



your body matters



Teachers Notes B: The Food Groups and a Healthy Diet

Nourishing Body & Mind for a Healthy Life

A Primary Health and Wellbeing Curriculum Pack

Revised Version 2023



Teacher Notes B: The Food Groups and a Healthy Diet

Associated lesson plans		
Primary Stage	Lesson	Title
1	1.1	Growing for health; food for life
2	2.1	Eating for health
3	3.1	The Eatwell Guide
4	4.1	Food groups
5	5.1 (3)	Energy: keeping my body balanced
6	6.1	Healthier diet
Useful websites	<p>https://www.foodstandards.gov.scot/consumers/healthy-eating/eatwell</p> <p><i>Food Standards Scotland- the Eatwell Guide</i></p> <p>https://www.nhs.uk/healthier-families/food-facts/healthier-food-swaps/</p> <p><i>NHS, Better Health – Healthier Food Swaps</i></p> <p>https://www.nhsinform.scot/healthy-living/food-and-nutrition/eating-well/vitamins-and-minerals#sugar</p> <p><i>NHS Inform, Food and Health, Eating Well</i></p> <p>https://www.bda.uk.com/resource/sugar.html</p> <p><i>British Dietetics Association: Food Sugar and your health: Food Fact Sheet</i></p> <p>https://www.foodstandards.gov.scot/education-resources/sugar-detectives</p> <p><i>Food Standards Scotland, Sugar Detectives</i></p> <p>https://www.youtube.com/watch?v=Bxeh8CugICA</p> <p><i>Food Standards Agency – Explains Sugar</i></p> <p>https://www.nhsinform.scot/healthy-living/food-and-nutrition/eating-well/vitamins-and-minerals#salt</p> <p><i>NHS Inform, Food and Health, Eating Well</i></p>	

Useful websites continued

<https://www.youtube.com/watch?v=unssU8nHPVE>

Food Standards Agency – Explains Salt

<https://www.bda.uk.com/resource/diet-behaviour-and-learning-children.html>

British Dietetic Association: Diet, behaviour and learning in children: Food Fact Sheet

<https://www.msc.org/uk>

Marine Stewardship Council, Eat Sustainable Seafood

Fruit & vegetables

Fruit and vegetables give us:

- ✓ Fibre – helps to maintain a healthy gut.
- ✓ Folate – important for normal and healthy blood formation.
- ✓ Vitamin C – helps the immune system to work as it should.
- ✓ Vitamin A – important for maintenance of normal vision and skin.
- ✓ Potassium – helps to maintain a healthy blood pressure.

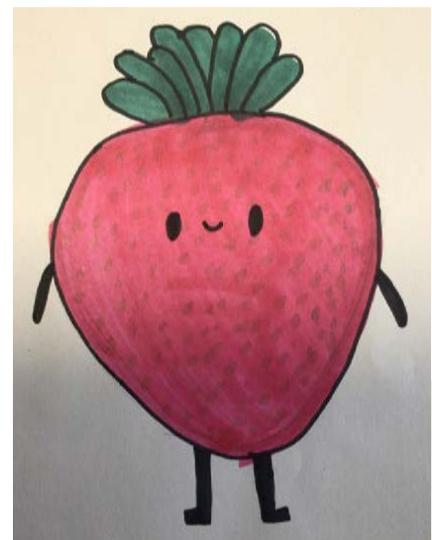


Recommended daily intake:

We should aim to have at least 5 portions of fruit and vegetables a day and to eat a wide variety to provide the body with a range of essential vitamins and minerals.

General Information:

- Over a third of what we eat should come from fruit and vegetables.
- You can choose from fresh, frozen, dried, tinned vegetables, and vegetable or fruit dishes (e.g., ratatouille, vegetable soup, vegetable curry, fruit salad)



- 150ml of fruit/vegetable juice or fruit/vegetable smoothie* counts towards the 5 a day recommendation but can only count as one portion per day no matter how much is consumed. This is to encourage people to eat the 'flesh' and skin of fruit and vegetables; a rich source of nutrients. Remember to wash the fruits and vegetables if eating with the skin. * fruit juice and smoothies should be consumed with meals to prevent tooth decay.
- White potatoes do not count as a vegetable; they are included in the starch-rich group - Potatoes, bread, rice and other starchy carbohydrates. However, sweet potatoes can count as a portion of vegetable because of the additional nutrients associated with their bright colour. Regardless of how much you eat, sweet potatoes can count as a maximum of one portion a day of vegetable OR starchy food/carbohydrates but not both.



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What's in a portion?

An estimated portion size for a child would be what they can hold in their hand. Children's portion sizes will vary depending on their age and energy requirements. Below is a rough guideline:

- 1 apple, banana, pear, orange or other similar sized fruit
 - 2 plums or similar sized fruit
 - ½ a grapefruit or avocado
 - 1 slice of large fruit, such as melon or pineapple
 - 3 heaped tablespoons of vegetables (raw, cooked, frozen or tinned)
 - 3 heaped tablespoons of fruit salad (fresh or tinned in fruit juice) or stewed fruit
 - 1 handful of grapes, cherries or berries
 - a dessert/cereal bowlful/two heaped handfuls of salad
 - 1 heaped tablespoon of dried fruit, e.g., raisins and apricots
 - a glass (150ml) of fruit juice (however much you drink, fruit juice counts as a maximum of one portion a day) *
 - 3 heaped tablespoons of beans and pulses (however much you eat, beans and pulses count as a maximum of one portion a day of either vegetable OR protein, not both)
- *Fruit juices and dried fruit all contain a high concentration of sugars that can cause tooth decay – these should be consumed at mealtimes only and in small amounts as reflected above.

Achieving 5-a-day:

It can be challenging to achieve the recommended 5 portions a day, but we can all increase the amount of fruit and vegetables that we eat through some very simple steps:



Potatoes, bread, rice, pasta and other starchy carbohydrates (Carbohydrates)

Choose wholegrain varieties as these contain more fibre, as well as vitamins and minerals, e.g.

- ✓ B Vitamins – for example thiamine which helps the body use the energy from the carbohydrates we eat.
- ✓ Folate – needed for the formation of healthy red blood cells and for the nervous system.
- ✓ Magnesium – contributes to reduction of tiredness and fatigue.
- ✓ Copper – helps the immune system to function as it should

and

- ✓ Fibre – helps to maintain normal bowel function



Recommended daily intake



Potatoes, bread, rice, pasta and other starchy carbohydrates should roughly make up just over a third of the food we eat i.e., have a portion of starchy foods at each meal and snack time throughout the day and base meals on foods from this group. They provide a stable energy source, especially the wholegrain variety.

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Foods included in this group

Bread

Couscous

Chapatti

Pasta

Wraps (tortilla)

Potato

Sweet potato

Rice

Noodles

Naan bread

Pitta bread

Breakfast cereals

Beans, pulses, fish, eggs, meat and other proteins (Proteins)

Foods containing protein provide:

- ✓ Iron – found in red meat. Contributes to the normal formation of red blood cells and transport of oxygen around the body.
- ✓ Zinc – found in meat. For maintenance of normal skin, hair, nails, vision and the immune system.
- ✓ Vitamin B12 – found in meat and fish. For healthy red blood cells and nerve function.
- ✓ Vitamin D – found in oily fish. For healthy teeth, bones and muscles.
- ✓ Omega-3 fatty acids – found in oily fish. Helps to maintain normal and healthy heart function

and of course

- ✓ Protein – for growth and maintenance of normal muscles and maintenance of healthy bones.



Recommended daily intake

It is important to eat some foods from this group, remembering a variety.

General Information:

- Beans, peas and lentils (types of pulses/legumes), eggs and cheese are good alternatives to meat because they are naturally very low in fat, high in fibre, protein, vitamins and minerals.
- Pulses, or legumes are edible seeds that grow in pods and include foods like lentils, chickpeas, beans and peas.

- Aim for at least two portions of fish a week, including a portion of oily fish (tinned & fresh tuna count as white fish).
- Some types of meat are high in fat, particularly saturated fat. Cut off any visible fat from red meats and skin from poultry and choose leaner mince (5-10% fat content).
- It is recommended to reduce the intake of red and processed meat. Processed meat includes burgers, sausages, bacon, cured meats, hot dogs, corned beef, tinned meat and reformed meat products e.g. ham. Processed meats are often also high in salt, so cutting down on these foods will also reduce salt intake.
- Try to limit poultry cooked in batter or breadcrumbs.

The Eatwell Guide recommends eating sustainably sourced fish. To find out more visit: <https://www.msc.org/uk>

Cooking methods:

Avoid frying and adding extra fat during cooking. Try to grill meat, steam fish and boil or poach an egg. Be mindful of how meat is cooked as this can make a big difference e.g. frying in fat (oil, butter, lard) vs. Baking without adding fat.

Children under 16 years should avoid eating swordfish, shark and marlin. This is due to the levels of mercury in these fish which affects a child's growing nervous system.

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Animal sources of protein	Plant sources of protein*
Beef Pork Lamb Ham Chicken Fish e.g. salmon (oily), cod (white) Eggs Seafood e.g. prawns	Beans e.g. kidney beans Lentils e.g. red lentils Tofu Quorn/textured vegetable protein Seeds e.g. sunflower, pumpkin seeds Uncoated nuts e.g. walnuts, peanuts

* Vegetable-based sources of protein are not a rich source of zinc and generally provide no vitamin B12. Nuts are high in protein as well as fibre but also high in fat, albeit good fat (mono/poly unsaturated), therefore can be eaten as part of a balanced diet, but in very small amounts.

Practical Advice:

1. Try to have a source of protein at each mealtime, for example, beans on toast for breakfast, tuna with a baked potato or sandwich for lunch and chicken and vegetable pasta for dinner.
2. Try to choose leaner cuts of meat like chicken and turkey.
3. Lower fat mince can often be expensive so it can be more cost effective to buy a smaller pack and bulk up the meal with beans and lentils which are alternative plant sources of protein.
4. Oily fish is an important source of Omega-3 fatty acids. However, if the diet does not contain oily fish, alternative sources include flaxseeds (linseed) and walnuts.
5. Try to include one or two meat free days each week with a focus on plant protein

Dairy and alternatives

Foods containing dairy provide:

- ✓ Protein – for growth and repair function.
- ✓ Calcium – for development and maintenance of strong, healthy bones.
- ✓ Iodine – important for healthy nerve and brain function, and healthy skin.
- ✓ Vitamin B2 (riboflavin) – to help release energy from carbohydrate and protein.
- ✓ Vitamin B12 – for healthy red blood cells and nerve function.



Try to have some milk and dairy food (or dairy alternatives) - such as cheese, yoghurt and fromage frais. These are good sources of protein and vitamins, and an important source of calcium which helps to keep our bones strong.

FACTBOX

Vitamin D helps regulate the amount of calcium and phosphate in the body and is essential for healthy teeth and bones. Everyone (including children) should consider taking a daily supplement containing 10 micrograms (10µ) of vitamin D (400 IU), particularly during the winter months (October to March) as per the Scottish Governments advice. For more information visit: <https://www.gov.scot/publications/vitamin-d-advice-for-parents/>

General Information:

Try to choose lower fat versions where possible such as semi-skimmed milks, low fat and lower sugar yoghurts, plain low fat fromage frais and reduced fat cheeses as the full fat versions are usually high in saturated fat.

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Foods included in this group

Cheese e.g. soft, hard, blue or spreadable

Yoghurts e.g. natural or Greek

Milk e.g. cow's, goat's or sheep's

*Calcium fortified soya alternatives

*Organic dairy alternatives are usually not fortified with calcium to the same level as their non-organic counterparts.

Butter and creams, despite being dairy products, are not included in this group as they are high in saturated fat and therefore fit in the "foods to eat less often and in smaller amount" section of the Eatwell Guide..

Practical Advice:

If possible, choose lower fat milk for drinks or with cereal.

1. Plain/natural yoghurt can be a great snack or dessert, with added fruit (fresh, frozen or tinned) as an option.
2. Plain/natural yoghurt or soured cream can be used instead of or mixed in with, high fat dairy foods like cream, crème fraiche or mayonnaise for example in 'tuna mayo'.
3. To help reduce fat intake from cheese, choose low fat cheese and see the tips below.
4. If you have dairy alternatives (drinks or yoghurts) e.g. soya, oat, rice or almond, try to look out for "calcium fortified" and unsweetened versions.*

TIP:
If cheese is grated,
it looks visibly more than a chunk
of the same weight

TIP:
Strong cheese =
more flavour =
Less cheese needed =
reduced intake.

Oils and Spreads

- Dietary fat provides us with essential fatty acids (those the body cannot make itself) and helps us to absorb the fat-soluble vitamins A, D, E and K.
- Most of us need to cut down on saturated fat, as it can raise blood cholesterol levels and increase the risk of heart disease and stroke.
- All fats are high in calories, even unsaturated fats, so it's important to use them in small amounts to avoid consuming more calories than you need.



Choose unsaturated oils and use in small amounts

Unsaturated oils provide vitamin E which contributes to the protection of cells from oxidative stress. Sunflower, olive and rapeseed oil are all high in vitamin E.

***Butter/butter blends, coconut and palm oils are not included in this section as they are high in saturated fat.**

Recommended daily intake:

All types of dietary fat are high in energy and should be limited.

NOTE:
coconut oil contains
almost double the amount of saturated fat than lard

A gram of pure fat,
provides 9 calories per gram.
Please see information on energy
balance (p.36)

General information:

- Dietary fat is also used as insulation and padding for protection of our organs. It is also broken down into its component parts and used as building blocks for essential proteins in the body. Both too little and too much can lead to health problems and can interfere with growth and development.
- Any dietary fat that is not used by your body's cells or used for energy is converted into body fat.
- All types of fat are higher in calories (energy) than protein and starchy foods.
- Unused carbohydrates and proteins that are not used for energy will also be stored as body fat.

Foods containing highest amounts of saturated fats **usually** come from animal sources and are typically solid at room temperature (there are exceptions – see below). Foods containing the highest amounts of unsaturated fats **always** come from plant sources and are **usually** liquid at room temperature. Again, there are two exceptions which are palm and coconut oil which are high in saturated fat and can be in a solid form. Coconut oil can be found in solid form or also in liquid form. Too much of this over time, increases the cholesterol in the blood, which can lead to blocked arteries (refer to British Heart Foundation Video).

Dietary source of unsaturated fat:

1. Vegetable oil (rapeseed)
2. Olive oil
3. Sunflower oil
4. Spreads made from these oils

Practical Advice:

- ✓ Use oils and spread products sparingly and less often.
- ✓ Choosing lower fat vegetable-based spreads for bread, as opposed to butter, is a good way to reduce your saturated fat and fat intake. For cooking or baking, use one of the sources from the list above.
- ✓ Grill, bake or microwave rather than fry foods in fat.
- ✓ Try to limit highly processed foods and snacks which are high in fat e.g. takeaways and deep-fried foods, pastries, cakes, biscuits, desserts.

TOP TIP: Oils expand when heated so heating oil in the pan before you use it, will make it go further so you don't need to use as much.

- To save money, use vegetable or sunflower oil instead of olive oil

TOP TIP: Olive oil/extra virgin olive oil are best used in salad dressings, etc and not necessarily in cooking.

Foods high in fat, salt and sugars-(HFSS)

General information:

- Foods in this section are not required to achieve a healthy, balanced diet as they tend to be high in energy (calories) and contain very few essential nutrients.
- Foods high in FSS should be eaten in small amounts and not very often as excess calorie consumption over time can lead to weight gain and other associated health conditions.
- Try to restrict foods and drinks containing sugar to mealtimes, rather than between meals, to reduce the impact on teeth.



Eat less often and in small amounts

High in saturated fat	High in salt (& sometimes fat)	High in sugar (& sometimes fat)
<ul style="list-style-type: none"> • Pastries and cakes • Some take away foods, e.g., deep fried/ battered foods • Sauces • Butter, ghee, lard • Palm oil, coconut oil/ cream • Cream, soured cream, crème fraiche • Mayonnaise 	<ul style="list-style-type: none"> • Crisps and other savoury snacks, like some crackers and salted popcorns • Soy sauce • Stock cubes, gravy granules, yeast extract • Pickles • Processed meats e.g. salami, bacon • Condiments e.g. tomato sauce, brown sauce 	<ul style="list-style-type: none"> • Full-sugar soft drinks and energy drinks • Cereal bars • Cakes, biscuits, sweets, chocolate/ confectionery • Puddings/desserts, pastries, ice cream, ice lollies • Jam and other sweet spreads • Honey, maple, agave and any other syrups

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Sugar (simple carbohydrates)

Regularly consuming sugary foods and drinks can cause weight gain and if eaten between meals, can cause tooth decay. Ideally, no more than 5% of the energy we consume should come from free sugars*. Currently, children and adults across the UK are consuming more than the Scottish Dietary Goal of 5%.

Many packaged foods and drinks contain surprisingly high amounts of free sugars*, even those that would be considered as healthier options e.g., some breakfast cereals, fruit flavoured yoghurts, fruit juice and **fruit juice drinks****, especially those marketed at children.

***Free sugar** includes any sugar added to food or drink products by the manufacturer, chef or consumer including those naturally found in honey, syrups and unsweetened fruit juice. This is the type of sugar we should aim to reduce.

Note- We do not need to worry about sugar which is naturally present in whole fruits, vegetables or plain milk/plain natural, unsweetened yoghurts.

****Fruit juice drinks** – the term “juice drink” is not defined by regulations and can be used to describe any drink which includes fruit juice, in whatever amounts, as well as usually containing sugar and/or sweeteners, e.g. ‘Fruit Shoots Strawberry and Raspberry’ (50% fruit juice)’, ‘Sunny D (13% fruit juice)’, ‘Capri Sun No added sugar’ (16-18% fruit juices).

Swap examples

Sugary Choice	Healthier alternative
Breakfast cereal e.g., sugar coated or chocolate flavour	Plain cereals e.g., whole-wheat biscuits, plain puffed rice, or porridge
Fruity flavoured yoghurts	Plain/natural (unsweetened) yoghurts. If needed, add fruit - fresh, frozen or tinned (in fruit juice).
Fizzy and soft drinks	Plain water, lower fat (unflavoured) milk or sugar-free drinks*
Cakes, chocolate-based desserts or puddings	Milk based desserts e.g., custard, rice pudding (low sugar versions are available)

*Be mindful of fruit squashes and fruit smoothies as these often contain high amounts of free sugar.

Sugary drinks have no place in a child’s daily diet but account for a surprisingly large proportion of the daily sugar intake of both children and adults. According to the National Diet and Nutrition Survey (NDNS) rolling programme from (2016/17-2018/19), sugary drinks provide 17% of free sugars consumed by 11–18-year-olds.

Maximum recommended daily intake for sugar

Age	Amount of sugar per day (grams)	Number of teaspoons (1 teaspoon = 4g sugar)
4 to 6 years	Maximum 19g	4 ³ / ₄
7 to 10 years	Maximum 24g	6
11 years +	Maximum 30g	7 ¹ / ₂

Salt

In the UK, we currently eat too much salt and would benefit from reducing our intake. As mentioned before, a diet high in salt can increase the risk of developing high blood pressure, which can eventually lead to heart disease or stroke. Ideally, we should be eating foods lower in salt, trying to avoid adding salt to our meals, choosing foods with ‘no added salt’, and adding herbs and spices to flavour our food.

Salt is already contained in 75% of foods we eat, mainly in processed foods. It is difficult to know exactly how much salt we consume, because we don’t tend to measure how much salt we add or pay much attention to food labels. One of the easiest ways to cut down on salt is to compare different brands of the same foods and choose those that are lower in salt whenever you can.

Salt = Sodium + Chloride.

Salt is sometimes listed in the nutritional information on food labels but can also be listed as Sodium.

If you know how much sodium is in a food, you can estimate the amount of salt it contains by multiplying the amount of sodium by 2.5

For example 4g of sodium = 4 x 2.5

=10g salt

Daily intake

The government recommends that adults have no more than 6g of salt per day and children should have even less. The maximum amount of salt children should be having varies by age.

Maximum recommended daily intake for salt

Age	Amount of salt per day (grams)	Teaspoons equivalent
Babies under 1	Less 1g	Should be avoided
1 to 3 years	Maximum 2g	A third
4 to 6 years	Maximum 3g	Half
7 to 10 years	Maximum 5g	Nearly 1
11 years +	Maximum 6g	1

Foods high in salt (always)	Foods high in salt (usually)
<p>Try to eat these foods less often & in small amounts</p> <ul style="list-style-type: none"> • Anchovies • Gravy granules • Stock cubes/powder • Processed/cured meats (sausages, hot dogs pepperoni, chorizo) • Olives • Pickles • Salted and dry roasted nuts • Salted fish • Soy sauce 	<p>Salt content of these foods can vary so look for brands that have lower salt options and/or make your own e.g. pizza/burgers</p> <ul style="list-style-type: none"> • Crisps • Pizzas or ready meals • Burgers (shop bought) • Pasta sauces • Some sandwiches (shop bought) • Sausages • Condiments (tomato sauces, mayonnaise)

Please note that various bread products (wraps, bagels, crumpets) and some breakfast cereals as well as cheese can be high in salt, yet they form part of a healthy balanced diet and therefore it is not recommended to cut them out. There are lower salt alternatives particularly amongst breakfast cereals and breads, however, remember to check food labels and be mindful of portion sizes.

Composite Dishes

To apply the Eatwell Guide to our diet, it is important to know what proportion of foods we are eating from each group. Dishes such as casseroles, lasagne, pizza, spaghetti bolognese and sandwiches, to name but a few, are called composite dishes. These meals include various ingredients which belong in more than one group e.g., pizza. The picture above shows how the ingredients of a pizza can be broken down into the following foods and corresponding food groups of the



Eatwell Guide; a base (carbohydrates), topped with cheese (dairy and alternatives), mixed vegetables (fruit and vegetables) and chicken/fish (proteins).

It is possible to make composite dishes healthier by changing the proportions and portion size of foods in the dish i.e. by reducing the amount of cheese and adding more vegetables to a pizza.

Fluids

Hydration

To ensure our bodies do not become dehydrated, we should aim to drink 6-8

glasses of fluid per day, although we may need to drink more when the weather is hot or during and after strenuous exercise. Fluids include water, lower fat plain milk and sugar free drinks, including tea and coffee. Fruit juice and smoothies count towards your fluid intake, although they are a source of free sugars*, so consumption should be limited to no more than a combined total of 150ml per day.

*Free sugar includes any sugar added to food or drink products by the manufacturer, cook or consumer including those naturally found in honey, syrups and unsweetened fruit juice. This is the type of sugar we should aim to reduce.

Sugary drinks are one of the main contributors to excess sugar intake amongst children and young people in the UK and are the main cause of tooth decay. Try to swap sugary soft drinks for diet, sugar-free or no added sugar varieties to help reduce sugar intake.



Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.



Additionally, drinks containing caffeine, such as cola, tea and coffee can act as a mild diuretic, meaning an increase in the passing of urine. This can affect some people more than others, so we should be mindful when choosing these types of drinks, so we stay hydrated.

Fruit juice can be a good source of vitamin C and is best given with breakfast or a main meal to help the body absorb iron. However, fruit juices are not recommended between meals as they contain free sugars and are acidic. This can cause dental decay and erosion; therefore, should only be given at mealtimes and drank through a thin straw to limit effects on teeth. Whether it is freshly squeezed (more expensive) or the cheaper long-life juice made from concentrate, both types contain almost the same amount of free sugars. Therefore, there is no need to buy expensive varieties of fruit juice.



Plain milk and water are the best to drink between meals drinks because they contain no added sugar and are not acidic, therefore are kind to our teeth.

Nutritional Needs of Primary School Children

Children need a healthy, varied diet containing an adequate balance of energy and nutrients; as outlined in the Eatwell Guide, which applies in its entirety to children over the age of 5. This balance is essential for normal growth and development. Children's energy requirements are high in relation to their size and can change rapidly because they are growing quickly and are becoming more active. Therefore, younger children should have small and frequent meals consisting of energy and nutrient dense foods as their stomach size is not large enough to cope with larger meals.



There are several essential nutrients that children require for healthy growth and development:

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Mineral/ Vitamin	Food source	Function	Information
Calcium	Milk, yogurt, cheese, soya beans, tofu, green leafy vegetables, seeds and nuts, non-dairy drinks with added calcium, bread and any food made with fortified flour, and fish that contain edible bones e.g. tinned fish.	For healthy bones and teeth.	If a child is eating well and over 5 years old, then encourage to eat low-fat dairy products as they contain less saturated fat and can provide the same amount (if not more) calcium.
Vitamin D	<p>Good food sources are oily fish and eggs (particularly the yolks). Other sources include dairy foods, some fortified foods such as breakfast cereals and non-dairy drinks (not the organic varieties).</p> <p>https://www.foodstandards.gov.scot/consumers/healthy-eating/nutrition/vitamins-minerals/vitamin-d</p> <p>https://www.healthscotland.com/documents/5274.aspx</p>	For growth, development and maintenance of bones and teeth – it also helps to keep muscles and the immune system healthy..	The main source of Vitamin D is from the action of sunlight on the skin. In the UK, the sun is only strong enough to make vitamin D during the months of April to September. Therefore, from October to March everyone age 5+ should consider taking a Vitamin D supplement.

Omega-3	Oily fish such as mackerel, herring, trout, salmon and sardines.	Long chain omega 3's can help protect the heart and blood vessels from disease. Our bodies cannot make this type of fat, so it is important we get it from the diet.	<p>Girls should have no more than two portions of oily fish a week (toxins present at low levels in oily fish can build up in the body over time and may be passed onto an unborn baby in a future pregnancy). Boys can have up to four portions of oily fish a week.</p> <p>Children under the age of 16 years should avoid eating fish such as shark, swordfish or marlin. This is because they may contain mercury which can affect a child's nervous system.</p>
Iron	<p>Lean meat, liver and liver pate*, wholegrains, pulses, beans, nuts, sesame seeds, dark green leafy vegetables, dried fruit and fortified breakfast cereals.</p> <p>* If you eat liver or liver pâté more than once a week, you may be getting too much vitamin A.</p>	For healthy blood and for transporting oxygen around the body.	<p>Iron is especially important for teenage girls and women as their requirements are higher due to menstrual losses.</p> <p>Vitamin C helps with the absorption of iron from plant sources so having a drink or food containing vitamin C with an iron-rich meal is a good idea, for example a glass of fruit juice with a bowl of iron fortified cereal.</p>

Vitamin C	Peppers, citrus fruits, broccoli, tomatoes, berries and potatoes with skin e.g., baked potatoes or unpeeled baby potatoes	For healthy body tissues, for example, skin, gums, bones and teeth, as well as helping the healing process.	Vitamin C aids the absorption of iron from plant sources (see iron above).
Vitamin A	<p>Liver*, dairy products, fortified fat spreads, eggs (particularly the yolks), dark green leafy vegetables and orange-coloured fruits and vegetables (e.g., carrot, sweet potato, butternut squash, melon)</p> <p>* If you eat liver or liver pâté more than once a week, you may be getting too much vitamin A.</p> <p>https://www.foodstandards.gov.scot/consumers/healthy-eating/nutrition/vitamins-minerals/vitamin-a</p>	<p>For healthy skin and eyes (helps vision in dim light).</p> <p>Helps the immune system to work as it should. It also helps keep skin and the linings of some parts of the body, such as the nose, function normally.</p>	Too much vitamin A over many years may be toxic as it may cause osteoporosis. Older women are at higher risk of developing osteoporosis.

Dietary Fibre

In addition to the vitamins and minerals listed above, children require fibre in their diets. Fibre comprises of a group of different substances in plant foods which cannot be completely broken down by the human digestive enzymes.

Fibre has many benefits such as;

- Preventing constipation
- Reducing the risk of many health conditions such as Type 2 Diabetes, stroke, cardiovascular disease and colorectal cancer.
- Keeping us fuller for longer

In the UK, adults and children do not meet the recommended daily fibre intakes highlighted in the table below. It is important to eat a variety of fibre-containing foods such as;

- Wholegrains and high fibre starchy carbohydrates like whole-wheat bread, pasta, wholegrain rice and wholegrain breakfast cereals
- Fruit and vegetables with skins
- Pulses, nuts and seeds

Recommended fibre intakes

Age	Daily recommendation (grams)
2-5yrs	15g
5-11yrs	20g
11-16yrs	25g
>16yrs	30g

To find out more about fibre visit <https://www.nutrition.org.uk/healthy-sustainable-diets/starchy-foods-sugar-and-fibre/fibre/>



Energy

The human body converts the food it consumes into energy from carbohydrates, protein and fat in the diet, to function and stay alive. This energy supply enables the body to do several things vital to its survival including:

Maintaining the body's essential functions: the heartbeat, metabolism (breakdown) of foods, respiration (breathing) and regulation of water and body temperature.

Enabling physical activity and movement: physical activity encompasses all forms of movement. The more active an individual is, the more energy they will require. Some activities will use more energy than others. For example, running will use more energy than walking.

Allowing for growth and repair of tissues: every individual will require some degree of tissue repair, but more energy will be needed during periods of growth when new tissues are formed, including childhood and adolescence due to an increase in body size.

Energy density

The amount of energy a food contains per gram is known as its energy density. Different food and drinks provide varying amounts of energy. Energy is measured in unit of kilocalories (kcal) or kilojoules (kj).

One kilocalorie (1 kcal) is equal to 4.18 kilojoules (4.18kj).

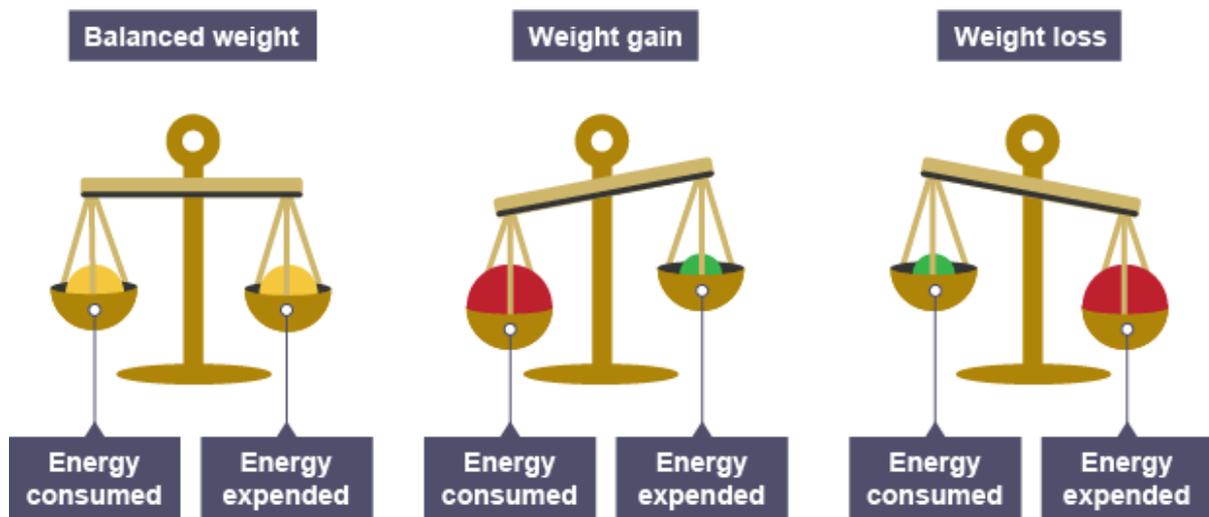
- Fat contains 9kcal (37kj) per gram
- Protein contains 7kcal (29kj) per gram
- Carbohydrates contains 3.75kcal (16kj) per gram (for the purpose of food labelling this is rounded up to 4 kcal per gram)

Carbohydrate is the most important source of energy for the body because it is the main fuel for both your muscles and brain.

Sources of carbohydrate are starchy foods like potatoes, bread, rice, pasta, pulses and breakfast cereals. Where possible, choose higher fibre and wholegrain options.

Energy balance

Energy balance is the relationship between energy input (energy/calories from food and drinks) and energy output (energy/calories used by the body for our energy requirements). It is important to be aware of energy balance to maintain a healthy weight. If we eat and drink more energy/calories than we use, the body can store this energy as excess weight. Similarly, if we eat and drink less energy/calories than we use, our bodies will gradually become lighter but if we eat and drink the same amount of energy/calories than we use, our weight stays the same.



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