

Read over the following excerpt about colon cancer and antioxidants. Answer the questions that follow.

*People who eat lots of fruits and vegetables have lower rates of colon cancer than those who eat little of these foods. Fruits and vegetables are rich in “antioxidants” such as beta carotene and vitamins C and E. Will taking antioxidants help prevent colon cancer? A clinical trial studied this question with 864 people who were at risk for colon cancer. The subjects were divided into four groups: daily beta carotene, daily vitamins C and E, all three vitamins every day, and daily placebo. After four years, the researchers were surprised to find no significant difference in colon cancer among the four groups.*

1. What is the explanatory variable?
2. What is the response variable?
3. What does “no significant difference” mean? Use the language of the situation.
4. Suggest some lurking variables that could explain why people who eat fruits and vegetables have lower rates of colon cancer. The experiment suggests that these variables, not the vitamins themselves, may be responsible for the reduced rates of colon cancer.