**Client Name**: Jeremy Brown

**Health History (including any specific health goals)**:

Jeremy is a 24-year-old law student at the local university. A competitive swimmer throughout college, Jeremy has always been in good health. Now that his schedule has become so hectic, he has limited time for exercise other than walking to class. He eats most meals outside of the house and admits to snacking and drinking caffeinated beverages to stay up to study.

The patient describes a family history of heart disease in both his mother and his father. His father takes medication for both high blood pressure and cholesterol and his mother has had angioplasty to open a blocked artery in her heart. His uncle on his mother’s side developed Type II diabetes at age 40. There is no family history of cancer.

Recent lab work revealed that Jeremy’s LDL cholesterol is 130 and his HDL cholesterol is 45. His average blood pressure was 135/85.

Jeremy feels sluggish and he is looking for ways to improve his quality of life. He wants an assessment of his current health and he would like recommendations for how he can integrate exercise and healthy eating habits back into his busy schedule.

**Height**: \_\_\_\_\_\_\_6’ 2”\_\_\_\_\_\_\_\_ **Weight:** \_\_\_\_\_\_\_235lbs\_\_\_\_\_\_\_\_\_\_\_

**BMI**:

 Calculate Jeremy’s BMI based on his height and weight and describe the implications of this number. Take Jeremy’s athletic history into account.

BMI = 106.69/3.5329 = 30.199 ≈ 30.2

The implications of a 30.2 BMI is that Jeremy is considered obese. Any BMI over 30 is on the level of obesity. Jeremy’s BMI needs to be lowered for his health.

**Activity Level: BMR and TDEE (Output)**:

Jeremy reports going to the campus pool about once a week for a 30-45 minute swim. He walks to class each day, but his apartment is not far from the main law buildings or the library. Jeremy spends 4-5 hours a night at the library studying or writing. About once a month, he meets his father to play golf. They play 18 holes, but use a golf cart to maneuver around the course.

 Compute Jeremy’s BMR.

66.5 + (13.75 x 106.69) + (5.003 x 74) – (6.775 x 24) = 1741.1095

 Discuss the activity factor used in the Harris-Benedict Equation and calculate TDEE.

The activity factor I used in the Harris-Benedict Equation is light exercise/1-3 days of sports. He lightly exercises by walking to class and he swims one day out of the week and plays occasional golf, so that constitutes the 1-3 days of sports. His TDEE is 741.1095 x 1.375 ≈ 2394

**Food Intake (Input)**:

Jeremy completed a food diary for one week. Analysis of his food choices revealed the following results:

|  |  |
| --- | --- |
| Average calories consumed per day | 3024 |
| Average fat consumed per day | 81g |
| Average saturated fat consumed per day | 40g |
| Average carbohydrates consumed per day | 355g |
| Average protein consumed per day | 40g |
| Average sodium consumed per day | 3,056mg |

Jeremy reports eating 2-3 servings of fruits or vegetables per day. He reports drinking 4-5 cups of coffee per day as well as 2-3 caffeinated sodas, and 2-4 glasses of water per day.

Jeremy reports eating fast food at least once a day.

**Calorie Deficit or Surplus (Compare Inputs and Outputs)**:

 Compare calories consumed versus calories expended.

Calories consumed: 3024

Calories expended: 2394

He is consuming 630 extra calories that his body is not using.

 Describe what will happen to Jeremy’s weight over the next month if he continues the same eating patterns. Show your work.

630 extra calories per day X 30 days = 18900

About 3500 calories = I pound body fat

18900/3500 = 5.4

Jeremy will gain about 5.4 pounds in one month if he continues the same diet.

**Overall Assessment**:

 Discuss overall implications of BMI and any energy imbalance on overall health.

The implications of Jeremy’s BMI is that he is eating more than he needs to, therefore adding to his level of obesity. His energy imbalance is leading to him gaining weight, which could increase his chances of high cholesterol, high blood pressure, heart disease, and diabetes if he continues on his current diet.

 Analyze food choices

o Is the client getting enough of each of the designated food groups?

He is not getting enough vegetables, because the daily recommendations for vegetables are 5 servings a day, and the daily recommendation for fruit is 2. He is not getting enough water. Based on what he says he eats, he is most likely not getting enough of the designated food groups.

o How does consumption of fats, carbohydrates, proteins and sodium compare to recommended values?

Jeremy’s Consumption Recommended Values

Carbs: 355g 202-292g

Fats: 81g 40-70g

Protein: 40g 45g

Sodium: 3,056mg 1,500mg

Based on recommended daily values, he is consuming too many carbs, fats, and sodium, especially for the inactive lifestyle he lives. He is not getting enough protein, so he does not have much energy.

 Propose ways to bring the energy input and output in line with Jeremy’s health goals. Describe final recommendations to improve Jeremy’s overall health and meet his fitness goals. How should Jeremy alter his eating habits and his activity? Link your recommendations to his personal health history *and* his family history.

Jeremy needs to diet to get his body back into a healthy weight range. He needs to eat much healthier and exercise better. I would recommend putting Jeremy on a 1800 calorie diet, because he does not have much time for fitness. If he wanted to find a way to exercise more, I would recommend a 2000 calorie diet. Because his TDEE is over 2000, he would lose weight because his body would begin to tap into the energy reserves that he already has and burn fat.

He should take out all junk food, carbonated beverages, and fast food. He needs to eat more protein, and more vegetables and grains. Vegetables and whole grains will improve his heart health, because his family risk of cholesterol and high blood pressure. If he ate much less sodium, he would greatly reduce his risk of having high blood pressure like his father, because his blood would not be retaining so much water.

If Jeremy dropped his weight to 194, he would be in a normal weight range based on his BMI. He would lose 594 calories per day (based on 1800 calorie diet), and adding exercise would increase the calories burned per day. I recommend he cut back on fats, sodium, and carbs, and eat more protein, vegetables, and whole grains.