

Spreadsheet RD from BR and RR.

This spreadsheet calculates the risk difference (RD) from the baseline risk (BR) and relative risk (RR). The BR and RR are assumed to be estimated independently. This will be true if the BR and RR are derived from separate studies. In many applications, the RR comes from a meta-analysis.

Confidence limits for the RD are then calculated from confidence limits for the BR and RR. The calculation uses the MOVER-R algorithm. Reference: Newcombe, Statistical Methods in Medical Research, 2013. It is assumed that the same confidence level applies to the intervals for BR and RR. This confidence level then applies to the RD.

The relative risk will usually be below 1, representing a reduction in risk due to the intervention. The calculated risk difference is then negative. Sometimes, the relative risk may be greater than 1, representing an increase in risk due to the intervention. The calculated risk difference is then positive.

The spreadsheet checks data validity as follows. The BR must lie between 0 and 1. The RR and its lower and upper confidence limits may be below or above 1. Both the BR and RR must satisfy the conditions lower limit \leq estimate \leq upper limit. Error codes are displayed for the confidence limits if these conditions are violated. Entered confidence limits for BR below 0 or above 1 are truncated to 0 or 1.

Also, when BR and RR are large, the calculated RD and its confidence limits may be ≥ 1 . If this is a possibility, the RR based model may be inappropriate and an OR based model may be preferred. If the calculated RD ≥ 1 , a warning is displayed and error codes are displayed for both confidence limits. Otherwise, a calculated upper limit ≥ 1 is truncated and a warning displayed.

To perform these calculations, replace values in **bold** as appropriate.

Input data:	Estimate	Lower limit	Upper limit
Baseline risk (BR)	0.041	0.011	0.137
Relative risk (RR)	0.36	0.2	0.67

Input data validity check	TRUE
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Results:	Estimate	Lower limit	Upper limit
Risk difference (RD)	-0.0262	-0.0888	-0.0058

RR).

vention.

preferable.
limits.