Obesity Case Study
DFM 484: Medical Nutritional Therapy

Dorette Franks
RB is a 45 YOWM who is married with two children, ages 15 and 18. He is of Italian
descent and loves to eat Italian food. He takes pride in his ability to prepare Italian food.
RB is a high school math teacher who does not exercise. His love of food and lack of
exercise have created a weight problem. For years he has endured much criticism from
his family and friends about his health. His family history reveals several areas of
concern. His father died of a heart attack and two brothers have had heart attacks. He
has a brother and a sister who has high serum cholesterol and is on strict diets. Both of
his parents and all of his grandparents had problems with high serum cholesterol. None
of this really bothered him until recently. Since his last birthday he has become very
concerned about his health and has decided to do something about his weight.

Anthropometrics:
Ht: 5’10”  Wt: 215 pounds  College weight: 170 pounds

RB has set a personal goal of losing 45 pounds to get back to his college weight. After a
recent visit to his primary MD, he was found to be healthy except for his weight. The
physician reinforced what others have been telling him about losing weight and
exercising. He emphasized that he should start slowly and sent him to the clinic RD to
discuss his weight problem. The RD interviewed him and obtained the following
information:

RB sleeps as late as he can and is usually rushed in the morning. He occasionally eats
breakfast. He drinks a cup of coffee with sugar, while getting ready for work. He does
not eat in the school cafeteria at lunch because he does not like the food. He says it is not
real food. The RD discovered that RB does not eat for the sake of eating or boredom; he
eats because he enjoys good food. He brings a sandwich from home and drinks a soda.
His sandwiches are usually egg salad, chicken salad, deli roast beef, or salami, made with
rye, whole wheat, or sometimes French bread. He puts mustard and a little bit of
mayonnaise with lettuce and tomato on his sandwiches.

He does not eat again until dinner. He likes to go home and work on his classes before
eating. When he sits at the table in the evening, he wants to have the day behind him and
nothing left to do but enjoy a good meal and go to bed. He usually helps prepare dinner,
or he prepares it himself. This is the meal he lives for. The way RB sees it, he works
hard during the day, skips breakfast, eats a light lunch, and does not snack much during
the day so he deserves a big meal at night.

RB has never been to Italy but has researched the lifestyle and eating habits there. He has
selected those recipes he likes and has combined them with some traditions of this
country to come up with his own style of Italian food. The meal has to start with the
American traditional tossed salad with about ¼ c of olive oil and vinegar dressing. The
Italian tradition of pasta appears at each evening meal. Spaghetti, mostaccioli, fettuccini,
or another form of pasta is always included. Tomato sauce, grated cheese, or cheese
sauces are essential. Parmesan, Romano, and mozzarella are his favorites. RB and his wife use some chicken and shellfish, but beef and veal are more popular. Lots of Italian seasoning, salt, and olive oil are important. Garlic bread is included in each meal with olive oil and a touch of melted butter. RB insists on real butter for his cooking. He also likes to use real cream in his sauces. Egg batter helps to keep things together. The vegetables are usually eggplant, squash, artichokes, asparagus, or beets. He uses a lot of onions, garlic, bell pepper, celery, and parsley in his cooking. All of this is washed down with several glasses of wine and finished off with pistachio ice cream or an Italian pastry. The serving sizes vary a great deal, depending on the combination of foods served. However, excessive amounts of each food item are the norm rather than the exception. After eating there is some cleaning up to be done before bedtime. Weekend meals are not that much different except that the Sunday meal is usually earlier.

QUESTIONS:

1. Determine RB’s IBW, % IBW, and BMI. Please show all calculations.

\[ \text{IBW} = 75 \text{ kg} \]
\[ 131\% \text{ IBW}, \text{ BMI 31.9} \]

2. Using the Harris Benedict equation and the appropriate activity factor, calculate his daily energy needs.

\[ \text{REE} = 1688 \times 1.3 = 2200 \text{ kcals (using IBW) loss} \]

3. Determine his protein needs

\[ 0.8 \text{ g/kg of IBW} = 60 \text{ grams} \]

4. Determine his BMI and interpret the results in relation to health risk.

BMI c/w obesity increases risk of obesity related diseases (type 2 DM, HTN, hyperlipidemia, CVD)

5. If RB were to lose one pound per week, he would have to reduce his daily calorie intake by how many kcals?

500 kcals (1700 kcals/day)

6. Explain the importance of exercise in RB’s weight reduction plan. Include advice you would give RB about the elements of an exercise program, including starting a program, warming-up, duration, intensity, etc.

Exercise is important in assisting with increasing calorie expenditure and producing gains in lean body mass. Suggest he start with 15 minutes of walking 5 times per week and gradually increase.

7. Comment on RB’s goal weight. Is it realistic?
No, because he hasn’t been at his college weight since college, which may cause frustration and abandonment of weight loss efforts.

8. Briefly explain the importance of RB’s family medical history.

His family history is significant for a history of CVD. Obesity further increases his risk for developing CVD.

9. RB believes it is all right to skip breakfast, eat light during the day, and eat a big meal at night. Is anything wrong with this kind of thinking? If so, identify the problem and describe the solution.

May lead to overeating in the evening due to increased hunger.

10. Determine 3 goals for RB to focus on achieving his weight loss goal (2 dietary and 1 exercise).

-Add a light breakfast
-Reduce portion sizes at dinner (reduce alcohol intake)
-Encourage an evening walk

11. Write a PES statement.

Excessive energy intake related to increased portion sizes at meals as evidenced by a history of progressive weight gain and elevated BMI.