiding dairy due to a casein allergy. This leads to some difficulty since the majority of my meals must therefore be prepared at home due to the unavailability of gluten free alternatives for those in a busy lifestyle. This leads to missed meals due to time constraints and therefore caloric insufficiency.
3. The most challenging part of this dietary routine was the difficulty in planning a day so that I would have a sufficient amount of food. An example of the amount of food required can be observed in the two day diet analysis. A second challenge was finding the appetite for the required amount of food. Following the AMDR lead to the ingestion of ~400 g of carbohydrates, 175 g of protein, and 70 g of fat, which after accounting for water intake meant the ingestion of ~3 kg of fluid and solids daily (assuming ~0.5 kg water total food ingested, and 2 L of water daily).
4. While there were days in which total caloric intake fell below 2800 kcal, for the most part the diet was held for the 6 week period. It is with this in mind that the challenge experienced a moderate to high degree of success. An unexpected challenge was the maintaining the AMDR, this was because peanut butter, coconut milk and oil, and cheap cuts of meat formed the back bone of my protein intake, and with it came a large amount of fats as well sometimes greater than 108 g daily.
5. Certain challenges like the large amount of meat ingested in a day and the cost that associated with it were addressed by incorporating beans, and greater amounts of both quinoa and dishes made chickpeas, lentils and/or coconut milk overcame this. While this diet change may not be completely feasible for all individuals, it was within my reach to accomplish this challenge,

although starting out with a greater repertoire of meal recipes, as well as budgetary control would have made the challenge more accommodating to my lifestyle.

6. Since this is a diet modification that is a necessity for my active lifestyle, I feel that I will continue to follow these guidelines that I have set out, admittedly there will be days in which I don't follow the AMDR, but I will hopefully continue to develop new ways to reach my nutrition goals in a dynamic and inventive manner.

Dietary Analysis:

Upon looking at the dietary analysis of January 16 and 17 it can be observed that the intake of the water soluble vitamin C is 2-3x greater in amount than the required amount, though this is unlikely to be harmful in the amount due to the rate of its excretion. It can also be noted that the fat soluble vitamin A is definitely lacking in the diet, though it should be noted that both example days were absent of ingestion of sweet potatoes, a good source of vitamin A and a common meal for myself. While January 16 has a much lower caloric intake than calculated required (see appendix) January 17th has sufficient. This is likely due to unintentional bias occurring from conscious effort to ingest more as preparation for 6 week challenge. Both calcium and sodium are within necessary levels, though sodium is likely to be higher than listed due to potential sources of salt not listed, seasoning etc. Trans fats ingestion is 0 mg, expected due to home made meals and avoidance of the majority of highly processed foods. While fats and proteins are within the required percentages for a 2800 kcal diet, carbohydrate ingestion is below required, this is likely something that will be addressed with the addition of lentils, chickpeas, or increased quinoa. One thing that needs to be changed is the large amount of cholesterol ingested far beyond the required amount. It is likely that eggs are a major source of this while they are only moderate sources of both fats and proteins.

References

Schiff, W. J. (2011). *Nutrition for healthy living* (2nd ed.). New York, NY: McGraw Hill.

Appendix

Caloric calculation:

$$\begin{aligned}\text{Estimated Energy Requirement (EER)} &= 662 - (9.53 \times \text{AGE}) + \text{PA} \times (15.91 \times \text{WT} + 539.6 \times \text{HT}) \\ &= 662 - (9.53 \times 23) + 1.25 \times (15.91 \times 72 \text{ kg} + 539.6 \times 1.8 \text{ m}) \\ &= 2846 \text{ kcal/day}\end{aligned}$$

Food journal

January 16, 2012

FOODS	Calorie s	Carb s	Fa t	Protei n	Choles t	Sodi m	Sugar s	Fibe r
Breakfast								
Ocean Spray - Cranberry 100% Juice , 480 ml	280	70g	0g	0g	0mg	70mg	70g	0g
Hemp Hearts - Hemp Hearts, 3 tbsp or 15 ml	188	4g	16g	12g	0mg	3mg	1g	2g
Nature's Path - Mesa Sunrise Gluten Free Cereal, 2 cup	320	64g	3g	8g	0mg	333mg	11g	8g
Lunch								
Eggs - Scrambled (whole egg), 4 large	405	5g	30g	27g	859mg	683mg	4g	0g
Dinner								
Tru Roots Organic - Quinoa, 1/2 cup (44g)	340	60g	6g	10g	0mg	10mg	8g	8g
Chicken - Breast, meat only, cooked, roasted, 0.5 breast, bone and skin removed	142	0g	3g	27g	73mg	64mg	0g	0g
Snacks								
Ryza - Vanilla Rice Milk, 1.5 Cup	165	36g	2g	3g	0mg	105mg	18g	2g
Heartland Gold Organic - Brown Rice Protein Powder, 20 g	80	3g	0g	16g	0mg	4mg	0g	2g
Bananas - Raw, 1 small (6" to 6-7/8" long)	90	23g	0g	1g	0mg	1mg	12g	3g
Kraft - Peanut Butter Smooth, 4 Tbsp. (15g)	360	16g	32g	12g	0mg	280mg	4g	4g
TOTAL:	2,370	281g	92g	116g	932mg	1,553mg	128g	29g

Other Totals

Vit A	430 RE	Cholesterol	932mg	Sat Fat	18g
Vit C	216mg	Iron	13 mg	PUFA	21g
		Calcium	950 mg	MUFA	15g
				Trans	0g

January 17, 2012

FOODS	Calorie s	Carb s	Fat	Protei n	Choles t	Sodi m	Sugar s	Fibe r
Breakfast								
Ocean Spray - Cranberry 100% Juice , 480 ml	280	70g	0g	0g	0mg	70mg	70g	0g
Hemp Hearts - Hemp Hearts, 3 tbsp or 15 ml	188	4g	16g	12g	0mg	3mg	1g	2g
Nature's Path - Mesa Sunrise Gluten Free Cereal, 2 cup	320	64g	3g	8g	0mg	333mg	11g	8g
Lunch								
Eggs - Scrambled (whole egg), 4 large	405	5g	30g	27g	859mg	683mg	4g	0g
O'dough's - Flax Seed Bread, 2 slice (37g)	200	38g	5g	2g	0mg	360mg	2g	4g
Last Mountain's Old Fashiontain - Raspberry Jam, 2 tbls	70	16g	0g	0g	0mg	0mg	10g	0g
Dinner								
Ryza - Vanilla Rice Milk, 1.5 Cup	165	36g	2g	3g	0mg	105mg	18g	2g
Heartland Gold Organic - Brown Rice Protein Powder, 20 g	80	3g	0g	16g	0mg	4mg	0g	2g
Bananas - Raw, 1 small (6" to 6-7/8" long)	90	23g	0g	1g	0mg	1mg	12g	3g
Kraft - Peanut Butter Smooth, 4 Tbsp. (15g)	360	16g	32g	12g	0mg	280mg	4g	4g
Snacks								
Chicken - Breast, meat only, cooked, roasted, 1 breast, bone and skin removed	284	0g	6g	53g	146mg	127mg	0g	0g
Tru Roots Organic - Quinoa, 1/2 cup (44g)	340	60g	6g	10g	0mg	10mg	8g	8g
Extra								

FOODS	Calorie s	Carb s	Fat	Protei n	Choles t	Sodiu m	Sugar s	Fibe r
Generic - Raw Broccoli Flowerets, 1 cup, 7grams	20	4g	0g	2g	0mg	19mg	0g	0g
TOTAL:	2,802	339g	100g	146g	1,005mg	1,995mg	140g	33g

Other Totals

Vit A	870 RE	Cholesterol	1005 mg	Sat Fat	19g
Vit C	326mg	Iron	14 mg	PUFA	21g
		Calcium	1000 mg	MUFA	16g
				Trans	0g