LAB: Nutrition & Exercise Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Choose a fast food restaurant, create a meal, then fill in the chart with the nutrition facts of your meal.**

The US Food and Drug Administration recommends the following amounts of each group of nutrients each day. 2000 Calories, 65g of fat, 300mg of cholesterol, 2400mg of sodium, 3500mg of potassium, 50g of protein, and 300g of carbohydrates, of which 25 grams should consist of dietary fiber.

Restaurant:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Calories** | **Fat** | **Choles.** | **Na** | **K** | **Carbs** | **Dietary Fiber** | **Sugar** | **Protein** |
| Entrée: |  |  |  |  |  |  |  |  |  |
| Side #1: |  |  |  |  |  |  |  |  |  |
| Side #2: |  |  |  |  |  |  |  |  |  |
| Side #3: |  |  |  |  |  |  |  |  |  |
| Drink: |  |  |  |  |  |  |  |  |  |
|  TOTAL |  |  |  |  |  |  |  |  |  |
| FDA recommendations |  |  |  |  |  |  |  |  |  |
| **% of daily allowance provided by your fast food meal** |  |  |  |  |  |  |  |  |  |

1. What are calories a measure of?

1. Explain the difference between Calories and calories?
2. How are calories burned? Explain.
3. What are some of the reasons why your body needs fat and cholesterol? What kinds of foods are high in cholesterol?
4. What problems can excess fat/cholesterol cause?
5. What does your body do with carbohydrates? What kinds of foods are high in carbohydrates?

 7. What is the formula for cellular respiration?

 8. What does dietary fiber contain that is important for digestion? Where does this molecule come from?

 9. How does the consumption of protein relate to the production of proteins? What kinds of foods are high
 in protein? Explain.

 10. Name the minerals listed in the chart above. How do minerals differ from vitamins?

 11. Examine the nutrition chart from your restaurant, what vitamin(s) does you meal appear to be high in?

[**http://www.clevelandclinic.org/health/interactive/calories.asp**](http://www.clevelandclinic.org/health/interactive/calories.asp) **has a calories burned counter for other forms of exercise.**

**Calories Burned During 1 mile of Walking**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Speed/Pounds** | 100 lb | 120 lb | 140 lb | 160 lb | 180 lb | 200 lb | 220 lb | 250 lb | 275 lb | 300 lb |
| 2.0mph (slow walking) | 57 | 68 | 80 | 91 | 102 | 114 | 125 | 142 | 156 | 170 |
| 2.5mph | 55 | 65 | 76 | 87 | 98 | 109 | 120 | 136 | 150 | 164 |
| 3.0mph (normal walking) | 53 | 64 | 74 | 85 | 95 | 106 | 117 | 133 | 146 | 159 |
| 3.5mph  | 52 | 62 | 73 | 83 | 94 | 104 | 114 | 130 | 143 | 156 |
| 4.0mph (fast walking) | 57 | 68 | 80 | 91 | 102 | 114 | 125 | 142 | 156 | 170 |
| 4.5mph | 64 | 76 | 89 | 102 | 115 | 127 | 140 | 159 | 175 | 191 |
| 5.0mph (jogging) | 73 | 87 | 102 | 116 | 131 | 145 | 160 | 182 | 200 | 218 |

 12. What percent of the calories from your meal were burned by walking/running 1 mile? How many miles
 would you have to walk/run to burn off the entire meal?

 13. A person’s heartrate increases during exercise. Many people have difficulty carrying on conversations
 while exercising, why would this be?

 14. What are some reasons that you have heard that exercise is good for you? What validity can you give to
 these reasons now that you have studied both the muscles and the cardiovascular system? Explain.

 15. Why do the calories burned depend on both the speed of exercise and the weight of the individual?
 Explain in terms of the how muscles contract.

 16. Research a vitamin, draw the structural formula and write down what this vitamin does for the body, a
 list of foods high in this vitamin, whether the vitamin is water or fat soluble. Include the URL you used
 to locate this information.

 BONUS: Some people argue that walking and running should burn the same number of calories since the
 same amount of weight is being moved the same distance. Why does running burn more calories than
 walking? At what point does their calorie burn become the same? Give your source(s) of information.