Number needed to treat (NNT)

The number of patients who
need to receive a particular
treatment to prevent one event

To calculate the NNT for a therapeutic trial, you need to know....

What is the absolute risk reduction(ARR)?

Number needed to treat (NNT)

NNT = 1 / absolute risk reduction (ARR)

What proportion of patients in each group experiences an "event"?

- the difference gives the absolute risk reduction (ARR)

Randomised Control Trial

Events in experiment group



Experiment

Events in control group



Control

What proportion of patients in each group experiences an "event"?
- the difference gives the absolute risk reduction (ARR)

Number needed to treat (NNT)

ARR = CER - EER

Events in control group



Control

-

Events in experiment group



Experiment

The number needed to treat is the inverse of the absolute risk reduction

Number needed to treat (NNT)

$$= \frac{1}{ARR}$$

Events in control group

CER
Control Event rate

Control

−

Events in experiment group

EER
Experimental Event Rate

Experiment