

An **odds ratio (OR)** of **4** means that the odds of an outcome occurring in the **exposed group** are **4 times greater** than the odds of the outcome occurring in the **non-exposed group**.### Example: If this was a study examining the association between smoking (exposure) and lung cancer (outcome), an odds ratio of 4 means that **smokers are 4 times more likely** to develop lung cancer than non-smokers, assuming other factors are controlled for in the study.### Important Note: – **Odds ratio (OR)** is commonly used in **case-control studies** or **cross-sectional studies** to quantify the association between exposure and outcome.