Supplementary Data 1. ‘pwr’ Package

Table1. Power calculations for t-tests of means (pwr.t.test)

Usage	**pwr.t.test**(d = NULL, sig.level = 0.05, power = NULL, type = c("two.sample", "one.sample", "paired"),alternative = c("two.sided", "less", "greater"))
Arguments	**d**: Effect size **sig.level**: Significance level **power**: Power of test **type**: Type of t test : one- two- or paired-samples **alternative**: a character string specifying the alternative hypothesis, must be one of "two.sided"(default), "greater" or "less

Table2. Power calculations for balanced one-way analysis of variance tests (pwr.anova.test)

Usage	**pwr.anova.test**(k = NULL, f = NULL, sig.level = 0.05, power = NULL)
Arguments	**k**: Number of groups **f**: Effect size **sig.level**: Significance level **power**: Power of test

Table 3: Power calculations for one- and two-sample proportion test (pwr.p.test and pwr.2p.test)

Usage	**pwr.p.test**(h = NULL, sig.level = 0.05, power = NULL, alternative = c("two.sided","less","greater")) **pwr.2p.test**(h = NULL, sig.level = 0.05, power = NULL, alternative = c("two.sided","less","greater"))
Arguments	**h**: Effect size **sig.level**: Significance level **power**: Power of test **alternative**: a character string specifying the alternative hypothesis, must be one of "two.sided"(default), "greater" or "less

Table4. Power calculations for chi-squared tests (pwr.chisq.test)

Usage	**pwr.chisq.test**(w = NULL, N = NULL, df = NULL, sig.level = 0.05, power = NULL)
Arguments	**w**: Effect size **df**: degree of freedom **sig.level**: Significance level **power**: Power of test

Table5. Power calculations for correlation test (pwr.r.test)

Usage	**pwr.r.test**(r = NULL, sig.level = 0.05, power = NULL, alternative = c("two.sided", "less","greater"))
Arguments	**r**: Linear correlation oefficient **sig.level**: Significance level **power**: Power of test **alternative**: a character string specifying the alternative hypothesis, must be one of "two.sided"(default), "greater" or "less

Table6. Power calculations for the general linear model (pwr.f2.test)

Usage	**pwr.f2.test**(u = NULL, v = NULL, f2 = NULL, sig.level = 0.05, power = NULL)
Arguments	**u**: degree of freedom for numerator **v**: degree of freedom for denominator **f2**: Effect size **sig.level**: Significance level **power**: Power of test **alternative**: a character string specifying the alternative hypothesis, must be one of "two.sided"(default), "greater" or "less

How to set up an R package if the usual methods don't work

- Go to the R web page (https://cran.r-project.org/web/packages/pwr/index.html).
- Download the zip file of '**pwr**' package from '**Package source**' under '**Downloads**'. Save it in a convenient place such as your desktop.
- Go into R, click on "**Packages**" (at the top of the R console), then click on "**Install package(s) from local zip files**", then find the zip file with '**pwr**' from wherever you just saved it.

Supplementary Data 2. ‘exact2x2’ Package

Table1. Calculate exact sample size for conditional tests for two independent binomials. (ss2x2)

Usage	**ss2x2(**p0,p1,power=.80,n1.over.n0=1,sig.level=0.05,alternative=c("two.sided","one.sided"),paired=FALSE,print.steps=FALSE, approx=FALSE)
Arguments	**p0**: true event rate in control group **p1**: true event rate in treatment group **sig.level**: significance level **power**: minimum power for sample size calculation **n1.over.n0**: ratio of n1 over n0, allows for non-equal sample size allocation **alternative**: character, either "two.sided" or "one.sided", one sided tests the proper **paired**: logical. TRUE gives power for McNemar’s test, FALSE are all other tests **print.steps**: logical, print steps for calculation of sample size? **approx**.: give sample size or power using normal approximation only

How to set up an R package if the usual methods don't work

- Go to the R web page (https://cran.r-project.org/web/packages/exact2x2/index.html).
- Download the zip file of ’**exact2x2**’ package from ‘**Package source**’ under ‘**Downloads**’. Save it in a convenient place such as your desktop.
- Go into R, click on “**Packages**” (at the top of the R console), then click on "**Install package(s) from local zip files"**, then find the zip file with ‘**exact2x2**’ from wherever you just saved it.

Supplementary Data 3. 'WebPower' Package

Table1. Statistical Power Analysis for Logistic Regression (wp.logistic)

Usage	**wp.logistic**(p0 = NULL, p1 = NULL, alpha = 0.05,power = NULL, alternative = c("two.sided", "less", "greater"),family = c("Bernoulli", "exponential", "lognormal", "normal", "Poisson","uniform"), parameter = NULL)
Arguments	**p0**: Prob(Y=1|X=0): the probobility of observieng 1 for the outcome variable Y when the predictor X equals 0. **p1**: Prob(Y=1|X=1): the probobility of observieng 1 for the outcome variable Y when the predictor X equals 1. **alpha**: significance level **power**: Statistical power. **alternative**: Direction of the alternative hypothesis ("two.sided" or "less" or "greater"). The default is "two.sided". **family**: Distribution of the predictor ("Bernoulli","exponential", "lognormal", "normal", "Poisson", "uniform"). The default is "Bernoulli". **parameter**: Corresponding parameter for the predictor's distribution. The default is 0.5 for "Bernoulli", 1 for "exponential", (0,1) for "lognormal" or "normal", 1 for "Poisson", and (0,1) for "uniform".

Table2. Statistical Power Analysis for Poisson Regression (wp.poisson)

Usage	**wp.poisson**(exp0 = NULL, exp1 = NULL, alpha = 0.05, power = NULL, alternative = c("two.sided", "less", "greater"), family = c("Bernoulli", "exponential", "lognormal", "normal", "Poisson","uniform"), parameter = NULL)
Arguments	**exp0**: The base rate under the null hypothesis. It always takes positive value. See the article by Demidenko (2007) for details. **exp1**: The relative increase of the event rate. It is used for calculatation of the effect size. See the article by Demidenko (2007) for details. **alpha**: significance level chosed for the test **power**: Statistical power. **alternative**: Direction of the alternative hypothesis ("two.sided" or "less" or "greater"). The default is "two.sided". **family**: Distribution of the predictor ("Bernoulli","exponential", "lognormal", "normal", "Poisson", "uniform"). The default is "Bernoulli". **parameter**: Corresponding parameter for the predictor's distribution. The default is 0.5 for "Bernoulli", 1 for "exponential", (0,1) for "lognormal" or "normal", 1 for "Poisson", and (0,1) for "uniform".

How to set up an R package if the usual methods don't work

- Go to the R web page (https://cran.r-project.org/web/packages/WebPower/index.html).
- Download the zip file of '**WebPower**' package from '**Package source**' under '**Downloads**'. Save it in a convenient place such as your desktop.
- Go into R, click on "**Packages**" (at the top of the R console), then click on "**Install package(s) from local zip files**", then find the zip file with '**WebPower**' from wherever you just saved it.