

## **From the Centre for Evidence-Based Medicine, Oxford**

For the most up-to-date levels of evidence, see

[http://www.cebm.net/levels\\_of\\_evidence.asp](http://www.cebm.net/levels_of_evidence.asp)

### **Therapy/Prevention/Etiology/Harm:**

- 1a: Systematic reviews (with homogeneity ) of randomized controlled trials
- 1a- Systematic review of randomized trials displaying worrisome heterogeneity
- :
- 1b: Individual randomized controlled trials (with narrow confidence interval)
- 1b- Individual randomized controlled trials (with a wide confidence interval)
- :
- 1c: All or none randomized controlled trials
- 2a: Systematic reviews (with homogeneity) of cohort studies
- 2a- Systematic reviews of cohort studies displaying worrisome heterogeneity
- :
- 2b: Individual cohort study or low quality randomized controlled trials (<80% follow-up)
- 2b- Individual cohort study or low quality randomized controlled trials (<80% follow-up / wide confidence interval)
- 2c: 'Outcomes' Research; ecological studies
- 3a: Systematic review (with homogeneity) of case-control studies
- 3a- Systematic review of case-control studies with worrisome heterogeneity
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- 3b: Individual case-control study
- 4: Case-series (and poor quality cohort and case-control studies)
- 5: Expert opinion without explicit critical appraisal, or based on physiology, bench research or 'first principles'

### **Diagnosis:**

- 1a: Systematic review (with homogeneity) of Level 1 diagnostic studies; or a clinical rule validated on a test set.
- 1a- Systematic review of Level 1 diagnostic studies displaying worrisome heterogeneity
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- 1b: Independent blind comparison of an appropriate spectrum of consecutive patients, all of whom have undergone both the diagnostic test and the reference standard; or a clinical decision rule not validated on a second set of patients
- 1c: Absolute SpPins And SnNouts (An "Absolute SpPin" is a diagnostic finding whose Specificity is so high that a Positive result rules-in the diagnosis. An "Absolute SnNout" is a diagnostic finding whose Sensitivity is so high that a Negative result rules-out the diagnosis).
- 2a: Systematic review (with homogeneity) of Level >2 diagnostic studies
- 2a- Systematic review of Level >2 diagnostic studies displaying worrisome heterogeneity
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- 2b: Any of: 1)independent blind or objective comparison; 2)study performed in a set of non-consecutive patients, or confined to a narrow spectrum of study individuals (or both) all of whom have undergone both the diagnostic test and the reference standard; 3) a diagnostic clinical rule not validated in a test set.
- 3a: Systematic review (with homogeneity) of case-control studies
- 3a- Systematic review of case-control studies displaying worrisome heterogeneity
- :
- 4: Any of: 1)reference standard was unobjective, unblinded or not independent; 2)

positive and negative tests were verified using separate reference standards; 3) study was performed in an inappropriate spectrum of patients.

- 5: Expert opinion without explicit critical appraisal, or based on physiology, bench research or 'first principles'

**Prognosis:**

1a: Systematic review (with homogeneity) of inception cohort studies; or a clinical rule validated on a test set.

1a- Systematic review of inception cohort studies displaying worrisome heterogeneity :

1b: Individual inception cohort study with > 80% follow-up; or a clinical rule not validated on a second set of patients

1c: All or none case-series

2a: Systematic review (with homogeneity) of either retrospective cohort studies or untreated control groups in RCTs.

2a- Systematic review of either retrospective cohort studies or untreated control groups in RCTs displaying worrisome heterogeneity

2b: Retrospective cohort study or follow-up of untreated control patients in an RCT; or clinical rule not validated in a test set.

2c: 'Outcomes' research

4: Case-series (and poor quality prognostic cohort studies)

5: Expert opinion without explicit critical appraisal, or based on physiology, bench research or 'first principles'

**Key to interpretation of practice guidelines**

**Agency for Healthcare Research and Quality:**

A: There is good research-based evidence to support the recommendation.

B: There is fair research-based evidence to support the recommendation.

C: The recommendation is based on expert opinion and panel consensus.

X: There is evidence of harm from this intervention.

**USPSTF Guide to Clinical Preventive Services:**

A: There is good evidence to support the recommendation that the condition be specifically considered in a periodic health examination.

B: There is fair evidence to support the recommendation that the condition be specifically considered in a periodic health examination.

C: There is insufficient evidence to recommend for or against the inclusion of the condition in a periodic health examination, but recommendations may be made on other grounds.

D: There is fair evidence to support the recommendation that the condition be excluded from consideration in a periodic health examination.

E: There is good evidence to support the recommendation that the condition be excluded from consideration in a periodic health examination.

**University of Michigan Practice Guideline:**

A: Randomized controlled trials.

B: Controlled trials, no randomization.

C: Observational trials.

D: Opinion of the expert panel.

**Other guidelines:**

A: There is good research-based evidence to support the recommendation.

B: There is fair research-based evidence to support the recommendation.

C: The recommendation is based on expert opinion and panel consensus.

X: There is evidence that the intervention is harmful.