

**Negative Feedback in the  
Endogenous Cholesterol  
Pathway-Does it Exist? A  
Correlative Clinical Study**



# PURPOSE/HYPOTHESIS:

Diet is a major contributor to our health and has been proven multiple times to be a strong factor contributing to cardiovascular disease. It is believed that since eggs have so much cholesterol that they are a negative influence on a person with risk of heart disease. If the endogenous and exogenous pathways of cholesterol metabolism are examined, it is known that approximately 75% of control is endogenous, and this is why the statin class of drugs works so well. However, could it be that there is a negative feedback system in place? If the system is taxed with an extremely high amount of exogenous cholesterol, such as in substantial quantities of eggs, would the endogenous cholesterol actually decrease?

The purpose of this project is to find out if a high intake of eggs can actually decrease cholesterol. In addition, I would like to broaden the study to include various diet types and their effects on cholesterol.

# METHODS:

Follow the cholesterol screenings and hand out surveys with questions about diet, specifically, how many eggs are consumed in a week. The results obtained would be strictly correlative; however, a goal of 200 cases will help to validate the results. Two venues will be compared: urban versus rural to see if placement changes the data.

The survey will be able to be completed in less than five minutes, so that people will not be deterred from participating. I plan to include questions about alternative lifestyles/dietary habits to see if there are any correlations between mindset and cholesterol/heart disease.

## Cholesterol Survey

1. How many eggs approximately do you consume per week? \_\_\_\_\_
2. Do you have diabetes? YES NO (circle one)
3. Do you have heart disease? YES NO
4. Do you have high blood pressure? YES NO
5. Do you have kidney/renal disease? YES NO
6. About how many servings of red meat do you eat per week? \_\_\_\_\_
7. Are you a vegetarian? YES NO
8. Do you regularly use herbal medications? YES NO
- 8a. If yes, which herbals do you use? (please list all you can remember) \_\_\_\_\_
9. Have you ever used any of the following products (circle all that apply) -  
NIACIN, FLAX SEED/OIL, TUMERIC, RED YEAST RICE, GUGGUL
10. Would you consider yourself interested in or practicing any forms of  
alternative/nontraditional medicine (examples-acupuncture, herbal  
medicine, eastern medicine)? YES NO
11. Would you consider yourself more laid back/easy going/Type B or  
more a go-getter/somewhat stressed/Type A personality? (circle one  
underlined phrase)
12. Do you currently take any cholesterol lowering medications and/or are  
you using any alternative therapies to lower your cholesterol? YES NO
- 12a. If YES, what medication do you take? \_\_\_\_\_

## FINDINGS:

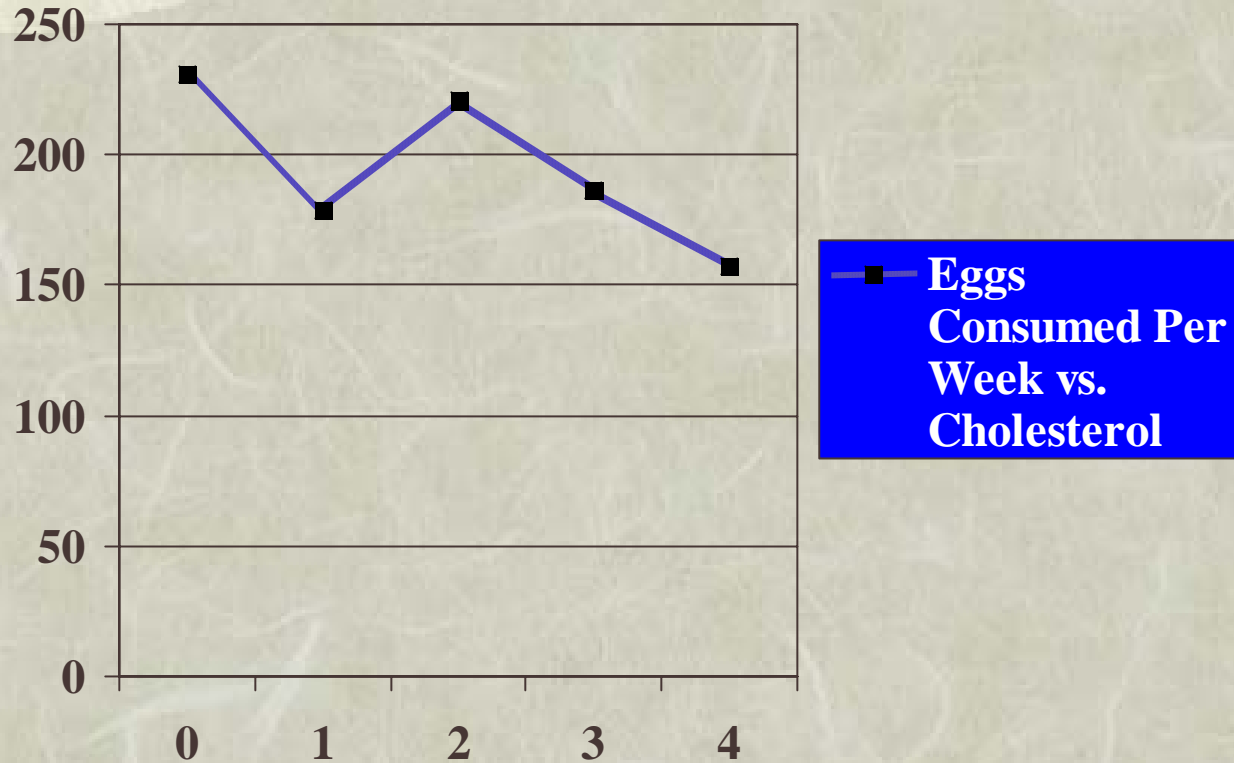
- ❖ Study very limited by small numbers due to large number of exclusion and small study population
- ❖ Princeton, Illinois results show decrease in total cholesterol with an increase in egg consumption
- ❖ Rockford, Illinois results show increase in total cholesterol with an increase in egg consumption
- ❖ Lowest total cholesterol seems to be in Type A personalities

# Number of Eggs Consumed Per Week (x-axis)

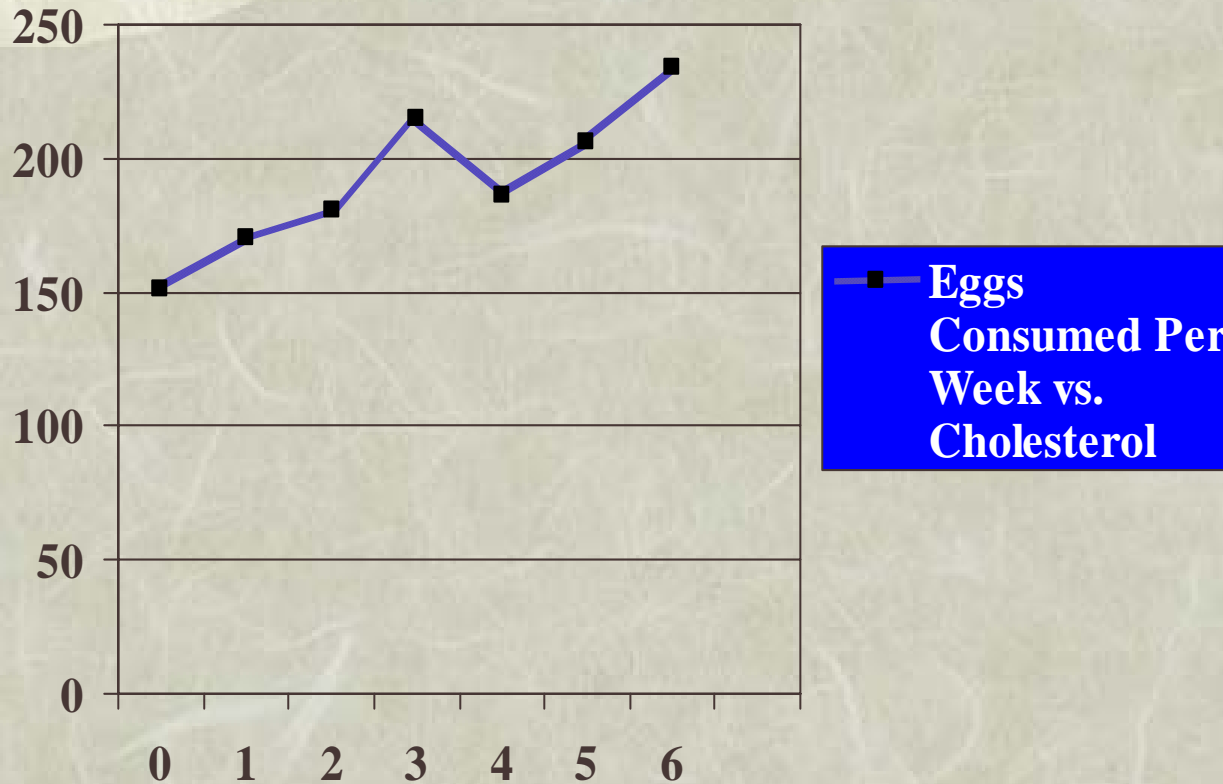
vs.

# Total Cholesterol (y-axis)

## PRINCETON, ILLINOIS



# Eggs Consumed Per Week (x-axis) vs. Total Cholesterol (y-axis) ROCKFORD, ILLINOIS



# Personality Type vs. Average Cholesterol Level

