

12. Epidemiology, Biostatistics and Evidence-Based Medicine

Starter Quiz ·

University Medicine

Name: _____ Score: _____

1. (Synthetic) 1,500 people at risk; 30 new cases in one year. What is the incidence, in % per year?
_____ % per year
2. (Synthetic) Exposed 300 with 30 events; unexposed 300 with 10 events. What is the relative risk?

3. Mothers of babies with birth defects report more medicine use in pregnancy than other mothers. What is the main worry?
 - ☐ Temporality
 - ☐ Selection of controls by chance
 - ☐ Recall bias
 - ☐ Too much statistical power
4. (Synthetic) 50 people have the disease and 45 test positive. What is the sensitivity in %?
_____ %
5. A study reports RR 1.5 (95% CI 0.8–2.8). What can you conclude?
 - ☐ p is below 0.05
 - ☐ The drug definitely has no effect
 - ☐ The data are compatible with no effect
 - ☐ The drug definitely raises risk
6. A randomised trial is always blinded.
 - ☐ True ☐ False
7. Which is a surrogate outcome?
 - ☐ A fall in blood cholesterol
 - ☐ Fewer deaths
 - ☐ Fewer strokes
 - ☐ Fewer heart attacks
8. Prevalence is a rate with a time unit.
 - ☐ True ☐ False

9. A relative risk can be calculated directly from a case-control study.

☐ True ☐ False

10. (Synthetic) Among smokers, exposed 18/120 and unexposed 6/40 had events. What is the RR in this stratum?

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Answers ·

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1. **2 % per year**

$30 \div 1,500 = 0.02$, so 2% per year.

2. **3**

$0.10 \div 0.0333 = 3.0$.

3. **Recall bias**

Mothers of affected babies may search their memory harder.

4. **90 %**

$45 \div 50 = 90\%$.

5. **The data are compatible with no effect**

The interval includes 1.

6. **False**

Randomisation and blinding are separate; a surgical trial may be randomised but not blinded.

7. **A fall in blood cholesterol**

A lab value may not translate into patient benefit.

8. **False**

It is a proportion at one moment; incidence is the rate.

9. **False**

The researcher chose how many cases and controls to include, so only the odds ratio is valid.

10. **1**

$0.15 \div 0.15 = 1.0$, so no effect inside the stratum.