

# Binary outcome

Sample Size Calculator

## Sample size calculator

Please select method

This spreadsheet is designed to calculate the number of participants required for a trial comparing two PROPORTIONS. The user must enter:

- the proportion in the control group (0.2 or 0.3 etc) AND
- the proportion in the intervention group (0.4 or 0.5 etc)

The number of participants required in each group is calculated with  power and  significance level

**BINARY OUTCOME**

Control group proportion =  \*enter value here (eg 0.2)

Intervention group proportion =  \*enter value here (eg 0.3)

Number per group =  (80% power; 5% significance; two-sided test)

User selects which type of outcome the calculation will be based upon (binary outcome and continuous outcome should be used for patient RCT, if cluster RCT the other methods should be selected)

Software detects whether decimals should be entered using full stops or commas

User selects power (80%, 90% or 95%) and significance (5% or 1%)

User selects control group proportion and expected intervention group proportion

Once proportions are entered, click this button

After pushing 'Calculate', the number of participants per group is shown  
Eg 293 in each group (586 in total)

If new calculation required, this button clears existing values

To exit, click this button

# Continuous outcome

**Sample Size Calculator**

**Sample size calculator**

Please select method

This spreadsheet is designed to calculate the number of participants required for a two-arm randomised controlled trial comparing two MEANS. The user must enter:

- the mean difference between intervention and control
- the standard deviation of the control group measure

The number of participants required in each group is calculated with  power and  significance level

**CONTINUOUS OUTCOME**

Standard deviation =  \*enter value here (eg 2.1)

Minimum difference detectable =  \*enter mean difference

Number per group =  (80% power; 5% significance; two-sided test)

Regional Settings identified as:  
English (US or UK)

Decimals should be in the form:  
0.1 (using .)

User selects power (80%, 90% or 95%) and significance (5% or 1%)

User selects control group standard deviation and expected significant minimum clinical difference

Once standard deviation and minimum difference detectable are entered, click this button

After pushing 'Calculate', the number of participants per group is shown  
Eg 32 in each group (64 in total)

To exit, click this button

# Cluster sample (binary)

**Sample Size Calculator**

**Sample size calculator**

Please select method

This spreadsheet is designed to calculate the number of clusters required for a two-arm CLUSTER randomised controlled trial comparing two PROPORTIONS. The user must enter:

- the proportion in the control group (0.2 or 0.3 etc)
- the proportion in the intervention group (0.4 or 0.5 etc)
- the average cluster size
- an estimate of the intracluster correlation

Regional Settings: English (US), Decimals shown: 0.1 (using .)

The control group is related with  power and  significance level

**CLUSTER SAMPLE (BINARY)**

Average cluster size =       Intracluster coefficient (ICC) =

Control group proportion =  \*enter value here (eg 0.2)

Intervention group proportion =  \*enter value here (eg 0.3)

Unadjusted sample size =  (80% power; 5% significance; two-sided test)

Number of clusters per group =

    

User selects control group proportion and expected intervention group proportion

User enters average number of patients per cluster

User selects power (80%, 90% or 95%) and significance (5% or 1%)

User enters expected ICC

Once proportions, ICC and average cluster size are entered, click here

Computes sample size if clustering was ignored (trial would have 586 patients)

After pushing 'Calculate', the number of clusters per group is shown Eg 24 clusters (of 30 people) in each group (48 clusters of 30 people in total, or 1440 people)

To exit, click this button

# Cluster sample (continuous)

**Sample Size Calculator**

**Sample size calculator**

Please select method **cluster sample (continuous)**

This spreadsheet is designed to calculate the number of clusters required for a two-arm CLUSTER randomised controlled trial comparing two MEANS. The user must enter:

- the mean difference between intervention and control
- the standard deviation of the control group measure
- the average cluster size
- an estimate of the intracluster correlation

The user enters average number of patients per cluster related with **80%** power and **5%** significance level

**CLUSTER SAMPLE (CONTINUOUS)**

Average cluster size = **30** Intracluster coefficient (ICC) = **0.05**

Standard deviation = **2.1** \*enter value here (eg 2.1)

Minimum difference detectable = **1.5** \*enter mean difference

**Calculate**

**Clear Values**

Unadjusted sample size = **64** (80% power; 5% significance; two-sided test)

Number of clusters per group = **3**

**EXIT**

User selects control group standard deviation and expected significant minimum clinical difference

Computes sample size if clustering was ignored (trial would have 64 patients)

After clicking 'Calculate', the number of clusters per group is shown Eg 3 clusters (of 30 people) in each group (6 clusters of 30 people in total, or 180 people)

User enters average number of patients per cluster

User selects power (80%, 90% or 95%) and significance (5% or 1%)

User enters expected ICC

Once SD, minimum detectable difference, ICC and average cluster size are entered, click here

To exit, click this button