# Analysis of data

# EXERCISES

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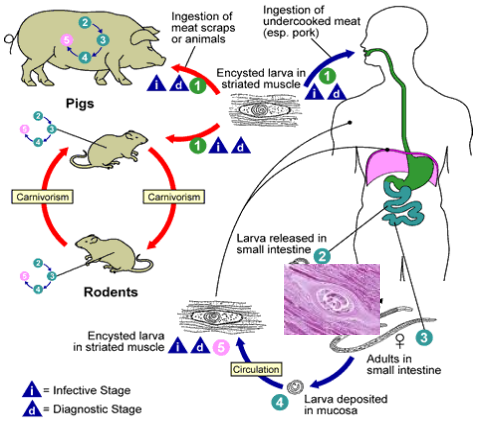

Exercise 1

Levels of blood levels of XX provide the basis for classifying individual for diagnosis and therapy. Based on circulating levels, individuals are classified as NL(normal levels), LL (low levels) or HL (high levels). What type of variable is this?

a. Categorical
b. Ordinal
c. Continuous

Exercise 2

Which of the following are true regarding p-values? (Select all that apply)

a. A p-value of 0.05 indicates there is a 5% probability of seeing differences as large or larger than those observed if the null hypothesis were really true.

b. The p-value for small sample sizes can be falsely low if one uses a chi-squared test. This is why a Fisher's exact test should be used to calculate p-values for smaller sample sizes.

c. When comparing frequencies, the p-value depends on the "degrees of freedom".

d. A p-value provides a way of evaluating whether the observed results are compatible with the null hypothesis.

e. If there is less than a 5% probability that the results are compatible with the null hypothesis, then statisticians would be likely to call the result "statistically significant.“

f. In evaluating random error, p-values also take into account the effects of bias and confounding.

Exercise 3

Statistical significance using confidence intervals, is it significant?

a. Relative Risk = 0.45, 95%CI= 0.27-0.63
b. Relative Risk = 0.68, 95%CI= 0.27-1.01
c. Relative Risk = 3.43, 95%CI= 0.98-5.92
d. Relative Risk = 2.51, 95%CI= 1.04-3.28
e. Risk Difference = 0.75, 95%CI= 0.41-1.16

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