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When I started this project, I was not even sure on what the World Food Prize was, but I was willing to take a chance. I just thought that malnutrition was only an issue in Africa and third world countries, but I was wrong because every country deals with problems linked to malnutrition and obesity. Some countries are worse than others and some countries may even underestimate this enormous issue. I met with my teacher and asked her about this project and as I did more research I became very interested on the world's food problems. I began this project knowing very little about malnutrition and obesity in any other country other than the United States. I just figured that most countries dealt with the same problems as we do. We have malnutrition and obesity so why would any other country be any different? I began by gathering information on Canada and East Asia. I decided to research Canada because so many similar problems occurring in Canada also occur in the United States. I wondered if they have the same problems as we do and if they are doing a better job on solving it. If I found out what they were doing to solve some of their malnutrition and obesity problems, then maybe I could do something to help our country out. When you walk around a big city or even a small town, you notice how many more adults and children are becoming obese. If we do not try and do something, then who will? It shouldn't bother me that other people make their own decisions and eat what they want, but we need to start doing something before every country is dealing with more problems than they already have. The first step to helping countries out is just by doing research and actually realizing how bad this situation is. You might be shocked by some of the statistics you find. When you finish this essay, you should take just an hour or two to research malnutrition and obesity. You may find out that you are just as interested in this topic as I am.

There are many people who are malnourished in Canada, but there are certain types of people who are most susceptible to it. The poor and not very well educated are two groups that are malnourished. The deprived, or the not so wealthy are not able to purchase healthy items at a store, and once they go without these items for such a period of time, their bodies do not have enough nutrition to work properly. They are not able to purchase the healthier items because fresh produce and meat tend to be a little bit higher in price. I was especially surprised by this next fact. The typical family in Canada has 3.2 people. This is typically two parents and one child. You have to figure in how much money the family makes too because that can decide how much food they can buy and what kind of food they can purchase. The average income based on working full time for a male is \$57,794 and for females it is \$41,415, and the average is \$50,516. This is based on Toronto, Ontario's earnings. Also, education plays a very important role in healthy food choices. If you do not learn what is healthy and what is not healthy, then it is very difficult for you to know what is good and bad for you. It is much harder to make a wise decision when you do not understand the right food choices. There are also some people who are very well educated, but they do not eat as healthy as they should. They learn about carbohydrates, fat, calories and sodium but they do not bother to read the labels. If the family is wealthy then they may buy more junk food and non-nutritious foods. To some people, most fruits, vegetables, and many other nutritious foods may seem more costly than a candy bar or some chips, so if the family does not make enough income, then they have to almost tell their kids that they can not have any nutritious foods. Not all fresh fruits are expensive though, but some are.

Canada imports a lot of their fruits such as bananas, strawberries, oranges, and many other fresh fruits from South America and other countries. The availability of fresh fruits is very high year round. Canada's fruits and vegetables consumption has jumped tremendously in the last few years because of the government urging people to continue to eat more fresh produce. Bananas, apples and oranges are among the top five fruits consumed by the Canadians, and now pineapple has joined in with this category. The pineapple consumption has tripled in the last 10 years. The sales of the papaya, although not a very well known fruit, has doubled in the last 10 years.

The vegetable group needs some help too because not everyone is too fond of veggies. The average Canadian consumed about 77 kg. of vegetables in the year of 2003, and that figure has continued to rise. Potatoes, lettuce, onions, carrots, and tomatoes are among the most consumed vegetables in Canada. The bad calories have also begun to rise slowly in the last few years. Since 1993 the caloric consumption has risen between 1 and 3 percent. It is almost funny to say but they are blaming the American culture such as fast food chains and the American lifestyle on this rise.

Meat is also essential in any diet but some may even choose to leave it out. Regardless of the mad cow disease outbreak in 2003, Canadians have continued to consume more beef every year. It has jumped to an average of 14.2 kg. per person. That is a rise of 5.0 percent compared to the year before. Meat is needed in everyone's body in order to live healthy. Meat provides protein, amino acids, iron and calcium. Protein is actually the predominant ingredient in a cell. And that is not the only very healthy nutrient found in meat. The amino acid is actually very important for the body because they include the amino and carboxyl groups which contain 20 acids that serve as the building blocks for protein. The sales of dairy products have also continued to rise, as the demand for yogurt and cheese has risen. Cheese has always been a favorite but it has stayed stable at about 8.8 kg. per person in a year. Yogurt has jumped to nearly 4.3 liters a year for one person.

The topic that I chose to write about is the total nutritional composition of the foods consumed. I chose this because when I think of malnutrition and obesity, I think of what kinds of foods families consume each day. This is the most basic cause or influence of malnutrition and obesity. The food guide for Canada is very similar to the United States food guide pyramid with just a few differences. The requirements are just a little bit different in Canada as in the United States. You are supposed to consume 5-12 servings of grain products which consists of breads, cereals, pasta and also rice. In the U.S there is a recommendation of 6-11 servings of grain. The vegetables and fruit groups are put together in Canada, so they ask for a consumption of 5-10 servings, and at this point the recommendation is 3-5 servings of vegetables and 2-4 servings of fruit. If you add that up, you have 5-9 servings of vegetables and fruits. Also the Canadian government states that you should have more than the recommendations, and that an unlimited amount is great to think about. Dairy products such as yogurt, milk and cheese are very important, so they ask for a daily consumption of 2-4 servings and slightly more for pregnant women and also teenagers. Teenagers need more because their bodies need it to grow. For pregnant women, good nutrition is essential for infants to grow and be healthy. The meat or protein group includes fish, eggs, tofu, peanut butter, or legumes such as peas, lentils or even dried beans. This group requires at least 2-3 servings. And finally you can never forget the tip of the pyramid, the sweets group. There is no recommendation besides eat sparingly, and that is good advice, but I think we need to go by Canada's guide because they only recommend 75 calories each day. If you think about this it may seem like a lot of calories, but if you take a type of potato chips and look at them, it isn't much. For example, in Dill Pickle potato chips there are 160 calories in about 20 chips. Now 75 calories is just about half of 20 chips so you are only having about 10 potato chips and no other snacks for the rest of the day. If you meet all the recommendations on the food guide pyramid, you will be getting about 1600 to about 2800 calories per day. Also you need to remember other important nutrients: iron, calcium, phosphorus, magnesium, vitamin D, and fluoride. If you want to get enough vitamin D, which helps prevent osteoporosis in adults you need about 50 micrograms per day. You should be sure to get 1000 to about 1300 milligrams of calcium per day, based on children. An adult needs to get about 2.5 grams per day. You need to be sure to get enough calcium because this prevents bone fractures, and it helps your body grow especially during childhood and teen years.

When I was in the process of composing a family, I had to factor in what lifestyles they would choose, what a typical family is like, where they should live, and their ages. I chose the location of Grand Falls, New Brunswick. In the Atlantic Provinces they have a higher rate of obesity and malnutrition compared to most other provinces in Canada. I decided to build my family based on the typical three

persons in a household. I decided that I would choose two parents and one son, who is 16 years old. The parents have a very good education and are both currently employed at full time jobs. The father, as of many other Grand Falls workers, works a busy job at the potato manufacturing company. The mother is a science professor at the local college. They both earn an above average wage at their jobs, but they work very long hours. Their child attends a local school in the city and usually gets dismissed at about 3:30 in the afternoon. When he gets home he usually grabs a bag of potato chips and a soda and heads for his room. He sits in his chair and plays the computer and also catches up on his favorite nightly show at 7:30. This factor has been continuing for many years because his parents aren't home and he doesn't seem to be able to find anything to do. His parents usually meet up at lunch break and grab a quick meal at a fast food restaurant. They order a cheeseburger, some fruit and yogurt, and some fries. They usually get off at about 8:30 and they meet at the grocery store to find something to cook that night. They buy a few t.v dinners, some chips, some other good bagged items ready to eat. This is the most convenient way to eat because they don't have time to cook a good meal. When they get home their son is still awake and they all eat t.v dinners and munch on chips with one pop. Finally at about 10:30 they all get to bed. This habit has been going on for quite some time and is only getting worse. The child has caught on from his parents and now that is the way that his lifestyle works. This situation is pretty severe because they are not getting enough nutrients from the dairy group, meat group and the vegetables and fruits group. With only eating t.v dinners and having a very quick breakfast, they are not allowed to get in all the nutrients essential for their body. Now with this lifestyle you have to figure out how much percentage of the requirements they are getting, and if they are getting enough. A t.v dinner has about 1 serving of meat, 1-2 servings of vegetables and one snack for the end. Then lunch has 1 serving of meat, 1 serving of vegetables and a pop. This for a whole day comes to two servings of meat, 2- 3 servings of vegetables and fruits, two servings of grains including their bun for the cheeseburger and cereal and about two servings of dairy a day including their cereal with milk. This is not the healthiest lifestyle because a lot of recommended levels are under the recommended servings. The grains group is only at two servings when they should be getting at least five. Their fruits and vegetables group is low because it should be at least five servings and they only got 2-3. They did meet the dairy products proposal of 2-4 and they also met the proteins group with a recommendation of 2-3 servings but it was fried and highly processed. They still did not meet the requirements of the grains and fruits and vegetables. If they met two out of the four requirements, that is only about 50% of what they should be getting. At this rate they could miss a lot of vitamins that come from fruits and vegetables, and they could also lack nutrition from cereal such as Vitamin A, C, E, iron, folic acids, and phosphorus, essential to keep the body in great shape. This is not good for your body because your bones and muscles can get weak. You can also lose a lot of your energy level, and your whole body can become exhausted from lack of nutrients.

These recommendations are excellent in my opinion. I think that this does provide an excellent diet because it provides you with all the food groups and enough to get your recommended daily allowance. Now a question often asked is how or when do I have time to get any missing nutrients that I did not include, because of limited income, choices, knowledge or care. There are many ways that the government or food companies can help. One way is to add a few vitamins or nutrients in certain foods bought at a local food mart. A few items include orange juice, bottled water, milk, and many liquid foods. They could make more cereals with 100% vitamins, and more healthy foods at fast food restaurants for families with busy lifestyles. If they would continue to do this and add more nutrients to more foods there would be more sufficient ways to get our recommended daily consumptions. Also another way to increase nutritional intake is to do what I feel is a great program that our school does. We have gone through the government for a grant that allows us to have a healthy snack every day such as carrots, apples, pears, bananas, kiwi and many more very nutritious snacks. I think that this helps people to pick more nutritious snacks when they get hungry. There are many other ways to get kids and adults to pick more nutritious foods, such as through the television, and other media. If they could add more health related commercials to television then many more people could understand why good choices are so vital for the body. Producers could also add coupons for fresh produce instead of having so many coupons for beverages and

snacks, because if there is a sale then more people tend to buy that food. Stores could also use contests to get kids to pick more nutritious foods. One example would be to have kids fill out a food chart every day and whoever completes their whole chart by getting all of the recommended allowances could get a prize. This would also allow kids to realize why they need to eat healthy. If everyone could just add in a few more fresh produce items, some vitamins and some meat, then it would drastically improve your energy level and the way your whole body functions.

Malnutrition is a major concern right now and we can't ignore it and expect it to go away. It is continuing to get worse in many countries and there is no better way to help besides awareness. If everyone was aware of this vast problem, then I don't think it would be quite as bad as it has already gotten. After all the research I have done, I have come to one quote that may make you think before you pick up a candy bar or a bag of chips, "You are what you eat." Tomorrow is a whole new day and you have every day for the rest of your life to add more nutrients into your diet, so don't waste it eating useless foods that don't help your body function properly. Not only will you boost your energy level and probably your mood, but you will feel great and you will wonder how you ever got through this much of your life without many wholesome foods.

Bibliography

<http://www.dietitian.com/rda.html>

Dietary Reference Intake/ Recommended Dietary allowance

<http://www.12.statcan.ca/english/profil01/details/details1fam.cfm?SEARCH=BEGINS&PSGC=35&SGC=3520005&A=&LANG=E&Province=35&PlaceName=ontario&CSDNAME=Toronto&CMA=&Search..>

Earning Statistics for: Toronto City Ontario

<http://www.prostarnutrition.com/12771//articles/malnur.htm>

Malnourished...with fruit and veges? This will shock you!

<http://quackwatch.org/03HealthPromotion/dri01.html>

Dietary Reference Intakes (DRIs)

New Guidelines for Calcium and Related Nutrients

Stephen Barrett, M.D.

<http://dir.yahoo.com/Regional/Countries/Canada/government/Federal/Departments/>

http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index_e.html

Action Towards Healthy Eating

<http://search.hc-sc.gc.ca/cgi-bin/query?mss=hcresult&pg->

[aq&enc=iso88591&q=rural+andhealth&ft=rural=health&doc=all&r=rural+health&kl=en&subsite=both](http://search.hc-sc.gc.ca/cgi-bin/query?mss=hcresult&pg-aq&enc=iso88591&q=rural+andhealth&ft=rural=health&doc=all&r=rural+health&kl=en&subsite=both)

http://en.wikipedia.org/wiki/Canada_2001_Census

<http://www.quackwatch.org/03HealthPromotion/dri01.html>

Dietary Reference Intakes (DRIs) New Guidelines for Calcium and Related Nutrients

<http://www.dietitian.com/rda.html>

Dietary Reference Intake/ Recommended Dietary Allowance

