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Written Assignment #1:

Experiential Persuasion for Eating Well: Macronutrient Profiles

With the government of Canada changing its daily nutritional intake values every so often and with all the information spreading around about foods that are good one day and bad the next, its no wonder that nutrition has become so complicated in the eyes of the average person. This confusion surrounding nutrition has become a major issue to the world population, specifically in more developed countries such as in North America. People may get caught up in the various supplements and vitamins that are advertised and may think that so long as they take a daily vitamin that they can eat whatever they like, as they are already ”healthy”. These nutritional misunderstandings have lead to medical professionals in the field of nutrition as well as other medical disciplines to look into the consequences of poor nutrition in an attempt to correct the situation and warn people about bad eating choices. In a causal study on heart disease, doctors and researchers have stated that an increase in malnutrition has lead to a serious outbreak of heart diseases as well as numerous other health related issues such as obesity and diabetes (Vest, Chan, Deswal, Givertz, Lekavich, Lennie, Desai 2019). Regardless of these disturbing facts, people still fill up the majority of their diets with processed foods instead of whole foods and don’t get the nutrients they need. The purpose of this paper is to persuade the reader to eat well by analyzing nutritional metrics, as well as discussing convenience and cost for a traditionally Tuscan Recipe – Ribollita.

Firstly, it is important to understand what macronutrients are in order to have an understanding of the nutritional data that will be analyzed later in the report. Macronutrients are by definition "A type of food… required in large amounts in the diet."(Oxford, 2019). The specific nutrients that compose the macronutrient list vary from species to species. For example, for plant life the macronutrients are chemicals such as potassium, magnesium, calcium, etc…. However, in the case of humans, the nutrients required in large amounts to sustain life are Carbohydrates, Lipids, and Proteins – each having their own specific roles in the human body.

Carbohydrates are, in laymen's terms, a fast burning fuel typically found in breads and fruits. They are broken down into two different types of carbohydrates; simple, and complex. Simple carbs are usually added into processed foods in order to increase sweetness and appeal. While on the other hand, complex carbs are more natural and found in things such as fruits and other whole foods. In general, the more complex the carbohydrate, the better it is for your system.

Lipids are more commonly known as fats, although it is much more complex than that and have gotten a bad reputation in the eyes of dieticians throughout the last one hundred years. The different of types of lipids are Fatty acids, Triglycerides, Phospholipids, as well as Cholesterol. Although these complicated names may seem intimidating, the important thing to understand about lipids is that they are essentially a slow burning fuel for your body.

Last but not least, we have the Proteins. Proteins might be the most complicated to understand because they have the most amount of functions in the human body. While Carbs are a fast burning fuel and Lipids are a slow burning fuel, proteins a little different. Proteins are essentially the workhorses of the macronutrients. The reason for this analogy is because proteins are responsible for numerous things such as; provide structural support for the cells, work as an enzyme and as hormones in the body, maintain fluid balance and Ph level, as well as being a source of energy for the body. Although these can be abstract concepts for the average person,

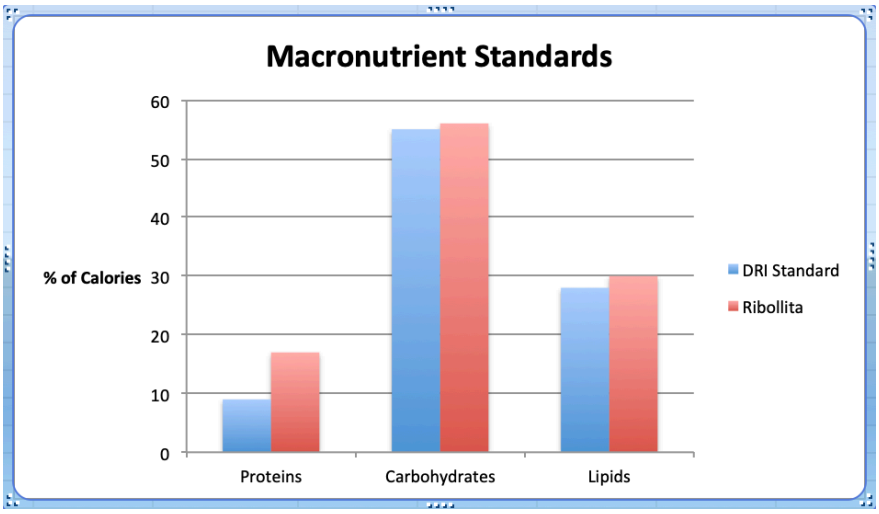
perhaps a more commonly known form of protein are antibodies – a protein found in the blood that protects the body against harmful diseases.

Now that the different macronutrients have been listed and explained, we can start to evaluate the Ribollita and the macronutrients that it contains. Figure 1 in the appendix demonstrates the nutritional facts of one serving of Ribollita with the percentages showing the daily amount of each nutrient as well as the total amount of Calories the serving contains. The Government of Canada bases these percentages on the suggested amount of nutrients for a 2000 Calorie diet.

Looking at this metric, we notice that the Ribollita has roughly a quarter of the daily amounts of both Carbohydrates and Lipids (19 and 20 percent respectively) as well as approximately a third (37%) of the daily proteins required for a healthy diet while only containing 461 out of the 2000 of a person's daily amount of Calories.

In order to get a better understanding of whether or not this consists of a healthy contribution to a person's diet, we should scale the percentages to see if they would meet the daily requirements if 2000 calories of Ribollita were consumed over the day. After doing this, we can see that the Ribollita is short of the mark for both Carbohydrates (by ~19%) and Lipids (by ~14%) while being above the mark for Proteins by ~59%.

However, this information isn't as important on its own. Another factor to consider when talking about a meals nutritional value is how it compares to the Dietary Intake recommendations (or DRI's). In the following figure titled "Macronutrient Standards", we look at each macronutrient as a percentage of the total amount of Calories in the serving of Ribollita and compare it to the percentage of each Macronutrient that is suggested by the DRI's. The values in the table were gathered from the NutriCalc reports (see Figure 2) shown in the appendix.



From looking at this table, we can notice that the standards for both Carbohydrates as well as Lipids are almost exactly at par with the DRI standards, more or less one or two percentage points. On the other hand, the actual caloric percentage of Proteins is much higher than the standard set by the DRI's. The DRI standard for proteins is listed at 8.76% of total Calories while the actual percentage of the Ribollita is listed at 17.39%. Although this may seem problematic, in reality it is not an issue. In fact, athletes or people who lead more active lives will need to eat more proteins in order to support their lifestyle. Typically, excess proteins are turned into energy for the body. However, an issue could arise in someone with kidney disease (Gunnars, 2018). With all this in mind, it is apparent that the Ribollita is a quality choice of meal for someone who cares about his or her nutrition.

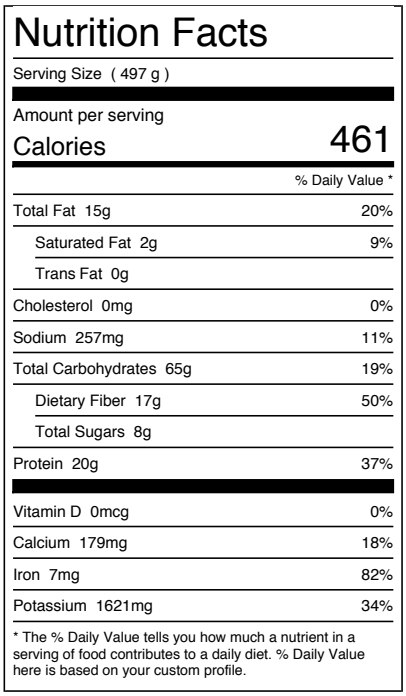
The problem with making poor nutritional choices, however, is not just understanding what nutrition is, but is also about the convenience of the food available. Many people lead busy lives and often find that processed food are much more convenient for them due to their availability, cost, and shelf life. Be that as it may, from the experience of cooking the Ribollita, I have found that eating processed foods is not necessarily more convenient. Some people may think that processed foods are much cheaper because of fast food typically being much less

expensive than a steak dinner. However, the grocery store can be the best restaurant option with the right cooking skills. The total cost of the ingredients for a single serving of Ribollita came out to roughly four dollars, prices many restaurants could not match. One downside of cooking is the time it takes to prep the ingredients and actually cook the food. However, if the proper time management is put into place the whole experience is much less time consuming and the outcome will be delicious.

Conclusively, eating well doesn't need to be a complicated chore as shown by the cost effective and nutritional value of the Ribollita recipe. The Ribollita has been shown to be a healthy meal as demonstrated by the critical analysis of its macronutrient content as well as its cost. This recipe is only one of thousands that makes a great case against eating processed foods. Not only is it beneficial to your body but your wallet as well – a great argument for cooking and eating healthier meals.

Appendix:

Figure 1:



Nutrition Facts

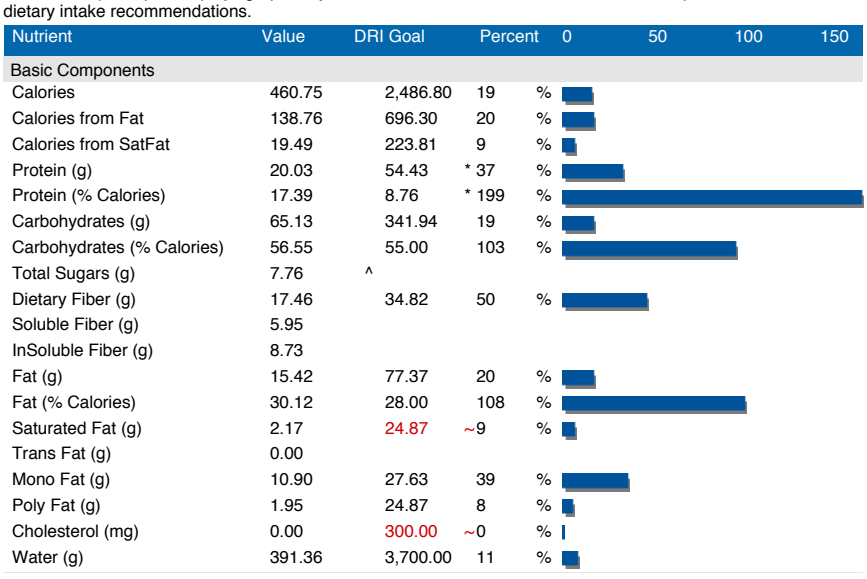
Serving Size (497 g)

Amount per serving

Calories	**461**
	% Daily Value *
Total Fat 15g	20%
Saturated Fat 2g	9%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 257mg	11%
Total Carbohydrates 65g	19%
Dietary Fiber 17g	50%
Total Sugars 8g	
Protein 20g	37%
Vitamin D 0mcg	0%
Calcium 179mg	18%
Iron 7mg	82%
Potassium 1621mg	34%

* The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. % Daily Value here is based on your custom profile.

Figure 2:



Bar Graph Report

The Bar Graph Report displays graphically the amount of the nutrient consumed and compares that to the dietary intake recommendations.

Nutrient	Value	DRI Goal	Percent	0 50 100 150
Basic Components				
Calories	460.75	2,486.80	19 %	
Calories from Fat	138.76	696.30	20 %	
Calories from SatFat	19.49	223.81	9 %	
Protein (g)	20.03	54.43	* 37 %	
Protein (% Calories)	17.39	8.76	* 199 %	
Carbohydrates (g)	65.13	341.94	19 %	
Carbohydrates (% Calories)	56.55	55.00	103 %	
Total Sugars (g)	7.76	^		
Dietary Fiber (g)	17.46	34.82	50 %	
Soluble Fiber (g)	5.95			
InSoluble Fiber (g)	8.73			
Fat (g)	15.42	77.37	20 %	
Fat (% Calories)	30.12	28.00	108 %	
Saturated Fat (g)	2.17	24.87	~9 %	
Trans Fat (g)	0.00			
Mono Fat (g)	10.90	27.63	39 %	
Poly Fat (g)	1.95	24.87	8 %	
Cholesterol (mg)	0.00	300.00	~0 %	
Water (g)	391.36	3,700.00	11 %	

References:

1- Vest, A. R., Chan, M., Deswal, A., Givertz, M. M., Lekavich, C., Lennie, T., … Desai, A. (2019). Nutrition, Obesity, and Cachexia in Patients With Heart Failure: A Consensus Statement from the Heart Failure Society of America Scientific Statements Committee. Journal of Cardiac Failure, 25(5), 380–400. https://0-doi-org.mercury.concordia.ca/10.1016/j.cardfail.2019.03.007

2- Oxford (2019). Macronutrient: Definition of Macronutrient. Retrieved from https://www.lexico.com/en/definition/macronutrient.

3- Gunnars, K. (2018, April 27). Is Too Much Protein Bad for Your Health? Retrieved from https://www.healthline.com/nutrition/is-too-much-protein-bad-for-you.