Criteria to Estimate Causality from Non-Randomized Studies.

**Hill’s Criteria** *(Proceedings Royal Society of Medicine 58:295-300, 1965)*

- Strength of association
- Consistency (across trials, investigators, persons)
- Specificity (can other things cause it)
- Temporal precedence (do we know if cause precedes effect)
- Dose-responsivity
- Plausibility (biological and psychological)
- Coherence (consistent with other lines of evidence)
- Analogy (do similar agents act similarly)

**Other possible criteria**

- Replicated by others
- Convergent validity
- Consistency across Ss
- External validity