Epidemiology, Biostatistics and Evidence-Based Medicine

University Medicine · Vocabulary in context

Word	Example
epidemiology	**Epidemiology** studies how diseases spread in populations.
biostatistics	**Biostatistics** uses statistics to study health data.
evidence-based medicine	**Evidence-based medicine** combines research, the doctor's skill and the patient's wishes.
incidence /ˈɪnsɪdəns/	**Incidence** counts new cases in a period of time.
prevalence /ˈprevələns/	**Prevalence** counts all the people who have the disease now.
case fatality	**Case fatality** is the share of sick people who die.
relative risk	A **relative risk** of 2 means the risk is twice as high.
odds ratio	The **odds ratio** is used in case-control studies.
bias /ˈbaɪəs/	**Bias** can distort results even with a large sample.
selection bias /sɪˈlekʃn ˈbaɪəs/	**Selection bias** happens when the people studied are not typical.
confounding /kənˈfaʊndɪŋ/	**Confounding** happens when a third factor causes both things you are studying.
stratification	**Stratification** compares results within each group, such as smokers and non-smokers.

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predictive values	**Predictive values** show how likely a test result is to be right.
sensitivity /ˌsensɪˈtɪvɪti/	A test with high **sensitivity** finds most people who have the disease.
specificity /ˌspesɪˈfɪsɪti/	A test with high **specificity** rarely gives a positive result to healthy people.
likelihood ratios	**Likelihood ratios** show how much a test result changes the chance of disease.
confidence interval /ˈkɒnfɪdəns ˈɪntəvl/	A narrow **confidence interval** means the estimate is precise.
p-value /ˌpiː ˈvæljuː/	A small **p-value** means the result would be surprising if there were no real effect.
Kaplan–Meier curve	A **Kaplan–Meier curve** shows how many patients are still well over time.
intention to treat	**Intention to treat** analyses patients in the group they were first put in.
forest plot	A **forest plot** shows the results of many trials on one chart.
heterogeneity	**Heterogeneity** means the trials give different results.
NNT	An **NNT** of 10 means ten people must be treated for one to benefit.
GRADE	**GRADE** rates how strong the evidence is.