Do Antioxidants Prevent Cancer?

People who eat lots of fruits and vegetables have lower rates of colon cancer than those who eat less of these foods. Fruits and vegetables are rich in antioxidants such as vitamins A, C, and E. Will taking antioxidants help prevent colon cancer? A clinical trial studied this question with 864 people who were at risk of colon cancer. The subjects were divided into four groups: daily beta-carotene, daily vitamins C and E, all three vitamins everyday, and daily placebo. The study was double-blind. The participants were examined regularly to see if they were developing polyps in their colons. After four years, the researchers were surprised to find no significant difference among the groups in terms of the rates of new polyp formation in their colons.


1. What are the explanatory and response variables in this experiment?

2. What are the experimental units in this study?

3. What are the treatments in this study?

4. What are the levels of the factor (explanatory variable) in the experiment?

5. What is the control group in the experiment?

6. Why was it necessary to include a group of subjects taking placebo pill each day in the experiment?

7. Suggest some lurking variables that could explain why people who eat lots of fruits and vegetables have lower rates of colon cancer.