

How to interpret Relative Risk and Odds Ratio



Ask Mish

- HOW TO INTERPRET RR AND ODDS RATIO

- = 1 means no association disease-risk factor, >1 is increased risk for disease in exposed and <1 means decreased risk of disease in exposed.

- **Calculation:** RR=2.5 means 150% increased risk; $RRI = |1 - RR| \times 100$ so $RRI = |1 - 2.5| \times 100$; $RRI = 150\%$. RR= 0.3 means 70% decreased risk; $RRR = |1 - 0.3| \times 100 = 70\%$

- Application of RR in clinical practice:

- Let's suppose we have a study in which we used Estrogen/ Progesterone to decrease the risk of CAD. Final result :RR=0.39 meaning RRR=61% equals 61% less risk of disease in the E/P group. If you have a woman with 20% Framingham CAD risk how much will be her risk of CAD if she receives E/P? Multiply 0.39 (RR) x 20% (Framingham.risk) = approximative 8% risk of CAD with E/P.

- How big should be RR or Odds ratio?

- Depends on study. RCT, least prone to bias, a small variation is enough; in COHORT study $RR > 3$, in CASE CONTROL study $OR > 4$ (Case control has a greater risk of bias)

Relative Risk

