



QUESTION WORKBOOK

Diet, energy and how to read a health claim

Nutrition, digestion and health evidence · Unit B10

AQA 3.3.4.2 (evaluating risk-factor data) · OCR A 2.1.2 (the molecules a diet supplies)
Edexcel A Topic 1.7–1.10 · CAIE not examined as a topic

5 questions · 19 marks

NAVY SCREEN EDITION

SECTION A · Short, 1 to 2 marks

- A1** State the conditions under which basal metabolic rate is measured, and state what a person's basal metabolic rate mostly depends on. [2]

SECTION B · Standard, 3 to 5 marks

- B1** A cross-sectional survey of 40 000 adults reports that those taking a vitamin supplement have a 12 per cent lower rate of heart disease than those who do not. A newspaper concludes that the supplement protects the heart. Evaluate that conclusion. [5]

- B2** In a population, 4 people in every 100 develop a particular cancer during their lifetime. A cohort study reports a relative risk of 1.25 for that cancer in people with a high intake of one food. Calculate the absolute lifetime risk for those people, calculate the increase in absolute risk in percentage points, and calculate how many people would have to eat that way for one extra case to arise. [4]

B3 Compare a cohort study with a case-control study, referring to who is recruited, what measure each produces, and the main weakness of each. [4]

B4 A cohort study finds that adults who reported eating the least fruit were later diagnosed with cancer more often than those who reported eating the most. Suggest two explanations for this association other than a protective effect of fruit, and suggest for each what the investigators could do to test it. [4]
