

The information you need to calculate a sample size will vary according to your study design, research questions, analysis plan and study restrictions. Prior to the calculation, you will need to decide on your:

Power. This is the ability of the statistical test to detect differences or effects that lead to rejection of the null hypothesis. It depends on the sample size. The larger the sample size, the bigger the power. This is usually set at 80-90% power.

Level of significance (α). This is the pre-set level of error that you want to commit in your research, determined before your data collection. It is usually set at 0.05 or 0.01. P-value is the actual level of error found when you perform the statistical test. When $p\text{-value} < \alpha$, then it supports the evidence against the null hypothesis (no effect) and your results are 'statistically significant'.

Effect size. The amount of difference in effect between the groups that you want to determine/establish.

Keep in mind that this minimum sample size may also need to be adjusted for any potential losses (e.g. loss to follow-up, non-compliance).

There are a few sources you can use to determine sample size including pilot study data, data from other studies, expertise of those in the field and generic effect sizes.

Most statistical packages will calculate a sample size for you. Additionally, there are some dedicated programs on the web. It is highly recommended that after you determine a sample size with one of the following you confirm with the biostatistical associate.

[Dr. Rollin Brant's \(UBC\) Sample Size Calculator](#)

[Qualtrics Sample Size Calculator](#)

[Statulator](#)

[Survey Monkey Sample Size Calculator](#)