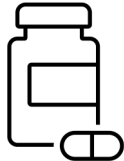# Effect Size

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!!**

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

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

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:** <= 0.2

- **Medium:** 0.3 - 0.5

- **Large:** > 0.6