

## IX. Logic of Hypothesis Testing

### Prerequisites

none

- A. [Introduction](#)
- B. [Significance Testing](#)
- C. [Type I and Type II Errors](#)
- D. [One- and Two-Tailed Tests](#)
- E. [Interpreting Significant Results](#)
- F. [Interpreting Non-Significant Results](#)
- G. [Steps in Hypothesis Testing](#)
- H. [Significance Testing and Confidence Intervals](#)
- I. [Misconceptions](#)
- J. [Exercises](#)
- K. [PDF Files](#) (in .zip archive)

When interpreting an experimental finding, a natural question arises as to whether the finding could have occurred by chance. Hypothesis testing is a statistical procedure for testing whether chance is a plausible explanation of an experimental finding. Misconceptions about hypothesis testing are common among practices as well as students. To help prevent these misconception, this chapter goes into more detail about the logic of hypothesis testing than is typical for an introductory-level text.