

Independent and Dependent Variables

Example 1:

Does nitrogen levels increase the plants growth rate?

What is the independent variable? _____

What is the dependent variable? _____

Example 2:

A researcher, Sally, is interested in whether or not a particular drug impedes memory. She runs an experiment in which each session starts with a subject swallowing a pill. Sometimes the pill does not contain the drug (placebo), and other times the pill contains 10 mg of the drug. Subjects then complete a memory task, and their scores are noted.

What is the independent variable? _____

What is the dependent variable? _____

Example 3:

A study indicates that antioxidants found in blueberries may slow down the process of aging. In this study, 19-month old rats (equivalent to 60-year old humans) were fed either their standard diet or a diet supplemented by either blueberry, strawberry or spinach powder. After eight weeks, the rats were given memory and motor tests. Although all supplemented rats showed improvement, those supplemented with blueberry powder showed the most notable improvement.

What is the independent variable? _____

What is the dependent variable? _____

Example 4:

Beta-carotene supplements have been thought to protect against cancer. However, a study published in the Journal of the National Cancer Institute suggests this is false. The study was conducted with 39,000 women aged 45 and up. These women were randomly assigned to receive a beta-carotene supplement or a placebo, and their health was studied over their lifetime. Cancer rates for women taking the beta-carotene supplement did not differ systematically from the cancer rates of those women taking the placebo.

What is the independent variable? _____

What is the dependent variable? _____

Example 5:

An automobile manufacturer wants to know how bright brake lights should be in order to minimize the time required for the driver of a following car to realize that the car in front is stopping and to hit the brakes.

What is the independent variable? _____

What is the dependent variable? _____