The ratio (quotient) of the exposure odds among the cases (subjects who are ill or have died, for example) to that among the controls (subjects who are not ill or who are alive, for example).

Note: The odds ratio is the estimate of relative risk used in a type of study (case-control) in which it is impossible to calculate relative risk directly. It is a good estimate of relative risk in cases in which the disease is rare. Thus, if the results of a trial are that the probability of death is 25% in the control group and 10% in the experimental group, the odds ratio of survival is [0.10 ÷ (1.0 - 0.10)] ÷ [(0.25 ÷ (1.0 - 0.25)] = 0.33.

(Related concepts: absolute risk reduction, number needed to treat and relative risk)