

A range of values below and above the [point estimate](#) that has a given probability of including the true value of a given parameter, such as a treatment effect.

Note: The confidence interval is the area of uncertainty for the estimating of a parameter. The use of this interval reflects the fact that a study provides one estimate of a parameter, out of the many estimates that would be possible if the study were repeated several times. If an X% CI is constructed for each repetition, X% of the intervals will contain the true value of the parameter. Investigators typically use confidence intervals of 90%, 95% or 99%. Thus, a 95% confidence interval indicates that there is a 95% probability that the confidence interval calculated from a particular study includes the true value of the parameter. If the interval includes a null value (a difference in means of 0, an [odds ratio](#) or a [relative risk](#) of 1, or a [correlation coefficient](#) of 0, for example), the [null hypothesis](#) cannot be rejected. A narrow confidence interval around a point estimate indicates a more precise estimate than a wide confidence interval.