Interpreting Results

Levels of Evidence (see Wikipedia entry)

Meta-analyses of RCTs > Systematic reviews or RCTs without meta-analyses > Qualitative opinion reviews of RCTs > a few RCTs > Meta-analyses of non-randomized studies (cohort/case control/noncontrolled RCTs) > Systematic reviews of nonrandomized studies > Expert opinion

Causality

See Hill's criteria for evaluating non-RCT studies

Interpreting Individual Results

What are necessary controls or comparison groups
Are there alternate explanations, esp simpler ones
Compare results with expected base rates or control group outcomes
Does it fit with prior research
Is it actually a replication test
Is magnitude sufficient for policy, public health, clinical changes
Is convergent validity present
What is distribution of effect across people – is effect due to a small subgroup?
Generalizability of sample
What is biggest anomaly in data