



Foods and Nutrition 12

Introduction Assignment

This assignment is intended to familiarize you with some concepts related to nutrition and healthy eating. This is the first assignment in this course, so complete it with care.

Student Name _____

Student No. _____ **Date** _____

Address _____ **Postal Code** _____

Complete the following *Foods and Nutrition 12* Introduction Assignment independently and return it to your teacher based on the instructions provided by your school. You do not need any external resources to complete this assignment.

There are three parts to this assignment:

Part A: Eating Behaviour	20 marks
Part B: The Cost of Eating	15 marks
Part C: Global Food Issues	15 marks

Contents:

20 pages

Assignment time:

2 hours

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Before you start, read these important tips.

1. Read each question carefully before answering.
2. Answer all questions to the best of your ability.
3. Take your time. Check your work before handing in the assignment.
4. Write neatly and check your spelling.

Foods and Nutrition 12 Introduction Assignment

Nutrition and Healthy Eating

The following Introduction Assignment has three parts to it. Once you have completed the assignment, return it to your teacher.

Part A: Eating Behaviour

Read the following article, and then answer the questions that follow.

Healthy Eating

Did you know that, in the last 20 years, the diameter of the average dinner plate increased by three inches? In this same time period, obesity has reached epidemic proportions! Sadly, at the same time, many youth have starved themselves. More than 17 percent of high-school girls in BC suffer from some form of eating disorder such as anorexia or bulimia. About 8 percent of males are also affected (Dr. Laird Birmingham, Provincial Director, St. Paul's Eating Disorder Program as quoted in *The Vancouver Sun*, February 5, 2004).

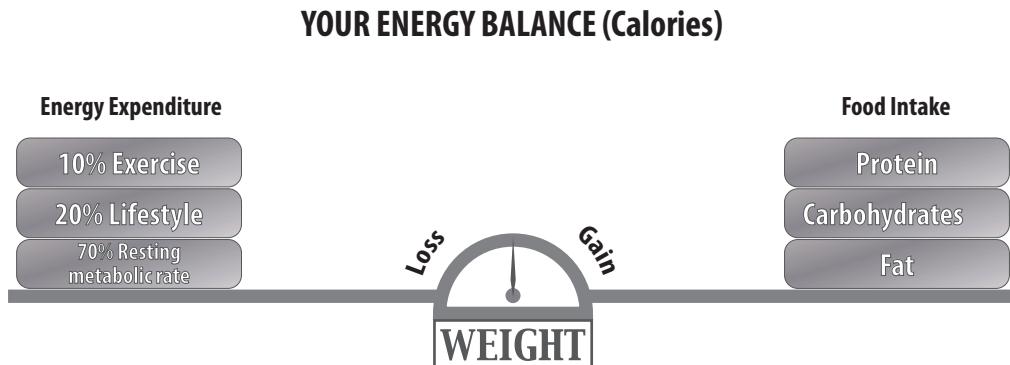
Eating disorders occur due to a number of psychological and sociological reasons. But what constitutes healthy eating? Why is a good diet important?

A good diet and a healthy body weight both enhance general well being and reduce the risk of diseases including heart disease, stroke, cancer, diabetes, and osteoporosis. What's needed to maintain a healthy body weight?

Energy Balance

The key to a healthy body weight is energy balance: simply put, "energy in" must equal "energy out."

"Energy in" is the calories you consume each day from foods and drinks. "Energy out" is the calories you burn to carry out basic bodily functions that keep you alive such as breathing and digestion as well as physical activity. The more physical activity you do, the more fuel you need. Energy that is not used is stored as fat and will cause weight gain. If the body has less energy than it needs, it will burn fat stores to keep up with the body's functions and activity. This results in weight loss.



How do you ensure energy balance? By being active and eating a nutritious diet.

The following are a few tips to follow for healthy eating.

- **Eat only the amount of calories you need.** Balance your calorie intake and your calorie expenditure; don't eat more than your body uses. The average daily allowance is 2000 calories, but this amount depends on your age, sex, height, weight, and physical activity. Teenage males 15–18 need approximately 2800 calories per day, while females of the same age require 2100. If you are a competitive athlete you will need more calories. For example, Olympic rowers need to eat between 5000 and 5500 calories just to maintain their bodyweight.
- **Make sure your diet consists of the essential building blocks of healthy eating.** Eat a diet that includes protein, carbohydrates, and mono- and/or polyunsaturated fats.
- **Eat a minimum of five portions of fruit, vegetables, grains, and legumes daily.** These types of foods provide needed complex carbohydrates, fiber, vitamins, and minerals and are low in fat and free of cholesterol. Brighter, deeper coloured fruits and vegetables contain higher concentrations of essential nutrients.

- **Drink more water.** Since our bodies make up 75% water, it's a vital part of our diet. Water flushes out toxins and waste from our kidneys and bladder.
- **Limit refined sugar and processed foods.** Sugar is added to many foods. In one year, a daily 12-ounce can of pop (160 calories) could increase your weight by 16 pounds. Many processed foods such as packaged, canned, boxed, or frozen meals contain high amounts of salt and food additives that may not be good for your health. When you can, make meals using fresh food.
- **Beware of fad diets and food supplements.** Many fad diets or diet products promise to be the magic bullet for weight loss, or the key ingredient for bulging muscles and a buff physique. However, any fad diets such as high protein diets, protein powders, meal replacements, or mega vitamins could be harmful to your body.
- **Get moving.** A healthy diet improves your energy, maintains physical wellness, and reduces the risk of many diseases. If you add regular physical activity to your day, your healthy eating plan will work even better!

Healthy eating and the right amount of physical activity ensure energy balance and support general physical wellbeing. Energy balance is important for maintaining a healthy body weight that, in turn, helps prevent diseases such as stroke, cancer, and diabetes.

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Based on what you have read, answer the following questions by selecting the correct response.

1. Fad diets and food supplements are always healthy and safe. (1 mark)
a. True
b. False ()

2. The more water you drink, the better for your health. (1 mark)
a. True
b. False ()

3. Females are more susceptible to eating disorders than males. (1 mark)
a. True
b. False ()

4. Even a little added sugar to our daily diets can cause weight gain over time.
(1 mark)
a. True
b. False ()

5. Brighter, deeper coloured fruits and vegetables contain: (1 mark)
a. more complex carbohydrates.
b. a completed protein.
c. higher concentrations of essential nutrients.
d. more fiber. ()

6. The building blocks of a healthy diet are: (1 mark)
a. carbohydrates, protein, and mono- or polyunsaturated fats.
b. vegetables and legumes.
c. vitamins, mineral, and fiber.
d. food supplements and additives. ()

MARKS

7. Why is energy balance important? (2 marks)

8. What are the benefits of eating healthy? (2 marks)

9. Make calculations for daily calories as outlined below.

- a. Go to the following website and calculate your daily caloric requirements in the 'Daily Needs Calculator': <http://www.nutritiondata.com/> or approximate an amount from the information you learned from the article (caloric requirements for teenage males—2800 and females—2100).

Recommended daily calories _____ (1 mark)

- b. In the chart below, write down everything you eat for one full day. Using a calorie counter book, reading food labels, and / or researching the website (<http://www.nutritiondata.com>), determine and record the number of calories for each food item. (7 marks)

Food Item	Number of Calories
	Total Calories _____

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MARKS

- c. What did you find out about the number of calories you eat in one day? Are you eating more or fewer calories compared to your recommended daily allotment? What might you do to balance your energy needs? (2 marks)

Part A

Evaluation Guidelines	Marks
Questions 1–8	/10
Question 9	/10
Total Marks	/20

Part B: The Cost of Eating

Living is expensive in this country and a healthy diet is difficult to afford for many BC families. A study by the American Dietetic Association in 2008 showed that junk foods that packed the most calories and had the fewest nutrients per gram were far less expensive than the nutritious, lower-calorie foods such as fruits and vegetables. Moreover, the healthy food prices surged 19.5 percent during the two-year study, while junk food prices dropped by 1.8 percent.

The high price of nutritious foods is a dilemma for many families trying to serve healthy meals on a reasonable budget. However, by planning for meals carefully, buying food items on sale, and resisting convenient foods and take-out, families can eat well without going over their budget.

Consider the following example of how one family of four spends money on food.

The Patterson Family's Grocery Expenses

Julie and Harold Patterson's have a 16 year-old son and a 13 year-old daughter. Here is their monthly budget:

Monthly Income: \$5900

Monthly Expenses: \$6754

Food: \$1000
(groceries: \$600/take-out and restaurants: \$400)

As you can see, the Patterson's do not make enough money to cover their monthly expenses, and a part of the problem is the amount of money they are spending each month on food.

Food is a big part of any family's budget and difficult to make cuts to—after all, good nutrition is vital for health. However, certain types of food are more costly than just-as-healthy, but less convenient types.

Instructions:

To complete this assignment you will need the Internet (some grocery stores have online flyers), a community newspaper, or a daily paper from a large city that has grocery or restaurant ads. Or, go to your local grocery store and

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make notes. Examine the costs of basic food purchases such as cereal, cheese, and bread. You will need to consult this information at various points in the assignment.

Look at this typical week's worth of food purchases for the Patterson family.

Trip	Purchases: (one week)	Amount (\$)
1	2 frozen pizzas (12 inches each)	12.57
	Small box of cereal (400g)	4.98
	Frozen pre-cooked bacon (250g)	6.99
	Mini-yogurt containers (6 × 100ml)	4.68
	4 "Lunchables" style pre-packaged lunches	14.00
	2L milk	3.35
	Loaf of sliced bread	3.59
2	4 breakfast sandwich combos from fast-food doughnut shop	16.37
3	1 dozen eggs	4.60
	Medium sized package of cheese slices	5.25
	Deli ham slices (400g)	6.37
	Deli salad (300g)	3.89
4	Specialty coffee (1 pound)	13.99
5	Take-out sub-sandwiches (4 × 12 inch) Lunch	26.00
	Medium sodas (4 × 8 oz)	3.80
6	Family dinner-fried chicken from fast food restaurant.	24.99
7	2L of milk	3.35
	Small box of cereal (400g)	4.98
	Pre-chopped stir-fry vegetables	4.87
	Fruit salad from the deli counter (500g)	7.29
8	Restaurant dinner	65.00

MARKS**Step 1: Sorting the Purchases**

First sort the purchased items into the relevant categories. (The first column is done for you.) (3 marks)

Single Serve	Restaurant Purchases	Convenience Foods
Mini yogurt containers ($6 \times 100\text{ml}$)		
4 "Lunchables" style pre-packaged lunches		
Medium sized package of cheese slices		
Deli ham slices (400g)		
Deli salad (300g)		

Step 2: Examining the Purchases

The total food cost for a one-week period for this family is \$240.91.

1. List three items that could be bought in larger quantities or in bulk rather than in 'single serve,' thereby reducing the cost of the purchase. (3 marks)

a. _____

b. _____

c. _____

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2. Choose three restaurant/convenience food items, and suggest a more cost effective alternative. (i.e.: small whole ham sliced at home, rather than deli sliced). (3 marks)

Item 1: _____

alternative: _____

Item 2: _____

alternative: _____

Item 3: _____

alternative: _____

3. Find four items on the family's grocery list that are on special at your local grocery store, or listed as on special in a newspaper ad or coupon. By using coupons or purchasing sale items, outline what savings the family could have made this week? Follow the example provided. (4 marks)

Item	Cost in budget	Sale/Coupon Cost	Money Saved
Deli Salad	\$3.89	\$2.99	\$0.90

MARKS

4. Make two recommendations to the family as to how they could reduce their overall food expenses? (2 marks)

i. _____

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ii. _____

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Part B

Evaluation Guidelines	Marks
See individual questions for marks.	15
Total Marks	/15

Part C: Global Food Issues

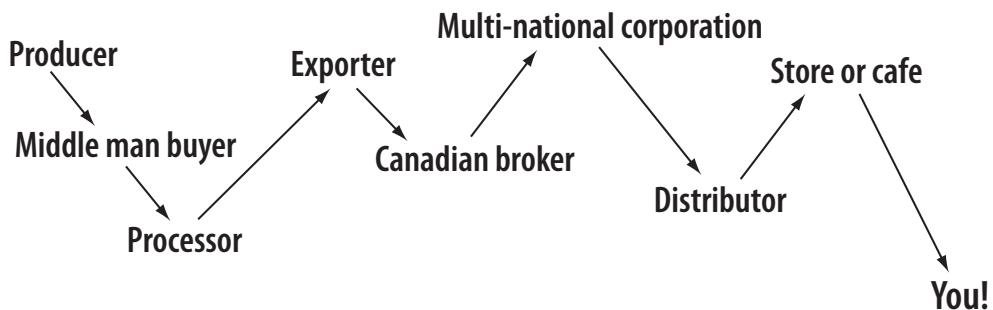
Read the following article, and then answer the questions that follow.

Fair Trade

There is a growing social-responsibility movement demanding that farmers in developing countries receive a fair price for the goods they produce such as coffee, tea, cocoa, and fruit.

This movement promotes “fair trade,” which is a strategy to alleviate poverty and ensure sustainable development. In the fair trade model, there are the usual producers, processors, distributors, retailers, and consumers. The difference is that unnecessary middlemen are eliminated, business practices are monitored for ethics and sustainability, and there is a standard of fairness and accountability.

CONVENTIONAL SUPPLY CHAIN



FAIR TRADE SUPPLY CHAIN



Coffee is the most widespread fair trade commodity. Canadians consume more than 40 million cups of coffee daily—an average of 2.6 cups a day for each coffee drinker. Most of the coffee Canadians buy is produced by small-scale farmers working for meager wages in some of the world's poorest countries, where rain forests have been stripped so coffee can grow quickly in full sun. This is neither financially nor environmentally sustainable.

Most producers are paid about 11 cents for every dollar spent on coffee.

Under the fair trade system, coffee growers make approximately 28 cents for every dollar spent by coffee drinkers, reducing the amount paid to the "middlemen." Also, about 85 percent of fair trade coffee is shade grown. This means that coffee grows naturally under a canopy of trees, and rainforest trees are not cut down to increase production. But coffee isn't the only product benefitting from fair trade practices.

Fair trade bananas may soon be selling in a grocery store near you. Of the seventy million tonnes of bananas that are produced each year, mostly in the Caribbean and Central and South America, 20 percent are traded internationally while 80 percent of the bananas produced are eaten locally. Of the bananas that are exported, most are grown on large plantations and controlled by large American firms such as Dole, Del Monte, and Chiquita. Human rights abuses against banana workers are notorious, including hiring child labourers as young as eight years old to work on plantations.

Without fair trade, banana farmers in Ecuador only receive a few cents a pound for their crop. This means many workers earn as little as \$3 a day—not nearly enough to support a family.

In 1997, the El Guabo Association of Small Banana Producers—a fair trade co-operative—was formed in southwest Ecuador in order to gain greater control over their livelihood. This organization of growers comprises 339 family farms and exports approximately 30000 boxes of fair trade bananas a week to Europe and the U.S. The profits made by selling fair trade bananas are funneled back into the community in the form of healthcare, retirement benefits, and education for local children.

Why buy fair? Fair trade means that producers in developing countries have healthy working conditions and receive a fair price for their labour, farming practices are sustainable and environmentally sound, and local communities benefit.

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Based on what you read in the article, answer the following questions.

1. Compared to the conventional trade model, how much more do fair trade coffee growers earn? (1 mark)
 - a. 11 cents more on every dollar spent on coffee.
 - b. 17 cents more for every dollar spent on coffee.
 - c. 28 cents more for every dollar spent on coffee.
 - d. 39 cents more for every dollar spent on coffee.()

2. Most coffee Canadians drink is produced by: (1 mark)
 - a. fair trade farmers.
 - b. middlemen producers.
 - c. large American corporations.
 - d. small-scale farmers working for meager wages.()

3. What does shade-grown coffee mean? (1 mark)
 - a. Rainforests are cut down to grow the coffee.
 - b. Coffee plants must grow large leaves.
 - c. Coffee grows under the natural rainforest canopy.
 - d. Only select trees in the rainforest are cut down.()

4. What percentage of the total banana production is exported to other countries in the world? (1 mark)
 - a. 80%
 - b. 28%
 - c. 40%
 - d. 20%()

5. Most bananas that are exported are grown: (1 mark)
 - a. on plantations run by large American firms.
 - b. in the rainforests of Central America.
 - c. on co-operative farms.
 - d. by the El Guabo Association of Small Banana Producers.()

MARKS

6. What are the benefits of fair trade to the community of fair trade cooperatives? (2 marks)

7. Why might middlemen buyers and processors want to discourage fair trade? (2 marks)

8. Fair trade products often cost more to buy. In a well-developed paragraph of at least 150 words, explain why you would, or would not go out of your way to buy fair trade products. What are some considerations when you make certain purchases? (6 marks—See Paragraph Scoring Guide on the next page for marking criteria.)

Paragraph Scoring Guide

6 → Wow!	<ul style="list-style-type: none"> • Forceful topic sentence that directly addresses the topic • All ideas are relevant and directly support the topic sentence • Logical sequence of ideas; effective concluding sentence • Sentences are controlled and varied in structure • Word choice is appropriate and precise: few mechanical errors
5 → Strong!	<ul style="list-style-type: none"> • Clear topic sentence that addresses the topic • Most ideas are relevant and generally support the topic sentence • Logical sequence of ideas; strong concluding sentence • Sentences are mostly controlled and varied in structure • Word choice is appropriate and accurate; some mechanical errors
4 → Good!	<ul style="list-style-type: none"> • Adequate topic sentence that addresses the topic • Ideas support the topic sentence but are general or obvious • Some logic in the sequence of ideas; adequate concluding sentence • Sentences and word choice are simple with an attempt at variety • A number of writing errors, but meaning is clear
3 → A Pass!	<ul style="list-style-type: none"> • Simple topic sentence that attempts to address the topic • Some ideas support the topic sentence but are general or obvious • Attempt at logical sequence of ideas; concluding sentence present but ineffective • Awkwardness in sentence structure and word choice • Numerous errors may interfere with meaning in some places
2 → Almost!	<ul style="list-style-type: none"> • Topic sentence is present, but may not address the subject • Ideas attempt but do not logically address the topic • Sequencing of ideas is confusing; concluding sentence present but ineffective • Awkwardness in sentence structure and word choice • Numerous errors may interfere with meaning in some places
1 → Not Yet!	<ul style="list-style-type: none"> • Topic sentence absent or does not address the topic • Ideas and writing have little or no sense of purpose • Maybe too short to adequately assess • Awkwardness in sentence structure and word choice • Significant number of errors creates interferes with meaning
0 →	<ul style="list-style-type: none"> • The response is off topic or difficult to understand

Part C

Evaluation Guidelines	Marks
See individual questions for marks.	15
Total Marks	/15

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Evaluation Guidelines	Marks
Part A	/20
Part B	/15
Part C	/15
Total Marks	/50

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