
PREGNANCY PROJECT (55 POINTS)

The purpose of this project is to provide you with a “real-life” experience to enhance your skills in assessing the nutritional status of a pregnant woman and in providing appropriate recommendations for dietary improvement based on nutrient requirements during pregnancy (*Course Learning Outcomes #1 and #2*). Overall, this will provide a learning experience in which you can apply the didactic information learned in the textbook and from class lectures to a real situation.

Assignment Overview

PART I: Your subject should be a pregnant woman whose due date is after April 1. You must submit the name and address of your subject to the instructor on or before **January 22**, by filling out [this form](#) (5 points). You should visit the subject (or phone/email) to collect baseline information, analyze her diet, and determine any recommendations you plan to give the subject (Part I). Please use the outlined format in Part I on pp. 2-3 for completing your assignment. ***Part I is due March 5 (hard copy) at 4 pm, in class.***

NOTE: Make sure you save your graded version of Part I because you will need to submit it (the graded version) with your Part II.

PARTS I & II: After you have received the instructor’s comments on your assessment and follow-up plan (Part I), you will be required to provide the advice to your subject (Part II). Please use the outlined format in Part II on p. 4 for completing your assignment. ***Graded Part I with Part II is due April 14 at 4 pm, in class.***

NOTE: Failure to review the instructor’s comments and include the graded Part I (the version with the instructor’s comments on it) with Part II will result in a 5 point penalty from your total assignment score.

PART I (Complete Sections I – V):

I. Identifying data (1 point)

- A. Nicole
- B. Wife, no children, works part time as an internet marketer, active

II. Health history (10 points)

- A. Age: **24**
- B. Previous obstetrical history, including: **N/A**
- C. Estimated delivery date: **July 16th**
- D. Laboratory data, if known - hematocrit, hemoglobin: **Don't know the values but the Doctor told her everything was normal**
- E. Any illnesses/sicknesses/chronic conditions: **None**
- F. Cigarette, drug, alcohol use: **None**
- G. Previous nutritional deficiencies (prior to pregnancy): **None**
- H. Use of medications or supplements (prior to pregnancy): **None prior. Currently: Prenatal vitamin**
- I. Exercise/activity (prior to pregnancy and currently): **Exercised minimal before pregnancy. Recently, has started exercising 5 days a week.**
- J. Allergies, other food intolerances: **None**

III. Nutritional assessment (10 points)

- A. Obtain a 24-hour recall from your subject. Enter her diet into *ChooseMyPlate's SuperTracker*. For this section, **ATTACH 3 PRINTOUTS FROM SuperTracker WITH PART I:**
 - (1) "Food Group and Calories" Report
 - (2) "Nutrients" Report
 - (3) "Meal Summary" Report

Breakfast: 2 ½ cups multigrain cheerios, 1/2c skim milk

Exercise: Pechanga for 50 minutes

Lunch: 1 egg, thin bagel (110kcal), 1 slice Colby jack cheese, ketchup

Snack: Pretzel ¾ cup, 2 Rhoades rolls, 2 tootsie rolls long skinny ones, 1Tbs hummus, ½ pita bread (90kcal)

Dinner: Chicken and refried bean burrito with red chili sauce and cheddar cheese. 3 cups light lemonade

Snack: Costco polish dog

3 water bottles of water

Please print your reports as PDF documents and attach to your completed project (see the printing instructions on p. 5).

B. **SUMMARIZE:**

(1) Your subject's macronutrient distributions (%) and whether the percentages are appropriate for pregnancy based on macronutrient recommendations

The subjects macronutrient distributions are within the percentages that are recommended for her.

(2) The number of MyPlate food group equivalents your subject consumed based on her actual intake and how she is meeting (or not meeting) her personalized MyPlate food group recommended levels.

The subject is not meeting the recommended amounts of fruits, vegetables, dairy, protein, and oils that MyPlate recommends. She is eating double the amount of grain equivalents that are needed and she is eating enough calories.

(3) Your subject's actual vitamin and mineral intake and how it compares to vitamin and mineral DRIs for pregnancy (i.e. is her diet high or low in any vitamins and minerals).

The subject is under in the following vitamins and minerals: potassium, magnesium, vitamin A, vitamin C, vitamin D, vitamin K, choline. Low intake of these vitamins could be due to the low intake of fruits, vegetables, dairy and protein. In all other vitamins and minerals she is receiving sufficient amounts.

C. Use of food assistance programs such as WIC, SNAP, food bank, church resources, etc.? **None**

D. Current use of prenatal or vitamin/mineral supplements? **Prenatal**

E. Estimated percentage of income spent on food. **5-10%**

F. What are your subject's cooking and eating habits? **Eats breakfast daily. Cooks lunch and dinner but eats out every once and a while.**

IV. **Weight graphed (4 points)**

A. State:

(1) Pre-pregnancy weight (lbs or kg): **124lbs Post-pregnancy 19 wks 130 lbs**

(2) Height (in or cm): **5'3**

(3) Pre-pregnancy Body Mass Index (BMI). **22**

B. **Plot Weight Gain:** Using the *Baby Your Baby* charts (posted on the *BYU Learning Suite*), plot your subjects weight gain on the graph - **ATTACH PLOTTED WEIGHT GAIN GRAPH TO PROJECT.**

C. **Interpret Weight Gain:** Compare actual weight gain to expected weight gain according to pre-pregnancy BMI. Is your subject gaining too much weight? Not enough weight? Within the recommended range? **Based on the weight gain chart, my subject is not gaining enough weight. She is slightly under the recommended line for weight gain.**

V. Nutritional care plan (15 points)

- A. Summarize (1-2 paragraphs) what you think are the most significant nutritional risk factors present in this pregnancy, and explain how the subject could change her diet to reduce this risk

In this pregnancy, I would say the most significant risk factor is her weight gain. She needs to be gaining a little bit more weight in order to be within the recommended range. Although she is eating enough calories, I would watch her weight gain over the next couple of week to see if weight gain improves. Because of the patients increased exercise, she may need to eat more calories in order to gain the necessary weight. If weight gain does not improve, I would recommend the patient eat more calories, specifically from the food groups she lacking such as fruits, vegetables, dairy, and protein.

- B. Explain (1-2 paragraphs) any recommendations, suggestions, and education you plan to give this subject and rationale.

First, I hope to educate the patient on recommend weight gain for her BMI level. I would help the patient understand that throughout her pregnancy she should plan to gain 25-35 pounds. I want to show the patient the weight gain chart and explain to her the importance of gaining enough weight during pregnancy. I would show her how to plot her weight gain in order for her to be able to track her weight gain over the next couple of weeks. If the patient can understand how to track her weight gain, she can make the necessary adjustments if needed.

Second, I want to suggest to the patient to add variety to her meals. The patient ate a lot of grains and I would recommend the patient eat more fruits, vegetables, and dairy. Also, I would recommend the patient eat seafood two times a week in order to get the essential fatty acids that are important during fetal growth. Eating seafood would also boost the amount of protein which she under her target goal of six ounces. Greater amounts of protein would also boost calorie intake, which would help with weight gain.

PART II (Complete Section I – II):

- I. **Education (5 points):** Provide your subject with the recommendations/advice you suggested in Part I (*after you review the instructor's comments*). Ideally, this should be done in-person (but email and phone are acceptable too). Summarize (1-2 paragraphs) what you discussed with your subject.

The first thing we discussed was the importance of gaining the proper amount of weight during pregnancy. I explained how the weight gain chart worked and gave her one to keep. I taught her how to chart her own weight gain so she could keep track over time. Also, we discussed the importance of eating essential fatty acids like DHA. My volunteer, Nicole, said she hated seafood and that is why she did not consume much. We discussed other food sources that she could consume in order to eat enough essential fatty acids.

- II. **Reflection (5 points):** Write 1-2 paragraphs about your overall impressions of how your subject received your advice (e.g., do you think she will follow your advice? Why or why not?). Also describe how you could have improved the education you gave.

Overall, I believe my subject received my advice well and I am very confident that she will consider some of the suggestions I made. She seemed responsive and eager to make any changes, especially when she knew the benefits they would provide for the baby. In the future, the education I gave could be improved by giving sources or websites where more information could be found. Also, I think handouts are very helpful for people to see what is being discussed. In the future, having some sort of hand out would be beneficial. Typing out a list of foods that contain DHA and the amount would help the patient visualize the foods better.

Meals from 01/15/14 - 01/15/14

Nicole's Meals

Your plan is based on a **2200 Calorie** allowance during your 1st trimester of pregnancy.

Date	Breakfast	Lunch	Dinner	Snacks
01/15/14	<ul style="list-style-type: none"> • ½ cup Milk, fat free (skim) • 2 cup MultiGrain Cheerios Cereal 	<ul style="list-style-type: none"> • 1½ miniature (1 oz) Bagel, 100% whole wheat • 1 slice (1 oz) Cheese, Colby Jack • 1 large egg(s) Egg, fried, with nonstick spray 	<ul style="list-style-type: none"> • 1 medium burrito Burrito with chicken, beans, and cheese • 1 foot long frankfurter roll Hot dog bun, white • 1 footlong frank Hot dog, frankfurter, beef 	<ul style="list-style-type: none"> • 1 small pita (4" across) Bread, pita • 2 snack size bar (0.5 oz) Chocolate-flavored roll (Tootsie Roll) • 1 tablespoon Hummus • 1 cup, rings Pretzel, hard, salted • 2 medium (2-1/2" across) Roll, white, soft

Nicole's Food Groups and Calories Report 01/15/14 - 01/15/14

Your plan is based on a **2200 Calorie** allowance during your 1st trimester of pregnancy.

Food Groups	Target	Average Eaten	Status
Grains	7 ounce(s)	14 ounce(s)	Over
Whole Grains	≥ 3½ ounce(s)	3 ounce(s)	OK
Refined Grains	≤ 3½ ounce(s)	11 ounce(s)	Over
Vegetables	3 cup(s)	¾ cup(s)	Under
Dark Green	2 cup(s)/week	0 cup(s)	Under
Red & Orange	6 cup(s)/week	0 cup(s)	Under
Beans & Peas	2 cup(s)/week	½ cup(s)	Under
Starchy	6 cup(s)/week	0 cup(s)	Under
Other	5 cup(s)/week	0 cup(s)	Under
Fruits	2 cup(s)	0 cup(s)	Under
Fruit Juice	No Specific Target	0 cup(s)	No Specific Target
Whole Fruit	No Specific Target	0 cup(s)	No Specific Target
Dairy	3 cup(s)	2¼ cup(s)	Under
Milk & Yogurt	No Specific Target	½ cup(s)	No Specific Target
Cheese	No Specific Target	1½ cup(s)	No Specific Target
Protein Foods	6 ounce(s)	5 ounce(s)	Under
Seafood	9 ounce(s)/week	0 ounce(s)	Under
Meat, Poultry & Eggs	No Specific Target	5 ounce(s)	No Specific Target
Nuts, Seeds & Soy	No Specific Target	0 ounce(s)	No Specific Target
Oils	6 teaspoon	2 teaspoon	Under
Limits	Allowance	Average Eaten	Status
Total Calories	2200 Calories	2193 Calories	OK
Empty Calories*	≤ 266 Calories	576 Calories	Over
Solid Fats	*	438 Calories	*
Added Sugars	*	138 Calories	*

*Calories from food components such as added sugars and solid fats that provide little nutritional value. Empty Calories are part of Total Calories.

Note: If you ate Beans & Peas and chose "Count as Protein Foods instead," they will be included in the Nuts, Seeds & Soy subgroup.

Nicole's Nutrients Report 01/15/14 - 01/15/14

Your plan is based on a 2200 Calorie allowance during your 1st trimester of pregnancy.

Nutrients	Target	Average Eaten	Status
Total Calories	2200 Calories	2193 Calories	OK
Protein (g)***	71 g	92 g	OK
Protein (% Calories)***	10 - 35% Calories	17% Calories	OK
Carbohydrate (g)***	175 g	279 g	OK
Carbohydrate (% Calories)***	45 - 65% Calories	51% Calories	OK
Dietary Fiber	28 g	22 g	Under
Total Fat	20 - 35% Calories	33% Calories	OK
Saturated Fat	< 10% Calories	13% Calories	Over
Monounsaturated Fat	No Daily Target or Limit	13% Calories	No Daily Target or Limit
Polyunsaturated Fat	No Daily Target or Limit	4% Calories	No Daily Target or Limit
Linoleic Acid (g)***	13 g	9 g	Under
Linoleic Acid (% Calories)***	5 - 10% Calories	4% Calories	Under
α -Linolenic Acid (g)***	1.4 g	1.1 g	Under
α -Linolenic Acid (% Calories)***	0.6 - 1.2% Calories	0.5% Calories	Under
Omega 3 - EPA	No Daily Target or Limit	7 mg	No Daily Target or Limit
Omega 3 - DHA	No Daily Target or Limit	38 mg	No Daily Target or Limit
Cholesterol	< 300 mg	381 mg	Over
Minerals	Target	Average Eaten	Status
Calcium	1000 mg	1269 mg	OK
Potassium	4700 mg	1612 mg	Under
Sodium**	< 2300 mg	4633 mg	Over
Copper	1000 μ g	1301 μ g	OK
Iron	27 mg	54 mg	Over
Magnesium	350 mg	261 mg	Under
Phosphorus	700 mg	1412 mg	OK
Selenium	60 μ g	136 μ g	OK
Zinc	11 mg	41 mg	Over
Vitamins	Target	Average Eaten	Status
Vitamin A	770 μ g RAE	641 μ g RAE	Under
Vitamin B6	1.9 mg	5.0 mg	OK
Vitamin B12	2.6 μ g	15.9 μ g	OK

Vitamin C	85 mg	37 mg	Under
Vitamin D	15 µg	5 µg	Under
Vitamin E	15 mg AT	31 mg AT	OK
Vitamin K	90 µg	22 µg	Under
Folate	600 µg DFE	2041 µg DFE	Over
Thiamin	1.4 mg	4.8 mg	OK
Riboflavin	1.4 mg	5.5 mg	OK
Niacin	18 mg	61 mg	OK
Choline	450 mg	299 mg	Under

Information about dietary supplements.

** If you are African American, hypertensive, diabetic, or have chronic kidney disease, reduce your sodium to 1500 mg a day. In addition, people who are age 51 and older need to reduce sodium to 1500 mg a day. All others need to reduce sodium to less than 2300 mg a day.

*** Nutrients that appear twice (*protein, carbohydrate, linoleic acid, and α-linolenic acid*) have two separate recommendations:

- 1) Amount eaten (in grams) compared to your minimum recommended intake.
- 2) Percent of Calories eaten from that nutrient compared to the recommended range.

You may see different messages in the status column for these 2 different recommendations.