Name:

Course Name and number:

Professor's Name:

Date:

Nutrition Labelling

In this assignment, one is asked to review the labels for five nutrients and then respond to a series of questions pertaining to food labels.

Nutrient 1: Calcium content (17 marks)

Review the labels for calcium content (Labels 1 and 2) and then respond to the questions below.

Use the gray area to type in your answers.

Label 1   Label 2

1.1 Which food label should you choose more often? (Choose Label 1 or 2) and why? (2 marks)

The most preferable label to choose more often is label two. This is because label 2 contains less sodium levels compared to label one. Besides, label two also offers 15% of calcium for a half a can whereas label two is composed of 0% calcium for half a can.

1.2 Identify and explain two health benefits of consuming a diet that meets the dietary requirements for calcium. (2 marks)

Calcium is essential in enhancing the growth and development of strong teeth and bones. In addition, Calcium plays an important role in assisting the body muscles, heart and nerves function effectively and suitably. (Business et al.)

1.3 Identify and explain two health risks associated with consuming too little calcium? (2 marks)

The health risks linked with taking low levels of calcium are: osteoporosis and Heart problems. Osteoporosis is a condition in which the bones become fragile and could get damaged easily compared to individual consuming preferred levels of calcium ions.

1.4 Calcium supplements take up a significant amount of space in the pharmacy. Take a picture of two brands of supplements (show the label and supplement facts – 2 pictures/supplement) and include in the assignment (2 marks). Explain which supplement you consider to be MORE beneficial and why (1 mark).

The chosen brands are Calcium magnesium and Caltrate plus. Calcium magnesium is the most preferred supplement because of its sufficient benefits. For an individual who is not consuming the correct levels of calcium, the calcium magnesium acts as the best supplement which works as a substitute, and one is able to consume normal calcium intake by taking a Calcium magnesium pill. (Business et al.)

1.5 Explain how the supplement needs to be taken in order for the body to get the best absorption. <u>USING THE TEXTBOOK</u> include the form of calcium (2 marks), dietary (food) inhibitors (2 marks) and promoters (2 marks) of bioavailability (2 x 3 marks = 6 marks).

The two primary elements of calcium are calcium carbonate and calcium citrate. Dietary inhibitor entails sodium and oxalate which are incorporated in food items such as chocolate and tea. Promoters of bioavailability of calcium entail yogurt, milk, almonds, kale and sesame seeds.

1.6 Identify two life stage groups which may benefit from a calcium supplement and explain why. (2 marks)

The major life stage groups of beneficiaries from a calcium supplement are children and the older persons. It is essential for children because of their developing body tissues, muscles and teeth. On the other hand, the older individuals benefit from calcium through the strengthening of their deteriorating bones and health in general.

Nutrient 2: Iron content (17 marks)

Review the labels for iron content (Labels 3 and 4) and then respond to the questions below. Use the gray area to type in your answers.

Nutrition Facts		
Per 1/5 package (85 g)		
Amount		% Daily Value
Calories 290		
Fat 1.5 g		2 %
Saturated 0.3 g + Trans 0 g		2 %
Cholesterol 0 mg		
Sodium 0 mg		0 %
Carbohydrate 60 g		20 %
Fibre 7 g		28 %
Sugars 2 g		
Protein 10 g		
Vitamin A 0 %	Vitamin C	0 %
Calcium 2 %	Iron	25 %

Nutrition Facts		
Per 1/5 package (85 g)		
Amount		% Daily Value
Calories 310		
Fat 1 g		2%
Saturated 0 g + Trans 0 g		0 %
Cholesterol 0 mg		
Sodium 0 mg		0 %
Carbohydrate 65 g		22 %
Fibre 3 g		12 %
Sugars 2 g		
Protein 11 g		
Vitamin A 0 %	Vitamin C	0 %
Calcium 2 %	Iron	25 %

Label 3   Label 4

2.1 Which food label should you choose more often? (Choose Label 3 or 4) and why? (2 marks)

The most preferred label in this case is label 4 because it consists of less fibre. In addition, fibre is an inhibitor of iron and this may be an obstacle for the body to absorb it efficiently and appropriately. Label four should be chosen more often.

2.2 Identify and explain two health risks associated with too much total iron? (2 marks)

The common health uncertainties linked with excess total iron are heart failure and diabetes. Physiologically, the body has no appropriate way of disposing the extra iron, so, one could easily develop diabetes. Heart failure often occurs if too much iron is taken.

2.3 Identify and explain two health risks associated with too little total iron? (2 marks)

Consuming less levels of iron can result in anemia and fatigue. Anemia occurs when one appears to have low levels of red blood cells while fatigue will often be experienced by an individual at quicker intervals because of taking less iron.

2.4 Iron supplements take up a significant amount of space in the pharmacy.
Take a picture of two brands of iron supplements (show the label and supplement
facts – 2 pictures/supplement) and include in the assignment (2 marks). Explain
which supplement you consider to be MORE beneficial and why (1 mark).

The first supplement contains high levels of iron while the second label is Feramax which contains little or no irons. Feramax is the most considerable

supplement because of its popularity in countries like Canada which is utilized for iron deficiency conditions.

2.5 Explain how the supplement needs to be taken in order for the body to get the best absorption. Include form of iron (2 marks), dietary (food) inhibitors (2 marks) and promoters (2 marks) of bioavailability (2 x 3 marks = 6 marks).

The primary forms of iron are heme iron and non-heme iron. Non-heme iron contains carbonyl iron, ferrous iron, and ferric iron. Dietary inhibitors involves excess amount of calcium, oxalates, phyate, and eggs. The Promoter of bioavailability involves lentils, seafood, breakfast cereals, and lean meats.

2.6 Name two life stage groups who could benefit from a supplement and why (2 marks)

The primary stage groups which could benefit from consuming the iron supplements are the Infants and adults. Iron deficiencies in newborns are a universal health issue. For adults, with the daily life activities, one may become fatigued and this could be a consequence of consuming low levels of iron.

Nutrient 3: Fibre content (8 marks)

Review the labels for fibre content (Labels 5 and 6) and then respond to the questions below. Use the gray area to type in your answers.

Nutrition Facts	Nutrition Facts
Per 1 slice (39 g)	Per 1 slice (37 g)

Label 5

Nutrition Facts
Per 1 slice (39 g)

Amount	% Daily Value
Calories 90	
Fat 1.5 g	2 %
Saturated 0.4 g + Trans 0 g	2 %
Cholesterol 0 mg	
Sodium 190 mg	8 %
Carbohydrate 15 g	5 %
Fibre 4 g	16 %
Sugars 2 g	
Protein 4 g	
Vitamin A 0 % Vitamin C 0 %	
Calcium 2 % Iron 8 %	

Label 6

Nutrition Facts
Per 1 slice (37 g)

Amount	% Daily Value
Calories 90	
Fat 1 g	2%
Saturated 0 g + Trans 0 g	0 %
Cholesterol 0 mg	
Sodium 200 mg	8 %
Carbohydrate 17 g	6 %
Fibre 1 g	4 %
Sugars 1 g	
Protein 3 g	
Vitamin A 0 % Vitamin C 0 %	
Calcium 2 % Iron 8 %	

Label 5   **Label 6**

3.1 Which food label should you choose more often? (Choose Label 5 or 6) and why? (2marks)

   The most appropriate label one would pick more often is label five because it has more fibre and less sodium whereas label six consists of more sodium and less fibre.

3.2 Identify and explain two health benefits of eating a high fibre diet? (2 marks)

The primary health benefits linked with a high fibre diet are normal bowel movements and lower cholesterol. Consuming high fibre content meals lowers the chances of getting heart diseases due to low levels of cholesterols.

3.3 Identify and explain two health risks associated with too little fibre? (2 marks)

The significant health uncertainties linked with less fibre content are weight addition, and a poor digestive system. Inappropriate blood sugar control is also a short coming linked with taking less levels of fibre.

3.4 Diabetes Mellitus is a major public health problem in Canada. According to the Canadian Diabetes Association currently 3 million Canadians have diabetes and the number is rising. Identify and explain two roles fibre has in managing diabetes? (2 marks)

Fibre has the capacity to regulate the blood sugar level which in turn delays the glucose from entering the blood stream. In addition, fibre helps in managing diabetes by slowing down digestion rates which involves the blood glucose level.

Be sure you have a good understanding of the concept %DV before starting Nutrient Section 4 and Nutrient Section 5.

Nutrient 4: Fat content (16 marks)

*Review the information you have about % daily value (DV). Choose two of the **same** food products that contain different levels of saturated fat - one with a low %Daily Value (DV) and one with a high %DV.*

4.1 Take a photo or scan two labels of the same food and include in assignment. Identify each food (provide a brief description and if it represents a high or low %DV) (2 marks per label; 4 marks total)

Nutrition Facts			Nutrition Facts		
Serving Size: 1 tablespoon (15g)			Serving Size: 1 tbsp (15g)		
Amount Per Serving			**Amount Per Serving**		
Calories 57		Calories from Fat 44	Calories 50		Calories from Fat 45
		% Daily Value*			**% Daily Value***
Total Fat 4.91 g		8%	**Total Fat** 5 g		8%
Saturated Fat 0.72 g		4%	Saturated Fat 0.5 g		2%
Trans Fat			Trans Fat 0 g		
Cholesterol 3.82 mg		1%	**Cholesterol** 5 mg		2%
Sodium 104.52 mg		4%	**Sodium** 95 mg		4%
Potassium 1.32 mg		0%	**Potassium**		
Total Carbohydrate 3.51 g		1%	**Total Carbohydrate** 1 g		0%
Dietary Fiber 0 g		0%	Dietary Fiber 0 g		0%
Sugars 0.94 g			Sugars 1 g		
Sugar Alcohols			Sugar Alcohols 0 g		
Protein 0.13 g			**Protein** 0 g		
Vitamin A 32.34 IU		1%	Vitamin A 0 IU		0%
Vitamin C 0 mg		0%	Vitamin C 0 mg		0%
Calcium 2.06 mg		0%	Calcium 0 mg		0%
Iron 0.03 mg		0%	Iron 0 mg		0%

The first label on the left represents regular mayonnaise while the second label on the right represents the low fat mayonnaise. The first label is composed of higher percentage of daily fats while the second label consists of lower daily value of fats in percentage.

4.2 Identify and explain two health risks associated with too much saturated fat? (2 marks)

The most significant health uncertainties linked with excess saturated fat are extreme levels of cholesterol which can lead to cardiac arrest and plaque developing in the arteries which can result in strokes or other hearth related conditions.

4.3 Identify and explain two health benefits associated with a moderate fat diet? (2 marks)

The primary health benefits linked with a recommended fat diet are high density lipoprotein cholesterol and enhancing the cardiovascular disease uncertainty.

4.4 Cardiovascular disease is a concern. When your doctor orders blood tests to assess your risk for heart disease, certain types of fats are measured. Define the fats listed below and explain their role in assessing heart disease (2 marks for each type; 8 marks in total)

- **HDL cholesterol**

- **LDL cholesterol**

- **Triglycerides**

- **Total cholesterol**

HDL cholesterol refers to a high density lipoprotein which assists to remove the Low Density Lipoprotein cholesterol and breaks it down; having a low level of high density lipoprotein cholesterol can increase the risks for heart diseases. Low Density Lipoprotein cholesterol results in plaque that can clog the arteries and cardiac arrests or fatal strokes. Triglycerides are a form of fat used to store extra energy. A high level of triglycerides is linked with atherosclerosis which can result in diabetes or heart attacks. Total cholesterol refers to the measure of high density lipoprotein, Low Density Lipoprotein, triglycerides, and other form of fats.

Nutrient 5: Sodium content (12 marks)

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*Review the information you have about % Daily Value (DV). Choose two of the **same** food product labels that contain different levels of sodium - one with a low %Daily Value (DV) and one with a high %DV.*

5.1 Take a photo or scan two labels from the same food and include in assignment. Identify each food (provide a brief description and if it represents a high or low %DV) (2 marks per label; 4 marks total)

The first label on the left represents a fresh beef and has low sodium concentration (55mg per 4 oz). while the second label on the right represents a canned chicken which is composed of high levels of sodium. (714.26 mg per 5 oz.).

5.2 Identify and explain two health risks associated with too much sodium? (2 marks)
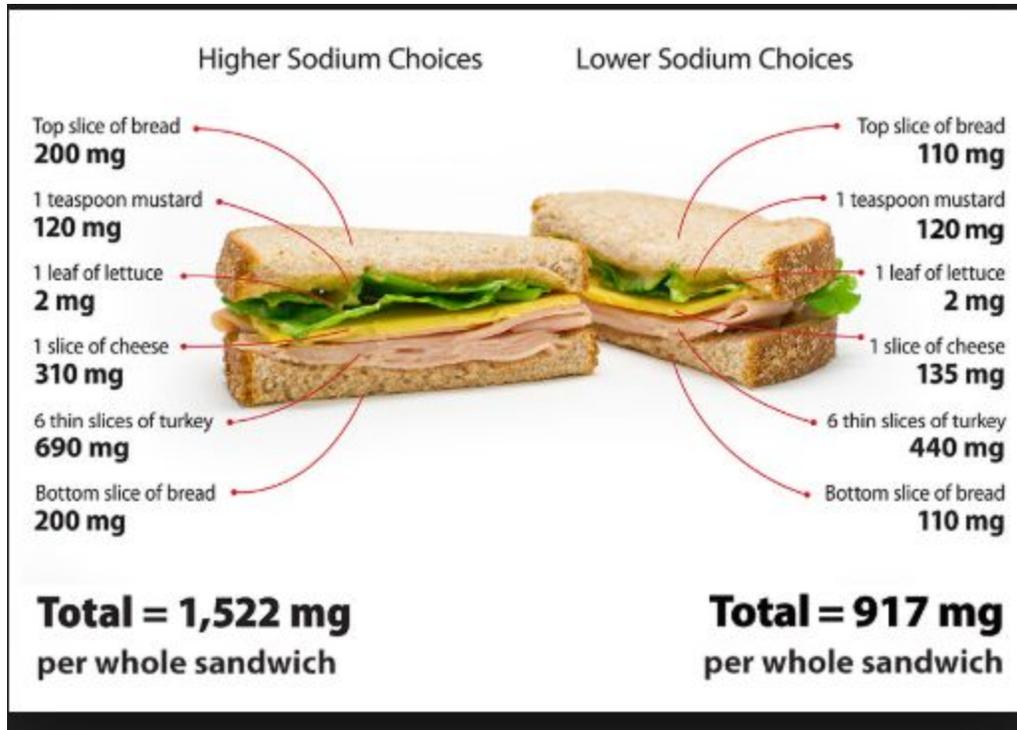
The major health uncertainties linked with high intake sodium ions are hypertension and kidney conditions. Hypertension will result in heart diseases whereas the kidney complication leads to the creation of pressure on the blood vessel in the heart.

5.3 Identify and explain two health risks associated with too little sodium? (2 marks)

The primary Health uncertainties linked with low intake of sodium includes increase in hormones and lipids in the bloodstream and insulin resistance. For individuals with diabetes condition, the low levels of sodium in the body can result in insulin resistance.

5.4 Choose two high sodium foods and lower sodium versions of both for a total of 4 labels. Take a photo or scan four labels and include in assignment. Do not use the same labels as used above. Identify each food (provide a brief description and if it represents a high or low %DV) (2 marks per 2 labels; 4 marks in total)

Higher Sodium Choices   Lower Sodium Choices

Top slice of bread
200 mg

1 teaspoon mustard
120 mg

1 leaf of lettuce
2 mg

1 slice of cheese
310 mg

6 thin slices of turkey
690 mg

Bottom slice of bread
200 mg

Total = 1,522 mg
per whole sandwich

Top slice of bread
110 mg

1 teaspoon mustard
120 mg

1 leaf of lettuce
2 mg

1 slice of cheese
135 mg

6 thin slices of turkey
440 mg

Bottom slice of bread
110 mg

Total = 917 mg
per whole sandwich

The higher Sodium choices have a total of 1,522 mg of Sodium composition. Cheese and turkey slices lead with the most percentage of Sodium. The daily value percentage of consuming them proves to be a health hazard compared to taking low levels of sodium concentrated food. A leaf of lettuce presents a low daily value percentage with preferred levels of sodium concentration.

Works Cited

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