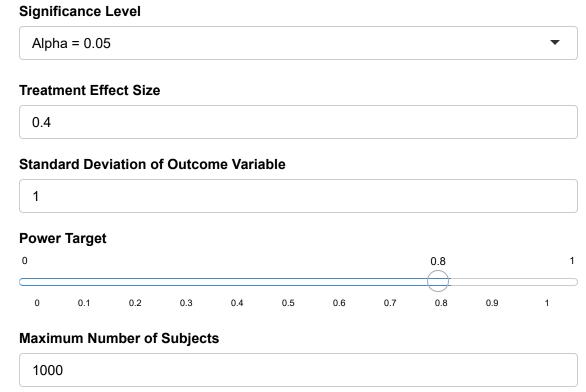# Power Calculator

This calculator can help you understand the power of a few simple experimental designs to detect average treatment effects. You can choose between a standard design in which individuals are randomly assigned to treatment or control and a clustered design, in which groups of individuals are assigned to treatment and control together. For other, more complex designs, for example using block or stratified assignment, or more complex causal quantities such as complier average causal effects (also known as local average treatment effects), we suggest you see the DeclareDesign Wizard at https://eos.wzb.eu/ipi/DDWizard/

☐ Clustered Design?

☐ Binary Dependent Variable?

Significance Level

Alpha = 0.05	▼

Treatment Effect Size

0.4

Standard Deviation of Outcome Variable

1

Power Target

0								0.8		1

| 0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1 |

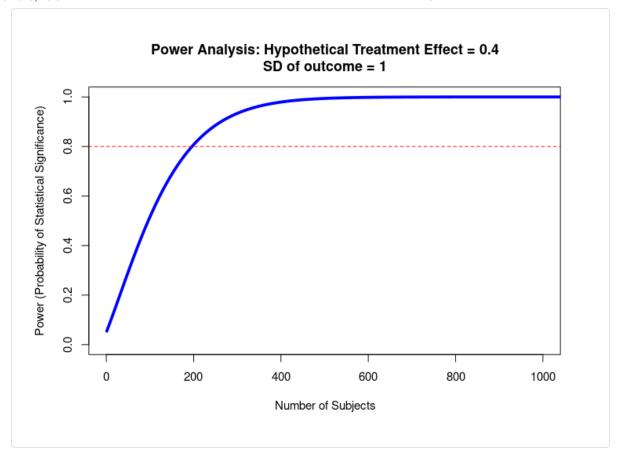**Maximum Number of Subjects**

1000

⤓ show below

helpers.R

server.R

ui.R

```
# server.R
source("helpers.R")

Ns_small <- as.matrix(1:10000)
Ns_big <- as.matrix(c(seq(1, 9999, 1), seq(1000, 100000000, 1000)))
shinyServer(
  function(input, output) {

    betas_fun <- reactive({
      sigma <- input$s
```

Power Analysis: Hypothetical Treatment Effect = 0.4
SD of outcome = 1

In order to achieve 80% power, you'll need to use a sample size of at least 197.

The functions used to calculate power are available in the helpers.R tab.