

## Chapter 21 - More About Tests

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Here is an illustration of the four situations in a hypothesis test:

		The Truth	
		$H_0$ True	$H_0$ False
My Decision	Reject $H_0$	Type I Error	OK
	Retain $H_0$	OK	Type II Error

Which type of error is more serious depends on the situation at hand.

Both errors can be reduced by increasing the sample size.

The **power** of a test is the probability that it correctly rejects a false null hypothesis.

**power** =  $1 - \beta$  where  $\beta$  is the probability that a test fails to reject a false null hypothesis.