

Hypothesis Testing

Type 1 and Type 2 Error

Example

Type 1 Error
"False Positive"
Consequences?

- Approve sale medicine that does not work!!
 - Deaths
 - Law Suits
- Lower Sig Level
1%

Type 2 Error
"False Negative"
Consequences?

- Stopping Sale of good medicine
 - Restricting Access
 - Pharm. Company could lose a lot of \$.
- Collect more data

New Medicine (Experiment) Decreases Blood Pressure

μ_1 : Pop. mean blood Pressure for those on medicine.

μ_2 : Pop. mean blood Pressure for those on Placebo.

H_0 : No Effect ($\mu_1 = \mu_2$): High P-value
Medicine is Not approved for use.

H_A : Medicine Lowers blood Pressure ($\mu_1 < \mu_2$): Low P-value
Medicine is approved for use.

