

Number Needed to Treat (NNT)

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Definition –

The Number Needed to Treat (NNT) is the number of patients you need to treat to prevent one additional bad outcome (death, stroke, etc.). For example, if a drug has an NNT of 5, it means you have to treat 5 people with the drug to prevent one additional bad outcome. More detailed discussion of the nature of the NNT measure can be found in the EBM Note on summarising the effects of therapy in the journal Evidence-Based Medicine 1997;2:103-4.

Calculation

To calculate the NNT, you need to know the Absolute Risk Reduction (ARR); the NNT is the inverse of the ARR:

$$\text{NNT} = 1/\text{ARR}$$

Where $\text{ARR} = \text{CER (Control Event Rate)} - \text{EER (Experimental Event Rate)}$.

NNTs are always rounded up to the nearest whole number.

For a more detailed look at the NNT measure, and an interactive nomogram for converting between ARRs, RRRs and NNTs, see Zapletal E, LeMaitre D, Menard J and Degoulet P, The Number Needed to Treat: a clinically useful nomogram in its proper context, BMJ 1996;312:426-9.