

WHAT ARE NUTRIENTS?

Nutrients are substances in food that the body needs for health, growth and normal functioning.

Different foods contain different nutrients. Eating a variety of foods helps us get all the nutrients we need!



THE MAIN NUTRIENTS

Macronutrients (needed in larger amounts)

Carbohydrate



- Provides energy
- Found in: bread, pasta, rice, potatoes, cereals

Protein



- Growth and repair
- Found in: meat, fish, eggs, beans, lentils, dairy, nuts

Fat



- Provides energy
- Helps to keep us warm
- Found in: oils, butter, nuts, seeds, avocado

Micronutrients (needed in smaller amounts)

Vitamins



- Keep us healthy
- Each vitamin has a different job
- Found in: fruit, vegetables, dairy, meat, fish

Minerals



- Help the body work properly
- Examples: calcium (strong bones), iron (healthy blood)
- Found in: dairy, meat, fish, vegetables

OTHER IMPORTANT NUTRIENTS

Fibre



- Helps food move through the digestive system
- Found in: wholegrains, fruit, vegetables, beans and lentils

Water



- Keeps the body hydrated
- Helps transport nutrients
- Helps control body temperature

REMEMBER...

A balanced diet includes all of these nutrients, in the right amounts.



MACRO v MICRONUTRIENTS

Macronutrients

- ✓ Needed in larger amounts
- ✓ Provide energy (carbohydrate, protein and fat)
- ✓ Measured in grams (g)

Micronutrients

- ✓ Needed in smaller amounts
- ✓ Include vitamins and minerals
- ✓ Do not provide energy
- ✓ Measured in milligrams (mg) or micrograms (µg)

FOOD LABELS

Food labels show the nutritional content of a food. They help us compare products and make healthier choices.

Use the per 100g column to compare products fairly.

Typical values	Per 100g	Per portion (30g)
Energy	1710kJ 407kcal	513kJ 122kcal
Fat	7.7g	2.3g
of which saturates	1.5g	0.5g
Carbohydrate	71.0g	21.3g
of which sugars	3.1g	0.9g
Protein	9.3g	2.8g
Salt	0.8g	0.2g

Look for sugar, fat and salt amounts. Choose more green and amber, and fewer reds.

TRAFFIC LIGHT LABELS

Many foods use a traffic light colour system to show if they are high, medium or low in fat, saturates, sugars and salt.

Green
= Low

A healthier choice

Amber
= Medium

Okay sometimes

Red
= High

Try to have less often

Does red mean never eat it?
No!

It depends on portion size, frequency and your overall diet.

ENERGY FROM FOOD

The body needs energy to function and be active. Energy is provided by:

Carbohydrate



Provides energy

Fat



Provides energy and is more energy-dense

Protein



Can provide energy, although its main role is growth and repair

Energy is measured in kilojoules (kJ) or kilocalories (kcal).

ENERGY REQUIREMENTS

We do not all need the same amount of energy. Our energy needs are affected by:



Age

Needs change at different stages of life.



Sex

Males and females may have different needs.



Body size

Larger bodies generally need more energy.



Physical activity

More activity uses more energy.



Growth

Children and teenagers need extra energy for growth and development.

Energy requirement = the amount of energy a person needs for their body to function and support their activity.

ENERGY BALANCE

Energy balance is the relationship between the energy we take in (food and drink) and the energy we use (through daily activities).

Balanced energy balance



Energy in = Energy out
Weight is more likely to stay the same.

Positive energy balance



Energy in > Energy out
Excess energy can be stored and may lead to weight gain.

Negative energy balance



Energy in < Energy out
Stored energy is used and may lead to weight loss.

CAN YOU REMEMBER?

- What is a nutrient?
- Name the three macronutrients.
- Give two functions of protein.
- What are two examples of micronutrients?
- Where would you find the per 100g information on a food label?
- What do the traffic light colours mean?
- Give four factors that affect a person's energy requirements.
- What is meant by energy balance?
- What can happen if someone is in a positive energy balance?

Good food gives you energy to do the things you love!





WHAT IS A SPECIAL DIET?

A special diet is a way of eating that excludes, limits or changes certain foods because of a person's needs, beliefs or choices.

Everyone is different and people may follow a special diet for health, religious, ethical or cultural reasons.



TYPES OF SPECIAL DIETS

Vegetarian

- Does not eat meat or fish.
- May eat eggs and dairy products.
- Still needs a balanced diet with enough protein, iron, calcium and vitamin B12.



Vegan

- Does not eat meat, fish, eggs, dairy or any animal-derived products (e.g. honey).
- Chooses plant-based foods only.
- Needs to plan carefully to get enough protein, iron, calcium, vitamin B12 and vitamin D.



Religious diets

- Halal** (Islam) – meat must be from a halal source. Pork and alcohol are not permitted.
- Kosher** (Judaism) – follows specific rules about which foods are allowed and how they are prepared.
- Other religions may also have specific dietary rules.



FOOD ALLERGIES vs FOOD INTOLERANCES

Food allergy

- The immune system reacts to a food.
- Even a small amount can cause a reaction.
- Reactions can be serious and life-threatening (anaphylaxis).
- Common symptoms: itching, swelling, hives, breathing difficulties.

Anaphylaxis is a severe allergic reaction and a medical emergency.



Food intolerance

- Does not involve the immune system in the same way.
- Usually related to difficulty digesting a food.
- Symptoms are generally less severe.
- Common symptoms: bloating, stomach pain, wind, diarrhoea.

An intolerance can be uncomfortable but is not usually life-threatening.

COMMON REASONS FOR SPECIAL DIETS



Health

- Allergies
- Intolerances
- Medical conditions (e.g. coeliac disease)



Ethical

- Concern for animal welfare
- Environmental reasons



Religious

- Follow religious beliefs and rules



Cultural

- Follow traditions and customs

FOOD SUBSTITUTIONS

Meals can be adapted by using suitable alternative ingredients.

Ingredient to replace	Suitable alternative	Example
Meat	Beans, lentils, tofu, quorn, nuts	Bean chilli instead of beef chilli
Dairy milk	Soya, oat, almond milk	Oat milk in a sauce
Cheese	Dairy-free cheese, nutritional yeast	Vegan cheese on pizza
Eggs	Mashed banana, applesauce, flaxseed	Banana in cakes
Butter	Plant-based spread, rapeseed oil	Vegan spread for baking

Don't just remove an ingredient – replace it! A good substitute keeps the meal nutritious, filling and appealing.

THE 14 COMMON ALLERGENS

These 14 allergens must always be shown clearly on food labels (often in bold).



Always check the ingredients list – allergens are usually highlighted in **BOLD**.

Ingredients: **Wheat** flour, water, **milk**, eggs, salt

MEAL MAKEOVER – EXAMPLE

Beef cheeseburger and chips

Vegetarian version

- ✓ Replace beef burger with a bean or quorn burger
- ✓ Keep the bun, salad and chips
- ✓ Use cheese and/or plant-based mayo

Vegan version

- ✓ Replace beef burger with bean, lentil or plant-based burger
- ✓ Use a dairy-free cheese alternative
- ✓ Use vegan mayo
- ✓ Keep the bun, salad and chips



Your vegan customer still needs a balanced diet. Think about protein, iron, calcium, vitamin B12 and vitamin D.

READING FOOD LABELS

- Look at the ingredients list.
- Check for allergens (shown in bold).
- Look for May Contain statements.
- Don't rely on appearance – always read the label!

Ingredients: **Wheat** flour (calcium, iron, niacin, thiamin), water, sugar, vegetable oil (rapeseed), **milk** powder, **egg**, baking powder (raising agents: E450, E500), salt.

Contains: wheat (gluten), milk, egg.

Allergens must be highlighted, often in bold text.

CAN YOU REMEMBER?

- What is a special diet?
- Give two reasons why someone might follow a special diet.
- What is the difference between a food allergy and a food intolerance?
- Name three foods a vegan would not eat.
- Give two examples of religious dietary rules.
- Why is it important to read food labels?
- Name four of the 14 common allergens.
- How can you adapt a recipe to make it suitable for a vegan customer?

Different choices. A more inclusive world! 😊





WHAT IS LIFE STAGE NUTRITION?

Life stage nutrition looks at how our nutritional needs change throughout our lives. Different life stages have different requirements because our bodies grow, develop and change.

Good nutrition helps us to grow, stay healthy and enjoy an active life at every stage!



THE DIFFERENT LIFE STAGES

Babies and young children (0–5 years)



- Rapid growth and development.
- Need a nutrient-dense diet and enough energy.
- Help to develop healthy eating habits for life.

Children and teenagers (5–18 years)



- Still growing and developing.
- Need extra nutrients such as iron.
- Need enough energy for growth, activity and learning.
- A balanced diet supports a healthy immune system.

Adults (19–64 years)



- Growth has largely finished.
- Need a balanced diet to maintain health and concentration.
- Energy needs may vary depending on lifestyle and activity level.

Older adults (65+ years)



- Metabolism may slow down.
- Need to maintain muscle and bone health.
- May need fewer calories but still require important nutrients.
- Staying well hydrated is important.

FACTORS AFFECTING NUTRITIONAL NEEDS

The amount of energy and nutrients a person needs can be affected by:



Age

Needs change at different stages of life.



Sex

Males and females may have different needs.



Body size

Larger bodies generally need more energy.



Physical activity

More activity uses more energy.



Growth

Children and teenagers need extra nutrients and energy for growth and development.

Everyone is different!
Nutritional needs depend on a combination of these factors.

Choose nutritious foods to fuel your future!



KEY NUTRIENTS AT EACH LIFE STAGE

Babies and young children

Important nutrients:

- **Protein** – growth and repair
- **Calcium and vitamin D** – strong bones and teeth
- **Energy** – for growth and activity
- **Iron** – healthy blood
- **Vitamins A and C** – healthy skin, vision and immune system



Small bodies, big growth – make every bite count!

Children and teenagers

Important nutrients:

- **Protein** – growth and repair
- **Calcium and vitamin D** – developing and maintaining strong bones
- **Iron** – healthy red blood cells
- **Energy** – growth, activity and learning
- **Fibre** – healthy digestion
- **Vitamins and minerals** – overall health



Fuel for growth, school and sport!

Adults

Important nutrients:

- **A balanced diet** – variety of all nutrients
- **Fibre** – healthy digestion
- **Water** – hydration
- **Calcium and vitamin D** – maintain bone health
- **Iron** – especially for women of childbearing age
- **Appropriate energy intake** – to maintain a healthy weight



Eat well, feel well, perform well!

Older adults

Important nutrients:

- **Protein** – maintain muscle mass
- **Calcium and vitamin D** – maintain strong bones
- **Fibre** – healthy digestion
- **Fluids** – prevent dehydration
- **Vitamin B12** – supports the nervous system (often needed in larger amounts)
- **Vitamin D** – important as the body is less able to make it from sunlight



Good nutrition helps you stay independent and active for longer!

WHY IS THIS IMPORTANT?



Supports growth and development



Maintains a healthy weight



Helps with concentration and learning



Keeps bones and muscles strong



Supports a healthy immune system



Provides energy for daily life



Improves mood and wellbeing



Helps to reduce the risk of diet related diseases in later life

CAN YOU REMEMBER?



- 1 What is life stage nutrition?
- 2 Give two factors that affect a person's nutritional needs.
- 3 Name two important nutrients for babies and young children.
- 4 Why is iron important for children and teenagers?
- 5 What nutrients are important for older adults?
- 6 Why might energy needs change as we get older?
- 7 How does a balanced diet help adults?
- 8 Give one reason why calcium and vitamin D are important.

Healthy people build brighter futures!





WHAT IS FOOD PROVENANCE?

Food provenance means where food comes from and how it has been produced.

Provenance is the story behind our food – from farm to fork!



THE FOOD JOURNEY – FROM FARM TO FORK

Food goes through many steps before it reaches our plate.



WHY DOES PROVENANCE MATTER?



WHAT ARE SEASONAL FOODS?

Seasonal foods are naturally ready to harvest at a particular time of year in a particular place.

Foods that are in season are often fresher, tastier, cheaper and better for the environment!



UK SEASONAL FOODS

Spring (March – May)	Summer (June – August)	Autumn (September – November)	Winter (December – February)
- Asparagus - Spring greens - Radishes - New potatoes - Rhubarb	- Strawberries - Raspberries - Courgettes - Tomatoes - Peas	- Apples - Blackberries - Pumpkin/squash - Mushrooms - Carrots	- Brussels sprouts - Parsnips - Leeks - Kale - Cabbage

SEASONAL OR NOT?

We can buy strawberries all year round – so what does “seasonal” mean?



FOOD MILES

Food miles are the distance food has travelled from where it was produced to where it is sold.

UK apples



- Lower food miles
- Fresher
- Supports local farmers
- Often in season
- Lower environmental impact

Imported apples



- Higher food miles
- May be available all year round
- Can have a larger carbon footprint
- May be cheaper out of season

Choose local and seasonal where possible to help reduce food miles and support the environment.



ADVANTAGES AND DISADVANTAGES

Choosing local and seasonal foods

- ✓ Fresher and often tastier
- ✓ Can be cheaper
- ✓ Supports local farmers and the economy
- ✓ Reduces food miles and carbon footprint
- ✓ Often better for the environment
- ✓ Encourages a varied diet throughout the year

Possible disadvantages

- ✗ May not be available all year round
- ✗ Less choice compared to imported foods
- ✗ Can sometimes be more expensive
- ✗ May require more planning and creativity
- ✗ Weather can affect what is available
- ✗ Not all foods can be grown in the UK

It's about balance – we can enjoy a variety of foods from different places while also making more sustainable choices where possible.



CAN YOU REMEMBER?



- What does food provenance mean?
- What are the stages of the food supply chain?
- Give three advantages of eating seasonal foods.
- Name three foods that are in season in the UK in summer.
- Why is it important to support local farmers?
- What does the term 'food miles' mean?
- Give two disadvantages of choosing imported foods.
- Why can we buy some foods all year round even if they are not in season in the UK?

Small choices make a big difference!

