Meal Planning Assignment

Janeza Bridges NUTR 407- Medical Nutrition Therapy 1 Laboratory Fall Semester 2021 December 13, 2021

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Part A: Introduction and ADIME

Introduction

Mr. Rubie is an obese 32-year-old chef living in San Diego. He has been at his job for about a year now and being a high-end restaurant, it is extremely stressful. He lives alone and loves to cook. Besides cooking, he lives a sedentary lifestyle and usually stays home and plays video games all day to wind down from his stressful job. He was recently diagnosed with Type II diabetes mellitus and cardiovascular disease and therefore, referred to a registered dietitian to best approach this situation. He has no symptoms out of the ordinary. Mr. Rubie eats just about anything, but always tries to get the best bang for his buck when grocery shopping. His diet consists of lots of fried foods in his deep fryer and loves to bake himself delicious sugar-packed sweets for his nightly dessert. He does not get bored of eating the same foods every day and is ready to change his habits.

ADIME

Dietitian Visit 12/12/2021 **Met with patient**: Mr. Rubie

Reason for referral: Type II Diabetes Mellitus; Cardiovascular Disease

NUTRITION ASSESSMENT

Diagnoses: Type II Diabetes Mellitus; Cardiovascular Disease

Pertinent medical history: Father - HTN

Nutrition order: Heart Healthy 2,000 kcal DM diet; Mediterranean

Medications: N/A

Labs:

Glucose: 500mg/dL (High) Creatinine: 1.9 mg/dL (High) Cholesterol: 208 mg/dL (High) HDL-C: 35 mg/dL (Low) LDL: 140 mg/dL (High) TG: 187 mg/dL (High)

HBA_{1C}: 10.5% (High)

Physical:

General Appearance: Obese

Weight: 220#/99.8kg **Height:** 70in/177.8cm **BMI:** 31.6kg/m² (Obese) **IBW:** 166#/75.3kg

%IBW: 132% (Obese compared to ideal body weight)

UBW: 170#/77.1kg **%UBW:** 129%

Food- and Nutrition-Related Information (24-hour recall):

Nutrition Needs: Based on ideal body weight Calories: 1,882 - 2635 kcal/d (25-35kcal/kg) Protein: 60.24 - 75.3 gm/d (0.8-1.0gm/kg)

Fluids: 2,000mL/d

Nutrition Subject Global Assessment (Well nourished, moderate or severe malnutrition) Comments: Include 2 criteria to support your assessment

Well-nourished (normal) due to %UBW of 129% (well-nourished >90% IBW) and no gastrointestinal symptoms.

NUTRITION DIAGNOSIS: PES Statements

Problem #1: Malnutrition RT poor eating habits AEB Obese BMI of 31.6kg/m², high glucose (500 mg/dL), and high hemoglobin A1C (10.5%).

Problem #2: Excessive energy intake RT food and nutrition knowledge deficit RT 24-hour food recall, High TG 187mg/dL, high cholesterol 208mg/dL, and low HDL-C 35mg/dL.

NUTRITION INTERVENTIONS

Goals:

Increase HDL-C to normal levels: >50mg/dL within 3 months

Decrease TG: 40-160mg/dL within 3 months Decrease: LDL: <130 mg/dL within 3 months Weight loss: 5-10% BW within 6 months

Nutrition Recommendations:

Mediterranean-style diet Consume about 2,000kcal/d - Minimum of 70% Small Frequent Meals Drink enough fluids throughout the day 2,000mL/d

Patient Education:

Type II Diabetes Education
Physical Activity/Health Education

Coordination of Care:

Physical therapist and/or personal trainer

NUTRITION MONITORING and EVALUATION

Follow up phone call within 2 days Workout log - 1 week by next visit (1 week) SMART goal(s) by next visit (1 week) Monitor weight until next lab test (2-3 months)

x Janeza Bridges

X Janeza Bridges 12/12/21

Part B: Two-Day Meal Plan

Menu: General Overview

Table I: Day 1: Thursday - December 09, 2021

Time	Meal
Breakfast	 Quinoa Smoothie
7:00am	 Blueberries
	■ Yogurt
	Almonds
	 Broccoli
	Quinoa
	■ Boiled Egg
Lunch	 Lentil Soup with chicken
12:00pm	Toppings
(at work)	o Avocado
	o Pico
	o Lemon
Dinner	■ ½ Brown Rice ½ Lentils
7:00pm	■ Chicken
	 Broccoli
Snacks	 Overnight Grains with Blueberries
3:00pm	
(at work)	
Fluids	■ Water

Table II: Day 2: Sunday - December 10, 2021

Time	Meal
Breakfast	 Quinoa with Greek Yogurt
7:00am	Berries
	 Sliced Almonds
	 Scrambled Eggs with sauteed broccoli
Lunch	■ Pico
12:00pm	■ Chicken
(at work)	■ Lettuce Wrap
	■ Greek Yogurt
	Avocado
	■ ½ Rice ½ Lentils
Dinner	■ Lentil/Brown Rice Chicken Salad
7:00pm	 Lemon/Avocado/Yogurt Dressing
Snacks	■ Egg Salad Lettuce Wraps
3:00pm	
(at work)	
Fluids	■ Water

Meal Plan: Detailed

Table III: Day 1: Thursday - December 09, 2021

Meal	Ingredients	Exchanges
Breakfast: Quinoa Smoothie Boiled Egg Lunch: Lentil Soup w/ Chicken **All veggies except pico are cooked **Lentils cooked as lentil soup, so he will have enough fr the next day	 2/3 c. Cooked quinoa ¾ c. Blueberries 2/3 c. Yogurt 12 Almonds 1 c. Steamed Broccoli 1 Boiled egg 1/3 c. Oats 1 c. Green lentils ½ c. Diced Carrots ½ c. Diced Celery ½ c. Diced Onion ¼ Chicken w/bone (4 oz of meat) 1 oz. Avocado Pico: ¼ c. Tomato ¼ c. Onion ¼ c. Cilantro ¼ c. Lemon 	 2 Starch 1 Fruit 1 Milk 2 Fat 2 Vegetable 1 meat (medium-fat) 1 starch 2 Starch 1 Vegetable 1 Vegetable 1 Vegetable 4 meat (medium-fat) 1 fat .25 Vegetable
Dinner: V2 Brown Rice, 1/2 Lentils Chicken Steamed Broccoli	 ¼ Chicken w/bone (4oz of meat) 1 c. Steamed Broccoli 2/3 c. Brown Rice 1 c. Green lentils ½ c. Diced Carrots ½ c. Diced Celery ½ c. Diced Onion 	 4 meat (medium-fat) 2 starch 1 Vegetable 1 Vegetable 1 Vegetable
Snacks: Overnight Grains	 2/3 c. Quinoa 3/4 c. Blueberries 1/3 c. Oats 	2 starch1 fruit1 starch

Table IV: Day 2: Friday - December 10, 2021

Meal	Ingredients	Exchanges
Breakfast: Quinoa and Yogurt	 2/3 c. Quinoa 1/3 c. Oats 3/4 c. Berries 12 Sliced Almonds 2 Scrambled Eggs 1 c. Sauteed Broccoli 	 2 starch 1 starch 1 fruit 2 fat 2 meat (medium-fat) 2 vegetable
Lunch: Loaded Lettuce Wrap	 ¼ Chicken w/bone (4oz of meat) Lettuce 2/3 Greek Yogurt 1 oz. Avocado 2/3 c. Brown rice 1 c. Green lentils ½ c. Diced Carrots ½ c. Diced Celery ½ c. Diced Onion Pico:	 4 meat (medium-fat) (lettuce) Free-food 1 milk 1 fat 2 starch 2 starch 1 Vegetable 1 Vegetable 1 Vegetable 25 Vegetable .25 Vegetable
Dinner: Loaded Salad	 1 c. Green lentils ½ c. Diced Carrots ½ c. Diced Celery ½ c. Diced Onion 2/3 c. Brown Rice ¼ Chicken w/bone (4oz of meat) Lettuce ¼ c. Lemon 1 oz. Avocado 	 2 starch 1 Vegetable 1 Vegetable 1 Vegetable 2 starch 4 meat (medium-fat) (lettuce) Free-food .25 Vegetable 1 fat
Snacks: Lettuce Wrap	 2 Boiled Eggs Lettuce ½ c. Celery raw 	1 meat (medium-fat)(lettuce) Free-food.5 vegetable

Meal Exchange

Name: Mr. Rubie

Diet Rx: Type II Diabetes Mellitus Diet

 46% Kcals CHO=
 952kcal
 238 gm CHO

 24% Kcals Pro =
 476kcal
 119 gm Pro

 30% Kcals Fat =
 639kcal
 71 gm Fat

Reminders: Think well-balanced meals! Snacks are optional if you would like to include them

	В	S	L	S	D	S	Total	CHO (g)	Pro (g)	Fat (g)	Kcals
Starches	3		2	3	2		10	(15g) x4= 600	(3g) x4= 120	(1g) x9= 90	810
Fruit	1			1			2	(15g) x4= 120			120
Milk	1						1	(12g) x4= 48	(8g) x4= 32	(1,5,8g) x9= 9	89
Vegetables	2		4		3		9	(5g) x4= 184	(2g) x4= 72		256
Meats/Subs.	1		4		4		9		(7g) x4= 252	(3,5,8g) x9= 405	657
Fats	2		1				3			(5g) x9= 135	135
CHO Choices	5		2	4	2		13				
							Kcals/gm	952	476	639	TOTAL Kcals:
							%Kcals	46%	24%	30%	2,067

Part C: Grocery List - \$30 Budget

Mr. Rubie enjoys cooking and grocery shopping. As mentioned earlier, he loves to save money and would rather shop at one place and save gas than go to multiple places. One of his favorite places to find deals is Food 4 Less, which is only a few blocks from his house. Mr. Rubie was given a grocery list from the registered dietitian and is excited to whip up some new recipes (*see Table V*). The groceries are for his two-day meal plan, but many of the items purchased can be used for future meals, such as carrots, celery, and eggs (*see Appendix I*). The price for all groceries totaled \$29.12 and the price for total groceries used was \$24.97.

Table V: Grocery list for two-day meal plan

Grocery List							
1 Bag Brown Rice	1 Bag Green Lentils	1 Bag Carrots					
1 Crown Broccoli	1 Whole Chicken	1 Bunch Celery					
1 Pack Eggs	2 Plain Greek Yogurt (Single)	1 Onion					
1 Pack Blueberries	1 Small Avocado	2 Pack Almonds					
1 Bunch Cilantro	2 Tomatoes	1 Head Lettuce					
2 Limes	1 Bag Quinoa	1 Container Oats					

Part D: Nutritional Analysis

When looking at a nutritional analysis of Mr. Rubie's two-day food log in detail, it shows that for both days he is around the 2,000kcal per day goal. For December 9th his daily energy intake was 2144kcals (*see Appendix II*). For December 10 his daily energy intake is at 1,875kcals, which is lower than the 2,000 goal, but when looking at the ADIME, his estimated calories per day should be between 1,882 kcals and 2,635 kcals per day (*see Appendix III and ADIME*).

Looking at Day 1 in detail, we can see that Mr. Rubie has met most of his daily requirements. When looking at each section of the analysis, we see that his macronutrients are at about proper levels with carbohydrates are at 132%, fats 32%, and protein 130%. For micronutrients, all are at optimal levels except for folate (343% high), vitamin D (10% low), and calcium (62% low). With vitamin D being so low, we may need to adjust his meals to include more sources that are high in vitamin D, such as salmon and fortified foods. If he is unable to obtain these from foods, a supplement containing Vitamin D and calcium may be needed.

Day 2 shows that Mr. Rubie is not meeting his daily requirements for macros as compared to Day 1. When looking at his carbohydrate intake, we see that it is low (89%), with fats (75% low), and protein (128% high). Although the analysis shows that the values are low, he is still within range of the calculated kcals per macronutrient. When looking at the micronutrients, we see an almost similar pattern as Day 1. All values show an adequate daily intake, except for Vitamin D and calcium. Again, these show that some items in his diet may need to be swapped if he would like to stick to his \$30 budget or he may need to supplement.

Regarding the structure of his meal plan, the goal was to have each meal balanced with an appropriate amount of carbohydrates, fats, and protein, as well as vegetables for each big meal. A Mediterranean-type diet is recommended because of how it is low in saturated fats and sugars and more plant-based. Foods were chosen based on nutritional value with the idea of mix-and-matching complementary proteins. A whole chicken was put onto the grocery list so that Mr. Rubie would be able to use the broth in recipes or drink it on its own if he wishes

Part E: Conclusion/Reflection

This project was fun! I loved how we were able to be creative with it, but still had guidelines to follow. I was able to use a lot of the information used in this course, along with information learned in Nutrition 510 for the counseling/behavior portion, Nutrition 303 for the grocery pricing, and Nutrition 406 (and this class) for the MNT portion. Figuring out a meal plan with a budget of \$30 was the most fun in my opinion. When creating my "patient," I tried to use a mixture of my boyfriend's personality and mine to make it a little more fun. I love grocery shopping and cooking, while he loves to find the best deals and eats anything. One thing I found difficult about this project was the meal pattern and exchange portion. It took the most time out of the other sections, but I was able to figure it out especially since we already had one for a previous assignment. Doing this project made me see how a dietitian administers a meal plan that is detailed, rather than it being what I normally see from online nutrition coaches who just tell you what to eat.

Appendix I: Grocery List - Food 4 LessAll food from the grocery list was purchased through Food 4 Less to save time and gas.

Item	Price	Quantity	Amount	Price per Unit	Amount Used & Total
	\$0.79	1 Bag	16 oz.	\$0.05	16oz
LONG GRAIN BROWN RICE					\$0.79
Kroger Long Grain Brown Rice	Φ2.50	1.5	1.6	Φ0.22	16
Simple Truth Quinoa	\$3.59	1 Bag	16 oz.	\$0.22	16oz. \$3.59
	\$1.49	1 Bag	16 oz.	\$0.09	16oz.
LENTILS Interior port Kroger Lentils					\$1.49
ranger Bentins	\$1.28	1 Bag	32 oz.	\$0.04	16 oz.
WHOLE CARROTS Kroger Carrots					\$0.64
	\$0.99	1 Bunch	16 oz	\$0.06	16 oz.
Celery					\$0.99
	\$1.65	1 Pack	12 ct.	\$0.14	5 eggs

CAGE FREE large white large wh					\$0.70
PLAIN NONFAT YOGURT Kroger Non-Fat Greek Yogurt	\$0.85	2 Pack	5.3 oz.	\$0.16	2 pack \$0.85
Blueberries	\$2.50	1 Pack	16 oz	\$0.15	16oz. \$2.50
Avocado	\$1.05	1 Avocado	7 oz.	\$0.15	3 oz. \$0.45
ALMONDS Silved Kroger Sliced Almonds	\$1.99	1 Bag	2.25 oz.	\$0.88	24 almonds (1 oz) \$0.88
	\$0.50	1 Bunch	2.28 oz.	\$0.22	1 bunch \$0.50

Cilantro	\$0.24	2 Tomatoes	4 oz	\$0.06	2 tomatoes
Roma Tomatoes	Ф0.00		2	00.45	\$0.48
White Onion	\$0.89	1 Onion	2 oz.	\$0.45	1 onion \$0.89
Iceberg Lettuce	\$1.49	1 Bunch	19 oz.	\$0.08	1 bunch \$1.49
Limes	\$0.20	2 Limes	1.5 oz.	\$0.13	2 limes \$0.40

SINGERSON 100% NATURAL AS A STATE OF THE PARTY OF THE PAR	\$5.96	1 Chicken	4 lbs.	\$1.49	4lbs \$5.96
Sanderson Farms Whole Chicken					
Broccoli	\$0.88	1 Crown	16 oz.	\$0.06	1 crown \$0.88
Mon's Best Quick Oats	\$1.49	1 Container	16 oz.	\$0.09	16 oz. \$1.49

Total	\$29.12
Total (Used)	\$24.97

Appendix II: Thursday - December 09, 2021

Description		Amount	Unit	Energy (kcal)
Blueberries, Fresh		0.75	cup, whole pieces	63.2
Kroger, Nonfat Yogurt, Greek, Plain		1	× 2/3 cup	10
MImonds, Raw		12	each	85.6
Egg, Whole, Cooked, Hard-Boiled		1	large	77.
Oatmeal, Regular or Quick Cooking, Dry		0.33	cup	101.
Quinoa, Cooked		0.66	cup	146.5
Go Green, Green Lentils, Cooked		8	OZ	270.8
Broccoli, Cooked From Fresh		1	cup, chopped	54.
Carrots, Cooked From Fresh		0.5	cup, sliced	27.
Celery, Cooked		0.5	cup, diced	13.
Onion, White, Yellow or Red, Raw		0.5	cup	38.8
Avocados, Raw, California		1	OZ	47.3
Pico de Gallo, Fresh Red Salsa		0.5	cup	16.8
Broccoli, Cooked From Fresh		1	cup, chopped	54.
Brown Rice, Steamed		0.66	cup	163.9
Lentils, Boiled		1	cup, whole pieces	229.6
Chicken Thigh, Skin Removed		4	oz	196.1
Chicken Wing, Skin Removed Before Eating		4	oz	208.6
Quinoa, Cooked		0.66	cup	146.5
Oats, Regular or Quick, Dry		0.33	cup	101.
ergy Summary (i)		Macronutrier	nt Targets	(i)
		Energy	2144 kcal / 1954 kcal (1	10%)
	-191	Protein	158.1 g / 122.1 g (129	%)
2144 kcal 1954 kcal	Calories	Net Carbs	220.6 g / 195.4 g (113	%)
	Remaining	Fat	47.0 g / 76.0 g (6 <mark>2</mark> %)
CONSUMED BURNED	BUDGET	· ac		,

	General	
Energy	2144.4 kcal	110%
Alcohol	0.0 g	No Target
Caffeine	0.0 mg	No Target
Water	1305.4 g	48%

Carbohydrates			
Carbs	290.5 g	132%	
Fiber	68.9 g	276%	
Starch	133.9 g	No Target	
Sugars	39.3 g	No Target	
Net Carbs	220.6 g	113%	

	Lipids		
Fat	47.0	g	62%
Monounsaturated	18.3	g	No Target
Polyunsaturated	12.3	g	No Target
Omega-3	1.1	g	101%
Omega-6	10.7	g	89%
Saturated	9.4	g	n/a
Trans-Fats	0.3	g	n/a
Cholesterol	426.7	mg	No Target

	Protein		
Protein	158.1	g	130%
Cystine	1.7	g	183%
Histidine	3.3	g	240%
Isoleucine	4.9	g	261%
Leucine	8.7	g	207%
Lysine	8.7	g	229%
Methionine	2.6	g	278%
Phenylalanine	5.1	g	311%
Threonine	4.6	g	233%
Tryptophan	1.4	g	276%
Tyrosine	3.6	g	217%
Valine	5.5	g	232%

	Vitamins		
B1 (Thiamine)	1.7	mg	151%
B2 (Riboflavin)	2.2	mg	198%
B3 (Niacin)	30.5	mg	218%
B5 (Pantothenic Acid)	8.0	mg	160%
B6 (Pyridoxine)	2.9	mg	226%
B12 (Cobalamin)	2.7	μg	111%
Folate	1372.5	μg	343%
Vitamin A	19510.2	IU	836%
Vitamin C	254.4	mg	339%
Vitamin D	60.5	IU	10%
Vitamin E	15.7	mg	105%
Vitamin K	522.4	μg	580%

	Minerals		
Calcium	619.2	mg	62%
Copper	2.1	mg	233%
Iron	28.3	mg	157%
Magnesium	648.7	mg	209%
Manganese	8.7	mg	483%
Phosphorus	2388.5	mg	341%
Potassium	4994.7	mg	192%
Selenium	124.7	μg	227%
Sodium	1440.0	mg	96%
Zinc	19.3	mg	241%



Appendix III: Friday - December 10, 2021

Description	Amour	nt Unit	Energy (kcal)
Quinoa, Cooked	0.	66 cup	146.52
Oats, Regular or Quick, Dry	0.	33 cup	101.3
Blueberry, Raw	0.	33 cup, whole pieces	27.84
Almonds, Raw		12 each	85.6
Eggs, Cooked		2 large	15
Broccoli, Cooked From Fresh		1 cup, chopped	54.
Chicken Breast, Skinless		4 oz	196.18
Kroger, Nonfat Yogurt, Greek, Plain		1 × 2/3 cup	10
Avocados, Raw, California		1 oz	47.34
Brown Rice, Steamed	0.	66 cup	163.9
Carrots, Cooked From Fresh	(0.5 cup, sliced	27.
Celery, Cooked	(0.5 cup, diced	13.
Onion, White, Yellow or Red, Raw	(0.5 cup	38.8
Pico de Gallo, Fresh Red Salsa		1 cup	33.73
o Green, Green Lentils, Cooked		8 oz	270.8
Chicken Breast, Skinless		4 oz	196.1
🍎 Avocados, Raw, California		1 oz	47.3
Eggs, Cooked		2 large	15
Celery, Cooked	(0.5 cup, diced	13.5
nergy Summary (i)	Macro	nutrient Targets	(i)
	Energ	y 1875 kcal / 19	954 kcal (96%)
1875 1954	79 Protei	n 155.6 g / 12	2.1 g (127%)
kcal kcal	Calories Net Ca	arbs 147.1 g / 19	95.4 g (75%)
	Remaining	56.8 g / 76	5.0 g (75%)
CONSUMED BURNED	BUDGET		

	General	
Energy	1874.7 kcal	96%
Alcohol	0.0 g	No Target
Caffeine	0.0 mg	No Target
Water	1172.8 g	<mark>4</mark> 3%

Carbohydrates			
Carbs	197.2	g	89%
Fiber	48.6	g	194%
Starch	70.4	g	No Target
Sugars	34.6	g	No Target
Net Carbs	147.1	g	75%

	Lipids		
Fat	56.8	g	75%
Monounsaturated	23.7	g	No Target
Polyunsaturated	11.0	g	No Target
Omega-3	0.8	g	74%
Omega-6	9.6	g	80%
Saturated	12.6	g	n/a
Trans-Fats	0.2	g	n/a
Cholesterol	948.8	mg	No Target

	Protein		
Protein	155.6	g	128%
Cystine	1.9	g	201%
Histidine	3.4	g	242%
Isoleucine	6.0	g	316%
Leucine	9.0	g	215%
Lysine	9.0	g	236%
Methionine	3.1	g	330%
Phenylalanine	5.3	g	319%
Threonine	5.1	g	254%
Tryptophan	1.4	g	287%
Tyrosine	4.0	g	243%
Valine	6.2	g	258%

	Vitamins		
B1 (Thiamine)	1.1	mg	104%
B2 (Riboflavin)	2.2	mg	202%
B3 (Niacin)	39.5	mg	282%
B5 (Pantothenic Acid)	8.7	mg	173%
B6 (Pyridoxine)	3.0	mg	233%
B12 (Cobalamin)	3.0	μg	125%
Folate	904.9	μg	226%
Vitamin A	18686.7	IU	801%
Vitamin C	172.4	mg	230%
Vitamin D	185.3	IU	31%
Vitamin E	14.0	mg	93%
Vitamin K	328.5	μg	365%

Minerals			
Calcium	601.0	mg	60%
Copper	1.2	mg	132%
Iron	19.8	mg	110%
Magnesium	472.4	mg	152%
Manganese	5.7	mg	318%
Phosphorus	2007.9	mg	287%
Potassium	4251.5	mg	164%
Selenium	147.6	μg	268%
Sodium	2002.1	mg	133%
Zinc	13.4	mg	167%

