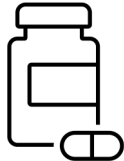


# Effect Size

# What is Effect Size?

- A measure of significance that DOES NOT rely on sample size
- p value is calculated using sample size
  - The more data you have, the more likely it will be significant
- Ex. Aspirin 

# Effect Size for Different Statistics

Statistic	Effect Size
t-test	Cohen's D
Chi-Square	Cramer's V
Regression	R Squared
ANOVA	Eta-Squared

# How to Calculate Cohen's D for Independent

- No sample size in there!!
- <https://www.socscistatistics.com/effectsize/default3.aspx#:~:text=For%20the%20independent%20samples%20T,by%20the%20pooled%20standard%20deviation.&text=Cohen's%20d%20is%20the%20appropriate,are%20of%20the%20same%20size.>

$$\text{Cohen's } d = (M_2 - M_1) / SD_{\text{pooled}}$$

$$SD_{\text{pooled}} = \sqrt{((SD_1^2 + SD_2^2) / 2)}$$

# How to Calculate Cohen's D for Dependent

- Mean / standard deviation for the DIFFERENCE
- No sample size in there!!

$$d = \frac{\bar{D}}{s_D}$$

# Interpreting Cohen's D

- **Small:**  $\leq 0.2$
- **Medium:**  $0.3 - 0.5$
- **Large:**  $> 0.6$