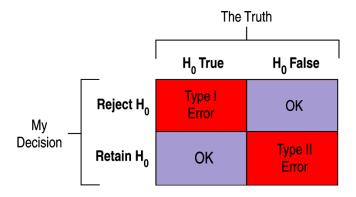
Here is an illustration of the four situations in a hypothesis test:



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.