

Video 14 Causation

1. People who own more cars tend to live longer than people who own fewer cars. Why is this relationship not evidence that buying more cars increases life expectancy?

This evidence isn't enough proof because there can be many other factors other than the number of cars that one owns that determine life expectancy.

2. Heavy smokers are about 20 times more likely to get lung cancer than nonsmokers. Why isn't this link by itself good evidence that smoking causes lung cancer?

This link isn't good enough because there can be several other factors that could have caused the cancer such as genetics, environmental factors, and exposure to other pollutants.

3. What is the difference between a retrospective study and a prospective study?

A retrospective study begins with sick people, while a prospective study looks ahead following healthy people who smoke and don't smoke to see who develops an issue.

4. Why is a prospective study that compares a group of smokers with a similar group of nonsmokers not an experiment?

It wasn't considered an experiment because there weren't any fully controlled variables. There were still extenuating circumstances that could skew the results.

5. Why do experiments with animals add to the evidence that smoking causes cancer in humans?

They were able to test on the animals in ways that they could not on people. They could focus on specific ingredients and side effects that cigarettes have and test them on animal tissue to see if it had carcinogenic effects, which it did.