

GCSE Eduqas Food, Preparation Nutrition Information – Autumn 2020

Please see link for the Eduqas Digital Guide below to aid your study.

<https://www.illuminate.digital/eduqasfood/>

Username: SLORDDERBY4

Password: STUDENT4

Cereal Facts

Cereal crops include wheat, rye, barley, oats and rice.

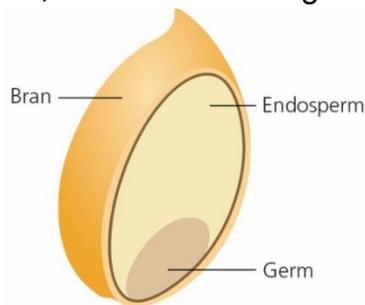
Grains are the seeds of cereal plants.

What is a wholegrain?

A 'wholegrain' is made up of three elements:

- a fibre-rich outer layer – the **bran**
- a nutrient-packed inner part – the **germ**
- a central starchy part – the **endosperm**.

During the milling process, the bran and the germ are often removed to give a 'whiter' cereal.



What nutrients do wholegrains contain?

Wholegrains can contain up to 75 per cent more nutrients than refined cereals as most nutrients are found in the bran and germ of the seed.

Wholegrains provide:

- **fibre** –soluble and insoluble
- **B vitamins** and **folic acid**
- **essential fatty acids (omega 3)**
- **protein**
- **antioxidants** including **vitamin E**, **selenium**
- **trace elements** such as **copper**.

Types of wholegrains

Cereals:

- Wheat, including spelt and durum
- Rice
- Barley (but not pearl barley which has had the outer husk removed)
- Maize (corn)
- Rye

- Oats
- Millet
- Wild rice

Other grains:

- Buckwheat
- Quinoa

Why should we eat wholegrains? Research suggests that, because of the nutrients they contain, eating wholegrains regularly may help to reduce the risk of many common diseases, including heart disease, stroke, type 2 diabetes and some forms of cancer of the digestive system (e.g. bowel cancer)..

Wholegrains may also help in maintaining a healthy body weight over time as part of a healthy diet and lifestyle.

They are usually low in fat but rich in fibre and starchy carbohydrate. They have a low glycaemic index (GI), meaning they provide a slow release of carbohydrate into the blood which, together with fibre content, may help keep you feeling fuller for longer.

Topic 1 – Cereals (P176 Illuminate Digital Textbook)

What are cereals?

What variety of cereals are available around the world and in the UK?

What is the importance of staple foods in the diet?

Examination questions

1 a The table below compares the nutritional values of both wholemeal bread and white bread.

	Wholemeal bread, medium sliced		White bread, medium sliced	
	Per 100g	Per 40g slice	Per 100g	Per 40g slice
Energy	221kcal	88kcal	223kcal	93kcal
Protein	10g	4g	8.7g	3.5g
Fat	1.8g	0.7g	1.7g	0.7g
Carbohydrate	37.8g	15.1g	44.6g	17.9g
Fibre	6.8g	2.7g	2.4g	1.0g
Salt	0.90g	0.36g	0.90g	0.36g

Using the information given in the table, answer the following questions:

(b) Which bread has the most energy value per slice? [1]

(c) Which bread type has the most protein content per 100g? [1]

(d) State why 100g wholemeal bread has more fibre content than 100g white bread. [1]

2. Mass production of bread uses the Chorleywood method. Give two reasons why a large-scale bakery uses the Chorleywood bread making process. [2]

3. Explain why kneading bread dough is an important process when making bread. [2]

4. A baker has produced a batch of bread rolls which are small and heavy. Give two reasons why this might have happened and suggest ways this can be avoided in the future. [4]

2 Pasta is a popular staple food and is made from wheat flour.

a Give the name of the wheat type that is recommended when making pasta. [1]

b Match the image with the correct pasta name. [5]

spaghetti papardelle tagliatelle conchiglie fusilli lasagne sheets orzo farfalle



(c) Pasta should be cooked to 'al dente'. State what the term 'al dente' means. [1]

(d) Lasagne is a popular pasta dish and uses béchamel sauce as a component of the dish.

3. Explain what is happening during the sauce thickening process. [4]

Topic 2 - Dietary Fibre (P16 Illuminate Digital Textbook)

What is dietary fibre?

Why do we need dietary fibre in the diet?

What is the difference between soluble and non-soluble fibre?

Examination questions

Question 1

A good source of the soluble fibre called beta-glucan is found in:

- honey.
- green leafy vegetables.
- oats.

Question 4

Dietary fibre is also referred to as:

- roughage, cellophane and glucose.
- glucose, cellulose and non-starch polysaccharide (NSP).
- roughage, cellulose and non-starch polysaccharide (NSP).

Question 3

Insoluble fibre performs the following functions in the body:

- fights infections and heals wounds.
- oxygenates the red blood cells.
- promotes healthy bowels and prevents constipation.

Question 2

Good sources of fibre in the diet include:

- brown rice, wholemeal bread and baked beans
- brown rice, cheese and eggs
- white rice, brown bread and doughnuts

Question 5

The recommended daily fibre intake for 11–16 year olds is:

- 2.5g
- 250g
- 25g

Question 6

Fibre is a type of carbohydrate that is found in:

- animal-based foods, including meat, fish and dairy products.
- plant-based foods, including fruit, vegetables and whole and unprocessed grains.
- both of the above.

Topic 3 – Diet and Good Health (P44 Illuminate Digital Textbook)

- What is meant by a healthy diet?
- What are the guidelines and recommendations for a healthy diet?
- Can you explain the nutritional needs through life?
- How can lifestyle choices affect your diet?
- Can you explain specific dietary needs or deficiencies?

Examination questions

1 True or false? Tick (✓) the correct box.

[3]

Statement	True	False
A diet rich in fibre helps to prevent bowel disorders.		
You should eat large amounts of food containing sugar and fat.		
Too much salt has a bad effect on the body.		

2 Match the acronyms of nutritional requirements with the correct description. The first one has been filled in for you.

[3]

PAL EARS RIs DRVs

Acronym	Description
EARS	Not targets but give a useful indication of how much energy the average person needs.
	The number of kilojoules the body uses to fuel physical activity.
	An estimate of the nutritional requirements of a healthy population.
	Benchmarks for the amount of energy and key nutrients that need to be taken in on a daily basis.

3(a) State two factors which influence how much energy a person needs. [2]

3(b) Explain the importance of maintaining a correct energy balance. [4]

4(a) Give general dietary advice to a friend who is trying to lose weight. [4]

4(b) Suggest a suitable food choice for your friend for the following meals:

- (i) breakfast
- (ii) midday meals
- (iii) snacks
- (iv) evening meal [4]

5.State additional advice given in the Eatwell Guide. [4]

6 Reference Intake (RI) is an example of how nutritional requirements are calculated.

6(a). Name two other methods of calculating nutritional requirements. [2]

6(b). Explain how RIs, as stated on food labels, give useful information to the consumer. [4]

7. Children need to be encouraged to eat a healthy balanced diet from an early age.

7(a) Explain the benefits of a healthy, balanced diet. [4]

7(b) Outline recent measures which have been taken in the UK to ensure that school meals are healthy and balanced. [4]

8. Food labels often have claims about the product on the packaging.

8(a). Explain the difference between a nutrition claim and a health claim, giving examples to support your answer. [6]

Diet and good health

1 True or false? Tick (✓) the correct box.

[3]

Statement	True	False
A diet rich in fibre helps to prevent bowel disorders.		
You should eat large amounts of food containing sugar and fat.		
Too much salt has a bad effect on the body.		

2 Match the acronyms of nutritional requirements with the correct description. The first one has been filled in for you.

[3]

PAL EARs RIs DRVs

Acronym	Description
EARs	Not targets but give a useful indication of how much energy the average person needs.
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	An estimate of the nutritional requirements of a healthy population.
	Benchmarks for the amount of energy and key nutrients that need to be taken in on a daily basis.

3 a State two factors which influence how much energy a person needs.

[2]

(1) _____

(2) _____

b Explain the importance of maintaining a correct energy balance.

[4]

4 a Give general dietary advice to a friend who is trying to lose weight.

[4]

b Suggest a suitable food choice for your friend for the following meals:

i breakfast

ii midday meals

iii snacks

iv evening meal

[4]

(i) _____

(ii) _____

(iii) _____

(iv) _____

5 The Eatwell Guide is based on four food groups.

a Complete the chart with the following information. The first one has been completed for you.

[8]

	Name of food group	Amount recommended each day	Main nutrients provided
i	 potatoes, rice, pasta and other starchy carbohydrates	one-third of our daily food intake or 5–6 portions	carbohydrate, calcium, iron, vitamin B and fibre
ii			
iii			
iv			

b State additional advice given in the Eatwell Guide. [4]

6 Reference Intake (RI) is an example of how nutritional requirements are calculated.

a Name two other methods of calculating nutritional requirements. [2]

(1) _____

(2) _____

b Explain how RIs, as stated on food labels, give useful information to the consumer. [4]

7 Children need to be encouraged to eat a healthy balanced diet from an early age.

a Explain the benefits of a healthy, balanced diet. [4]

b Outline recent measures which have been taken in Wales to ensure that school meals are healthy and balanced. [4]

8 Food labels often have claims about the product on the packaging.

Explain the difference between a nutrition claim and a health claim, giving examples to support your answer. [6]

9 Outline the functions of the following nutrients and describe the changing nutritional needs of these nutrients from birth to adolescence:

[9]

- a protein
- b calcium
- c iron

(a) _____

(b) _____

(c) _____

10 Lifestyle and beliefs can affect a person's choice of food and diet. Discuss this, giving examples of special diets to support your answer.

[10]

TOTAL: 71

ANSWERS TO EXAM QUESTIONS

DIET AND GOOD HEALTH (P 67)

Q1. True, False, True.

Q2. In vertical order down the table: PAL, DRVs and RIs.

Q3. a) any two from the following: age, sex, height, weight, and level of activity. b) Energy input must equal energy output. If energy input is less than output, there could be possible weight loss. If energy input is more than energy output, there could be weight gain leading to obesity. Obesity can contribute towards diet related illnesses such as Coronary Heart Disease, type 2 diabetes and hypertension.

Q4. a) Answer should include some of the following points, with reasons cut down on calorie intake, a calorie-controlled diet is essential when trying to lose weight; avoid foods high in fat and sugar because these are high in calories. Beware of 'hidden fat and sugar' in food products – read labels for information; choose low in fat and sugar options – there is a wide variety available and they can contribute to a calorie controlled diet; eat breakfast – a good start to the day and helps prevent the temptation to snack mid morning; use cooking methods which do not require addition of fat or oil e.g. grilling, steaming. Use herbs and spices to flavour food instead of fat or oil; plenty of exercise – tones the body and muscles. b) Breakfast – unsweetened fruit juice or fresh or dried fruit with or without a sugar free breakfast cereal or porridge. Skimmed milk, no added sugar. Eggs cooked without any additional fat with wholemeal bread or alternative yeast product. Yoghurts (plain) or sweetened with artificial sweeteners / honey. Midday meal – any balanced food choice such as a soup and bread roll, salad, and pasta dish. Choice should be based on low fat, low sugar, low calorie option that is nutritionally balanced, with a variety in colour, flavour and texture. Snacks – choice based on some carbohydrate food but otherwise low in fat and sugar. Suggestions could include unsalted nuts, fresh fruit, vegetable sticks, low fat crisps. Filled pitta bread, plain biscuits with cottage cheese. Drinks – unsweetened juices, water, skimmed milk, and smoothies. Evening meal – should include a dish containing a high protein food such as chicken or fish, some carbohydrate such as boiled rice, pasta, couscous or jacket potato and plenty of steamed vegetables or salad. Include unlimited fresh fruit and / or vegetables daily.

Q5. Fruit and vegetables / 5–6 portions needed daily / vitamins, dietary fibre, some carbohydrate; Milk and alternative / 3–4 portions / protein, calcium, vitamins A and D, fat; Beans, pulses, fish, eggs / 5–6 portions / protein, iron, vitamins, calcium.

Q6. a) dietary Reference Value, Estimated, Average Requirements, Guideline Daily Amounts. b) RIs (previously Guideline Daily Amounts) give a benchmark for the amounts of energy and nutrients needed by adults. They are recommendations for an average person to maintain a healthy diet. Labels give information on the energy provides by 100g amounts of the food as well as % RI for fat saturates, sugars and salt. It is useful for consumers for making informed decisions and choices when planning for special diets.

Q7. a) benefits include: prevention of obesity and related illnesses, brain functions at its optimum, a fitter body to take part in activities, it lays down a good foundation, forms good eating habits for later years, a healthy child is usually a happier child, psychological benefits. b) Recent measures include: advice on healthy eating – the Eatwell Guide. Emphasis on the importance of choosing unsaturated fats and oils, plant proteins that are more environmentally sustainable. Energy requirements have been added to reinforce the fact that all food and drink contribute to total energy intake. The Scientific Advisory Committee on Nutrition advice on 'free sugars' (sugars added to food by manufacturers, cook or consumer). Recommended intake for sugar has changed to a recommended 5% of total dietary intake. Welsh Assembly Government Food and Fitness plan to improve access to food and drink. Change for Life is a campaign aimed to help people make lifestyle changes through improved nutrition and exercise. Appetite for Life and Healthy Eating in Schools are both measures aimed to improve the nutritional standards of food and drink in schools.

Q8. A nutrition claim relates to the nutrients that food product does or does not contain, for example sugar, fat, fibre – a health claim related to any health benefit that a food product may have, for example plant sterols lower blood cholesterol.

Q9. a) protein – growth of body cells, maintenance and repair of body cells, a source of energy if other sources are lacking. Protein needs at birth are required for growth.

Additional protein

is required during growth spurts through to adolescence to coping with increase in body size and for the maintenance of increasing body cells.

b) calcium – formation and development of the skeleton, normal clotting of blood, normal functioning of nerves and muscles. Calcium requirements increase with age.

Babies and children's needs are high, in order to develop good bone density. Vitamin D promotes the absorption of calcium.

c) iron – formation of haemoglobin that carries oxygen to the body tissues. Iron requirements increase with age reaching a peak at adolescence. Girls need more than boys to replace the loss during menstruation.

Q10. Lifestyle includes religion and beliefs that dictate people's food choice. Examples are all types of vegetarianism – vegans, lacto vegetarians, lacto-ovo vegetarians. Vegetarians do not eat meat of any kind. They choose not to eat meat for a variety of reasons that include the cruelty of killing animals, environmental issues, medical reasons and a possible dislike to the texture of flesh. Some vegetarians do not eat fish as well as meat and there are others who do not eat animal products that include eggs and milk. Lacto ovo eat both dairy products and eggs. Lacto vegetarians eat dairy but avoid eggs. Vegans do not eat dairy products, eggs or anything derived from animals, which includes honey. Religious beliefs include: Buddhists who follow a strict vegetarian diet; Hindus who also follow a strict vegetarian diet; Jews and Muslims do not eat pork or products from a pig, birds of prey and shellfish. Jewish meat must be slaughtered according to Kosher (Jewish) and halal (Muslim) laws. Rastafarians are also vegetarians and only eat a food deemed to be 'natural', that is without artificial colours, flavourings and preservatives.