

# HOW STRONG IS THE SCIENTIFIC EVIDENCE?

## SYSTEMATIC REVIEWS AND META-ANALYSES

gather & summarise all relevant studies on a particular topic - lower chance of bias



systematic reviews



meta-analyses

## RANDOMISED CONTROLLED TRIALS (RCT)

identify population to study  
e.g. women over 50



split into two random groups and measure effects



one group is not exposed (control)

one group is exposed to treatment (intervention)

## OBSERVATIONAL RESEARCH

scientists use these studies to identify correlations and develop hypotheses for further testing



## ANIMAL & CELL STUDIES

effects in humans and animals are not always the same

isolated cells in the laboratory behave differently than cells in the body



## EXPERT OPINIONS & ANECDOTES

a single person's experience or opinion does not provide an objective picture



anecdotes



COMMUNICATION TIPS



this is the strongest available evidence



these studies can prove causation but keep in mind not to generalise too readily



don't forget that correlation does not mean causation, and remember to communicate absolute risk



always keep in mind the limitations of cell and animal research



this evidence is too weak to draw conclusions