

Nutritional Epidemiology

with Professor Lucinda Black

Talking points

KNOWLEDGE

1. What part of the nervous system is damaged when a person has MS?
2. List four potential signs or symptoms of MS.

COMPREHENSION

3. In your own words, how would you describe a randomised controlled trial?
4. In a case-control study, what is meant by the 'case' and 'control' participants?

SYNTHESIS

5. What are the challenges of collecting dietary data by asking people what they ate?
6. What can case-control studies tell researchers about the link between diet and disease?
7. Describe another type of study that could be used to investigate diet and disease. How is it different to a case-control study?

CREATIVITY

8. Can you think of a method to get a more accurate measurement of what someone eats in a week than asking them to write it down?

Activity

Are fruit and veg really good for you? Check the evidence yourself!

In many countries, the government recommends that adults eat at least five portions of fruit and vegetables a day. But what evidence is there behind these recommendations?

In this exercise, you will look at a nutritional epidemiology research paper to find out if eating more fruit and vegetables is linked to lower risk of cardiovascular disease and death.

Head to www.sciencedirect.com/science/article/pii/S0140673617322535. This is a research article published in an academic medical journal. Have a look at the structure of the article. What sections does it have? Don't worry, you won't need to read the whole article! You can learn the key points from the summary at the start.

Read the summary and the 'Research in context' sections and answer the following questions:

- The study is described as a 'prospective cohort study'. Look up a definition of this. Why do you think the researchers chose to use this type of study?
- How many people were included in the study, and how many cardiovascular deaths and diseases were recorded?
- Why do you think it is important that this study included participants from low-, middle- and high-income countries?
- Why do you think the study collected information about participants' socioeconomic status and lifestyle, as well as diet?
- How did the risk of total mortality change if vegetables were eaten cooked, rather than raw?
- What did the study discover about how the specific amount of fruit and vegetable intake impacts the risk of total mortality?
- What are the implications of this research for people who do not have access to lots of fruits and vegetables?
- Based on what you have read, do you agree with the 'five a day' advice?

More resources

- Learn more about the MS Nutrition Research Program: msnutritionresearch.com.au
- The Healthy Eating Advisory Service has listed a collection of engaging teaching resources to develop your knowledge and skills around food and nutrition: heas.health.vic.gov.au/schools/classroom/curriculum-resources
- The British Nutrition Foundation has lots of classroom resources and posters relating to healthy eating, as well as activities for the annual Healthy Eating Week: www.nutrition.org.uk/resources

Visit Lucinda's Futurum webpage to view an animation about her work: www.futurumcareers.com/could-a-healthy-diet-combat-multiple-sclerosis