

GENERAL NUTRITION KNOWLEDGE QUESTIONNAIRE

This is a survey, not a test. Your answers will help identify which dietary advice people find confusing. It is important that you complete it by yourself. Your answers will remain anonymous. If you don't know the answer, mark "not sure" rather than guess. Thank you for your time.

Section 1: The first few items are about what advice you think experts are giving us.

1. Do health experts recommend that people should be eating more, the same amount, or less of the following foods? (tick one box per food)

	More	Same	Less	Not Sure
Fruit	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food and drinks with added sugar	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>
Vegetables	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fatty foods	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>
Processed red meat	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>
Wholegrains	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Salty foods	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>
Water	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. How many servings of fruit and vegetables per day do experts advise people to eat as a minimum? (One serving could be, for example, an apple or a handful of chopped carrots) (tick one)

2	<input type="checkbox"/>
3	<input type="checkbox"/>
4	<input type="checkbox"/>
5 or more	✓
Not sure	<input type="checkbox"/>

3. Which of these types of fats do experts recommend that people should eat less of? (tick one box per food)

	Eat less	Not eat less	Not sure
Unsaturated fats	<input type="checkbox"/>	✓	<input type="checkbox"/>
Trans fats	✓	<input type="checkbox"/>	<input type="checkbox"/>
Saturated fats	✓	<input type="checkbox"/>	<input type="checkbox"/>

4. Which type of dairy foods do experts say people should drink? (tick one)

Full fat (e.g. full fat milk)	<input type="checkbox"/>
Reduced fat (e.g. skimmed and semi-skimmed milk)	✓
Mixture of full fat and reduced fat	<input type="checkbox"/>
Neither, dairy foods should be avoided	<input type="checkbox"/>
Not sure	<input type="checkbox"/>

5. How many times per week do experts recommend that people eat oily fish (e.g. salmon and mackerel)? (tick one)

- 1-2 times per week
- 3-4 times per week
- Every day
- Not sure

6. Approximately how many alcoholic drinks is the maximum recommended per day (The exact number depends on the size and strength of the drink)? (tick one)

- 1 drink each for men and women
- 2 drinks each for men and women
- 2 drinks for men and 1 drink for women
- 3 drinks for men and 2 drinks for women
- Not sure

7. How many times per week do experts recommend that people eat breakfast? (tick one)

- 3 times per week
- 4 times per week
- Every day
- Not sure

8. If a person has two glasses of fruit juice in a day, how many of their daily fruit and vegetable servings would this count as? (tick one)

- None
- One serving
- Two servings
- Three servings
- Not sure

9. According to the 'eatwell guide' (a guideline showing the proportions of food types people should eat to have a balanced and healthy diet), how much of a person's diet should be made up of starchy foods? (tick one)

- Quarter
- Third
- Half
- Not sure

Section 2: Experts classify foods into groups. We are interested to see whether people are aware of food groups and the nutrients they contain.

1. Do you think these foods and drinks are typically high or low in added sugar? (tick one box per food)

	High in added sugar	Low in added sugar	Not sure
Diet cola drinks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural yoghurt	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ice cream	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tomato ketchup	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Melon	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2. Do you think these foods are typically high or low in salt? (tick one box per food)

	High in salt	Low in salt	Not Sure
Breakfast cereals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frozen vegetables	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bread	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baked beans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Red meat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Canned soup	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Do you think these foods are typically high or low in fibre? (tick one box per food)

	High in fibre	Low in fibre	Not Sure
Oats	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bananas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
White rice	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Eggs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Potatoes with skin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pasta	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4. Do you think these foods are a good source of protein? (tick one box per food)

	Good source of protein	Not a good source of protein	Not sure
Poultry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cheese	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fruit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Baked beans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Butter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nuts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Which of the following foods do experts count as starchy foods? (tick one box per food)

	Starchy food	Not a starchy food	Not sure
Cheese	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pasta	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potatoes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nuts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Plantains	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Which is the main type of fat present in each of these foods? (tick one box per food)

	Polyunsaturated fat	Monounsaturated fat	Saturated fat	Cholesterol	Not sure
Olive oil	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Butter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sunflower oil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eggs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

7. Which of these foods has the most trans-fat? (tick one)

Biscuits, cakes and pastries	<input checked="" type="checkbox"/>
Fish	<input type="checkbox"/>
Rapeseed oil	<input type="checkbox"/>
Eggs	<input type="checkbox"/>
Not sure	<input type="checkbox"/>

8. The amount of calcium in a glass of whole milk compared to a glass of skimmed milk is: (tick one)

About the same	<input checked="" type="checkbox"/>
Much higher	<input type="checkbox"/>
Much lower	<input type="checkbox"/>
Not sure	<input type="checkbox"/>

9. Which one of the following nutrients has the most calories for the same weight of food? (tick one)

Sugar	<input type="checkbox"/>
Starchy	<input type="checkbox"/>
Fibre/roughage	<input type="checkbox"/>
Fat	<input checked="" type="checkbox"/>
Not sure	<input type="checkbox"/>

10. Compared to minimally processed foods, processed foods are: (tick one)

Higher in calories	<input checked="" type="checkbox"/>
Higher in fibre	<input type="checkbox"/>
Lower in salt	<input type="checkbox"/>
Not sure	<input type="checkbox"/>

Section 3: The next few items are about choosing foods	
1. If a person wanted to buy a yogurt at the supermarket, which would have the least sugar/sweetener? (tick one)	
0% fat cherry yogurt	<input type="checkbox"/>
Natural yogurt	<input checked="" type="checkbox"/>
Creamy fruit yogurt	<input type="checkbox"/>
Not sure	<input type="checkbox"/>
2. If a person wanted soup in a restaurant or cafe, which one would be the lowest fat option? (tick one)	
Mushroom risotto soup (field mushrooms, porcini mushrooms, arborio rice, butter, cream, parsley and cracked black pepper)	<input type="checkbox"/>
Carrot butternut and spice soup (carrot , butternut squash, sweet potato, cumin, red chillies, coriander seeds and lemon)	<input checked="" type="checkbox"/>
Cream of chicken soup (British chicken, onions, carrots, celery, potatoes, garlic, sage, wheat flour, double cream)	<input type="checkbox"/>
Not sure	<input type="checkbox"/>
3. Which would be the healthiest and most balanced choice for a main meal in a restaurant? (tick one)	
Roast turkey, mashed potatoes and vegetables	<input checked="" type="checkbox"/>
Beef, Yorkshire pudding and roast potatoes	<input type="checkbox"/>
Fish and chips served with peas and tartar sauce	<input type="checkbox"/>
Not sure	<input type="checkbox"/>
4. Which would be the healthiest and most balanced sandwich lunch? (tick one)	
Ham sandwich + fruit + blueberry muffin + fruit juice	<input type="checkbox"/>
Tuna salad sandwich + fruit + low fat yogurt + water	<input checked="" type="checkbox"/>
Egg salad sandwich + crisps + low fat yogurt + water	<input type="checkbox"/>
Not sure	<input type="checkbox"/>
5. Which of these foods would be the healthiest choice for a pudding? (tick one)	
Berry sorbet	<input checked="" type="checkbox"/>
Apple and blackberry pie	<input type="checkbox"/>
Lemon cheesecake	<input type="checkbox"/>
Carrot cake with cream cheese topping	<input type="checkbox"/>
Not sure	<input type="checkbox"/>

6. Which of these combinations of vegetables in a salad would give the greatest variety of vitamins and antioxidants? (tick one)

- Lettuce, green peppers and cabbage
- Broccoli, carrot and tomatoes
- Red peppers, tomatoes and lettuce
- Not sure

7. If a person wanted to reduce the amount of fat in their diet, but didn't want to give up chips, which of the following foods would be the best choice? (tick one)

- Thick cut chips
- Thin cut chips
- Crinkle cut chips
- Not sure

8. One healthy way to add flavour to food without adding extra fat or salt is to add: (tick one)

- Coconut milk
- Herbs
- Soya sauce
- Not sure

9. Which of the following cooking methods requires fat to be added? (tick one)

- Grilling
- Steaming
- Baking
- Sautéing
- Not sure

10. Traffic lights are often used on nutrition labelling, what would amber mean for the fat content of a food? (tick one)

- Low fat
- Medium fat
- High in fat
- Not sure

11. "Light" foods (or Diet foods) are always good options because they are low in calories. (tick one)

- Agree
- Disagree
- Not sure

The following questions are related to food labels:

Product 1 (Sweet biscuit)					Product 2 (Savoury biscuit)				
Each biscuit (9.5g) contains:					Each biscuit (16g) contains:				
Calories	Sugar	Fat	Saturates	Salt	Calories	Sugar	Fat	Saturates	Salt
43	2g	1g	1g	0.1g	66	1g	3g	Trace	0.3g
2%	2%	2%	3%	2%	3%	1%	4%	1%	4%
Typical value (as sold) per 100g: 450 Kcal					Typical value (as sold) per 100g: 412 Kcal				
Ingredient list: Oat flakes, sugar, palm oil, fortified wheat flour, whole wheat flour, fructose, malt syrup, salt, raising agents: sodium hydrogen carbonate, ammonium hydrogen carbonate, flavouring					Ingredient list: Wheat Flour, Palm Oil, Corn Syrup, Malt, Salt, Yeast, Leavening Agents (Sodium Bicarbonate, Ammonium Bicarbonate, Sodium Pyrophosphate), Corn Starch, Soy Lecithin, Sodium Metabisulphite (Baking Agent).				

12. Looking at products 1 and 2, which one has the most calories (kcal) per 100 grams (tick one)

- Product 1
- Product 2
- Both have the same quantity
- Not sure

13. Looking at product 1, what are the sources of sugar in the ingredient list? (tick one)

- Sugar and malt syrup
- Sugar, fructose and lecithin
- Sugar, fructose and malt syrup
- Not sure

Section 4: This section is about health problems or diseases related to diet and weight management	
1. Which of these diseases is related to a low intake of fibre? (tick one)	
Bowel disorders	<input checked="" type="checkbox"/>
Anaemia	<input type="checkbox"/>
Tooth decay	<input type="checkbox"/>
Not sure	<input type="checkbox"/>
2. Which of these diseases is related to how much sugar people eat? (tick one)	
High blood pressure	<input type="checkbox"/>
Tooth decay	<input checked="" type="checkbox"/>
Anaemia	<input type="checkbox"/>
Not sure	<input type="checkbox"/>
3. Which of these diseases is related to how much salt (or sodium) people eat? (tick one)	
Hypothyroidism	<input type="checkbox"/>
Diabetes	<input type="checkbox"/>
High blood pressure	<input checked="" type="checkbox"/>
Not sure	<input type="checkbox"/>
4. Which of these options do experts recommend to reduce the chances of getting cancer? (tick one)	
Drinking alcohol regularly	<input type="checkbox"/>
Eating less red meat	<input checked="" type="checkbox"/>
Avoiding additives in food	<input type="checkbox"/>
Not sure	<input type="checkbox"/>
5. Which of these options do experts recommend to prevent heart disease? (tick one)	
Taking nutritional supplements	<input type="checkbox"/>
Eating less oily fish	<input type="checkbox"/>
Eating less trans-fats	<input checked="" type="checkbox"/>
Not sure	<input type="checkbox"/>
6. Which of these options do experts recommend to prevent diabetes? (tick one)	
Eating less refined foods	<input checked="" type="checkbox"/>
Drinking more fruit juice	<input type="checkbox"/>
Eating more processed meat	<input type="checkbox"/>
Not sure	<input type="checkbox"/>

7. Which one of these foods is more likely to raise people's blood cholesterol? (tick one)

- Eggs
- Vegetable oils
- Animal fat
- Not sure

8. Which one of these foods is classified as having a high Glycaemic Index (Glycaemic Index is a measure of the impact of a food on blood sugar levels, thus a high Glycaemic Index means a greater rise in blood sugar after eating)? (tick one)

- Wholegrain cereals
- white bread
- Fruit and vegetables
- Not sure

9. To maintain a healthy weight people should cut fat out completely. (tick one)

- Agree
- Disagree
- Not sure

10. To maintain a healthy weight people should eat a high protein diet. (tick one)

- Agree
- Disagree
- Not sure

11. Eating bread always causes weight gain. (tick one)

- Agree
- Disagree
- Not Sure

12. Fibre can decrease the chances of gaining weight. (tick one)

- Agree
- Disagree
- Not sure

13. Which of these options can help people to maintain a healthy weight? (answer each one)

	Yes	No	Not sure
Not eating while watching TV	✓	<input type="checkbox"/>	<input type="checkbox"/>
Reading food labels	✓	<input type="checkbox"/>	<input type="checkbox"/>
Taking nutritional supplements	<input type="checkbox"/>	✓	<input type="checkbox"/>
Monitoring their eating	✓	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring their weight	✓	<input type="checkbox"/>	<input type="checkbox"/>
Grazing throughout the day	<input type="checkbox"/>	✓	<input type="checkbox"/>

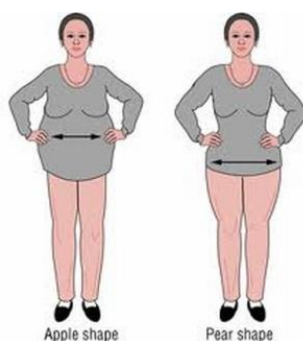
14. If someone has a Body Mass Index (BMI) of 23kg/m², what would their weight status be? (tick one)

Underweight	<input type="checkbox"/>
Normal weight	✓
Overweight	<input type="checkbox"/>
Obese	<input type="checkbox"/>
Not sure	<input type="checkbox"/>

15. If someone has a Body Mass Index (BMI) of 31kg/m², what would their weight status be? (tick one)

Underweight	<input type="checkbox"/>
Normal weight	<input type="checkbox"/>
Overweight	<input type="checkbox"/>
Obese	✓
Not sure	<input type="checkbox"/>

Look at the body shapes below:



16. Which of these body shapes increases the risk of cardiovascular disease (Cardiovascular disease is a general term that describes a disease of the heart or blood vessels, for example, angina, heart attack, heart failure, congenital heart disease and stroke)? (tick one)

Apple shape	✓
Pear shape	<input type="checkbox"/>
Not sure	<input type="checkbox"/>

Section 5: We would like to ask you a few questions about yourself

1. Are you...

- Male
 Female

2. What is your current weight approximately? Please give this in stones and pounds or kilograms.

Stones	<input type="text"/>
Pounds	<input type="text"/>
Or Kilograms	<input type="text"/>

3. What is your current height approximately? Please give this in feet and inches or centimetres.

Feet	<input type="text"/>
Inches	<input type="text"/>
Or Centimetres	<input type="text"/>

4. In general, would you say your health is...

- Poor
 Fair
 Good
 Very good
 Excellent

5. Are you...

- Single
 Married
 Living as married
 Separated
 Divorced
 Widowed

6. Do you have any children?

- No
 1
 2
 3
 4
 More than 4

7. Do you have any children, under 18 years, living with you?

- Yes
 No

8. What best describe your ethnic origin? (tick one)

- White British
 White Irish
 Other White background
 Black British
 Black Caribbean
 Black African
 Other Black background
 Indian
 Pakistani
 Bangladeshi
 Chinese
 Other Asian background
 White and Black Caribbean
 White and Black African
 White and Asian
 Other mixed background
 Other, please specify:

9. What is the highest level of education you have completed?

- Primary school
 Secondary school
 O level/ GCSEs
 A levels
 Technical or trade certificate
 Diploma
 Degree
 Post-graduate degree

10. Do you have any nutrition related qualifications (or are you studying to get a nutrition qualification)?

- Yes
 No
 Please specify:

Thank you very much for taking part in this survey!

SCORING THE GENERAL NUTRITION KNOWLEDGE QUESTIONNAIRE-REVISED

The General Nutrition Knowledge Questionnaire consists of four independent sections, each assessing a different aspect of nutrition knowledge: Dietary recommendations; Food groups; Healthy Food choices and Diet, disease and weight management. Both validity and reliability studies have been carried out on the questionnaire as a whole and each section independently, thus enabling each one to be used as a separate measure if required.

Section 1 - Dietary Recommendations

Each item carries one point for a correct answer. The subsections of the first and third questions are treated as separate items.

Maximum score = 18.

Section 2 – Food groups

Each item carries one point for a correct answer. In questions with lists of foods, each food is treated as a separate item (questions 1,2,3,4,5,6).

Maximum score =36

Section 3- Healthy Food choices

Each item carries one point for a correct answer.

Maximum score = 13.

Section 4 - Diet, disease and weight management

Each item carries one point for a correct answer. The subsections of the question 13 are treated as separate items.

Maximum score = 21.