

# Examples

## Examples R package

Install R Package

```
# setwd("C:/Users/mbofi/Dropbox/CeMSIIS/GitHub/ewhorm_sim/rpkg")
install.packages('C:/Users/mbofi/Dropbox/CeMSIIS/GitHub/ewhorm_sim/ewhorm_0.1.tar.gz', repo = "C:/Users/mbofi/Dropbox/CeMSIIS/GitHub/ewhorm_sim")
library(ewhorm)
```

## Simulate data

```
simulated_data <- ewhorm::sim_data(n_arms = 4,
                                   N = 30 * 4,
                                   mu_6m = c(0,0,0,0),
                                   mu_12m = c(0,0,0,0),
                                   sigma = diag(1,2),
                                   rmonth = 12)

head(simulated_data, 10)
```

	y_6m	y_12m	treat	recruit_time
1	-0.53139934	0.35453665	Placebo	3
2	0.05556132	-0.07613965	High	4
3	-2.16353049	-0.46860407	Medium	9
4	-0.42822239	0.78068245	Low	4
5	-1.35028541	-0.43646163	Low	8
6	0.06814993	0.28519301	Low	9
7	0.27439431	-0.73811365	Low	1
8	0.16952060	-0.09384885	Placebo	1
9	1.05579968	-2.01543372	Low	5
10	1.74841645	-1.17738823	Medium	6

## Simulate trial

```
result_trial <- sim_trial(n_arms=4,  
                          N1=120, N2=60,  
                          mu_6m = c(0,0,0,0),  
                          mu_12m= c(0,0,0,0),  
                          sigma=diag(1,2),  
                          rmonth=12,  
                          alpha1=0.5,  
                          alpha=0.05,  
                          p_safety=c(0.9,0.8,0.7),  
                          safety=T)
```

```
(result_trial)
```

```
$result1  
[1] FALSE
```

```
$result2  
Low-Placebo  
          2
```

```
$safety  
[1] TRUE TRUE TRUE
```