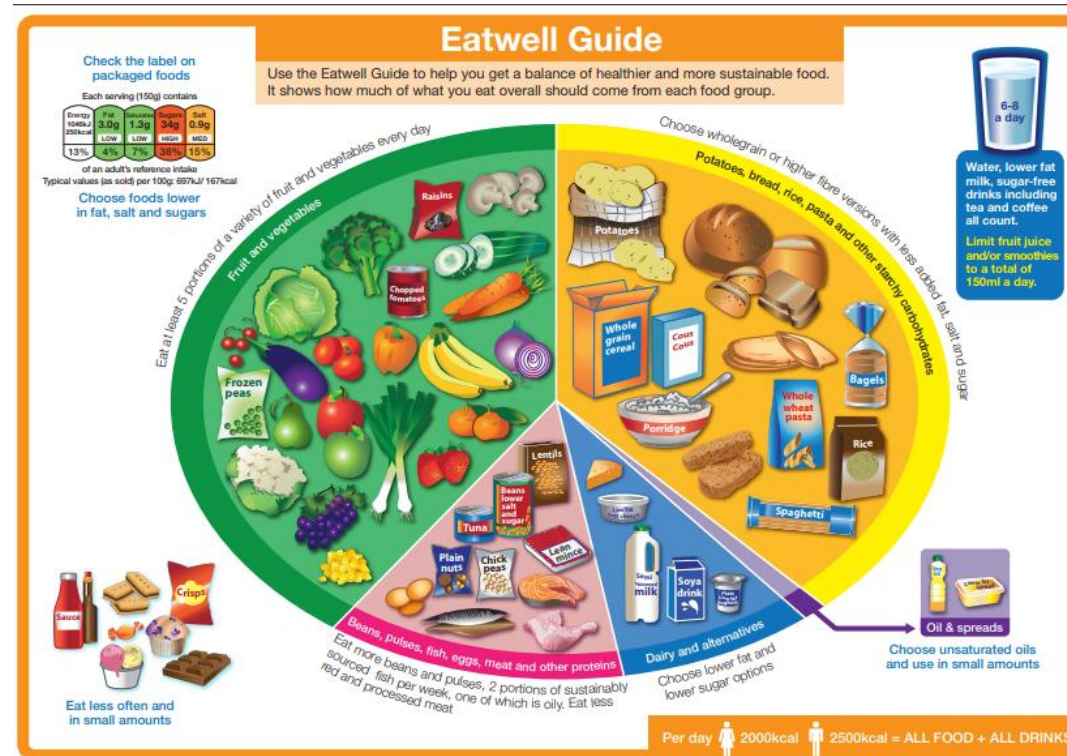




# Knowledge Organiser

## Food & Nutrition

### Topic: Diet & Good Health



Source: Public Health England in association with the Welsh Government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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# Knowledge Organiser

## Food & Nutrition



### Topic: Diet & Good Health

**Diet:** What you consume (food & drink) on a daily basis.  
\*everyone is on a diet! It doesn't mean losing weight

**Balanced Diet:** A diet containing all of the correct nutrients in the correct amount, contributing to good health.

### Government Guidelines

1. Base your meals on starchy carbohydrates
2. Eat lots of fruit and vegetables
3. Eat more fish, including a portion of oily fish
4. Cut down on saturated fat and sugars
5. Eat less salt
6. Get active and be a healthy weight
7. Don't get thirsty
8. Don't skip breakfast



## Eatwell Guide

**Fruit & Vegetables (Vitamins & Minerals)**  
5 a day. (a variety).  
Fresh, frozen, tinned, dried & juiced all count - fruit juice/ smoothies should be limited to 150ml per day in total & dried fruit should be limited to 1 tablespoon per day.  
1 portion = 80g  
Tips: grate or blend vegetables into a Bolognese. Add fruit to cereal. Swap potato chips for sweet potato.



**Hydration** Aim for 6-8 glasses of fluid per day. Water is the best choice as it hydrates you without adding any extra calories to your daily intake. Unsweetened tea and coffee, sugar free drinks and low fat milk all count

**Bread, rice, potatoes, rice, paste & other carbohydrates (carbohydrates and fibre if wholemeal)**  
Choose wholegrain or higher fibre versions with less added fat, salt and sugar.

**Oils and spreads (Unsaturated fat)**  
This includes olive, vegetable & rapeseed oil, and margarine which is oil hardened to a solid by pumping hydrogen through it. This is the healthier fat. It lowers blood cholesterol rather than raising it like saturated fat. It is however still very high in energy (kcal) so it is a very small proportion.

**Energy requirements (kcal)**  
Shows the average energy requirements for adult males and females. Females -2000 kcal and males - 2500kcal. If energy intake is greater than energy expenditure (i.e. From exercise), = weight gain. These are only averages – depends on age, gender, activity level & body size.

**Dairy & Alternatives (Calcium)**  
Dairy sources come from milk. Cheese, yogurt and cream are made from milk so are also included.  
Non dairy alternatives include milk and products made from soya, coconut, almond etc. These are not made from milk and are suitable for lactose intolerant and are lower in saturated fat. Food in this group can be high in saturated fat and sugar (i.e. Cheese, whole milk, sweetened yogurts) so choose low fat & sugar versions

**Composite foods**  
A dish or meal with more than 1 kind of food component in them. E.g. pizzas, pies, lasagne and sandwiches are all made with ingredients from more than one food group.

### Traffic Light Labelling

To help consumers see nutrition at a glance & compare products. Shows amounts per 100g & per portion. Colour-coded. (not for energy due to varying requirements)

| Each serving (150g) contains |      |           |        |      |
|------------------------------|------|-----------|--------|------|
| Energy                       | Fat  | Saturates | Sugars | Salt |
| 1046kJ<br>250kcal            | 3.0g | 1.3g      | 34g    | 0.9g |
|                              | LOW  | LOW       | HIGH   | MED  |
| 13%                          | 4%   | 7%        | 38%    | 15%  |

RI =

recommended daily intake of nutrients

| (per 100g) | High  | Medium   | Low   |
|------------|-------|----------|-------|
| Sugar      | >15g  | 5-15g    | <5g   |
| Fat        | >20g  | 3-20g    | <3g   |
| Sat. fat   | >5g   | 1.5-5g   | <1.5g |
| Salt       | >1.5g | 0.3-1.5g | <0.3g |

**Percentage Reference Intake (% RI)**  
How much of the daily intake is in a portion. i.e. 50% RI of salt means that the serving contains ½ the daily intake for salt & so try to choose options lower in salt for the rest of the day.  
Shows energy, sugar, fat, sat. fat & salt

**Foods to avoid:** High in the 3 'S's. Salt, Sugar, Saturated fat  
Use food labels to help you choose foods lower the 3 'S's  
**Salt:** Adults - < 6g per day & even less for children. High salt = increased risk of developing high blood pressure = greater risk of stroke & heart disease.  
**Sugar:** Too much sugar, especially between meals, can increase risk of tooth decay and will add extra calories so cut down on cereal, cakes, biscuits and sugary drinks.  
**Saturated fat:** Foods high in saturated fat can lead to high blood cholesterol, which narrows arteries and leads to coronary heart disease. Usually from animal sources i.e. Animal fat, butter, cheese.

**Beans, pulses, fish, eggs, meat & other protein (protein)**  
Animal sources - meat such as chicken, pork, beef., eggs And fish such as salmon, tuna, cod. Plant sources - beans, lentils, pulses. Plant sources have less saturated fat and are more environmentally friendly. Aim for >2 portions of sustainably sourced fish per week, including a portion of oily fish (a portion = 140g). Oily fish - salmon, sardines, mackerel & trout, are sources of vitamin D & omega 3.

### Diet Related Health Problems

**Obesity** - When the body has too much fat.  
BMI (Body Mass Index) is used to calculate body mass  
BMI of 18.5 – 25 is normal, 30 + is obese.  
Cause: energy in > energy out; Eating too many high energy foods (fat & sugar); Low exercise levels.  
Problems: High blood pressure and cholesterol = heart problems; Increased risk of type 2 diabetes & cancer  
Breathing difficulties, fatigue & low self esteem.



**Diabetes** - Blood glucose levels cant be controlled.  
Insulin helps glucose be absorbed by the body. The body produces more insulin when blood glucose levels are too high in the blood.  
Type 2 Diabetes – the body cant produce insulin so blood sugar levels get too high.

### Coronary Heart Disease

Arteries clogged up with fatty cholesterol.  
Cause: saturated fats, low physical activity, smoking & high blood pressure.  
Health Problems: Blood cannot pass through arteries properly which causes heart to pump faster and harder, causing chest pains (angina); blood flow and oxygen to the heart gets blocked which causes heart attacks.



### Bone Health

**Rickets** (soft and weak bones in children)  
Cause: lack of vitamin D or calcium.  
Leads to bone pain, deformed growth (i.e. Bowed legs) and increased risk of fractures.  
**Osteoporosis** (bone disease, brittle bones in elderly)



### Anaemia

Caused by an iron deficient  
Iron helps make red blood cells which carry oxygen round the body.  
People who are anaemic lack red blood cells  
Cause: not enough iron in the diet (i.e. Red meat, green leafy veg) women who lose blood through menstruation; pregnant women who pass their iron to their baby.  
Health problems: fatigue (tiredness); pale skin



### Tooth Decay

Plaque is a substance which contains bacteria. This builds up from food in the mouth. Bacteria feed on sugars and form acids which eat away at tooth enamel and cause tooth decay (caries/cavities) Cause: high sugar foods.



### Key Words

**Sustainably sourced** - production of food, plant or animal products using farming techniques that protect the environment. i.e. Fishing that doesn't reduce the species' population.  
**Lactose intolerant** - a common digestive problem where the body is unable to digest lactose, a type of sugar mainly found in milk and dairy product  
**Cholesterol** - a fatty substance. Too much cholesterol in a person's blood can cause heart disease.  
**Blood pressure** - a measure of the force that your heart uses to pump blood around your body.  
**Kcal** - unit to measure energy.  
**Obesity** - a condition where the body accumulates too much fat  
**BMI** - Body Mass Index – a measure of body mass. 18.5-25 = normal weight, 30+ = obese  
**Diabetes** - a condition where blood glucose levels stay too high as insulin isn't produced by the body  
**Insulin** - produced in body to control blood sugar levels  
**Coronary heart disease** - caused by a build up of cholesterol in the arteries, restricting blood flow  
**Osteoporosis** - a bone disease where bones weaken and become brittle  
**Rickets** - a condition in children where bones are soft, weak and deformed.  
**Anaemia** - condition where there are a lack of red blood cells  
**Plaque** - a substance on teeth which reacts with sugar and causes tooth decay.



### Modifying meals, recipes & diets

**Reduce salt**  
Less processed meat (i.e. ham, bacon, sausage)  
Less ready-made foods (pasta sauces in jars, ketchup) – make your own  
Be cautious of naturally salty foods – cheese, olives, soy sauce  
Use other seasoning such as herbs and spices  
Foods can be preserved in brine (salted water). Choose non brine alternative (i.e. Tuna)  
Use low salt stock cubes



**Reduce saturated fat**  
Swap butter for low fat spreads made from unsaturated oils  
Eat lean cuts of meat or trim off the visible fat  
Grill, bake, steam instead of frying  
Allow fat to drain away when cooking  
Swap high fat snacks like muffins, pastries for lower fat alternatives such as fruit loaf or rice cakes with houmous.



**Reduce sugar**  
Often listed as sucrose, glucose etc. Look out for 'ose' ending.  
Use less sugary sauces (ketchup, beans, BBQ)  
Swap fizzy drinks for dilute juice/water & lemon  
Avoid sugary breakfast cereals.  
Reduce sugar in hot drinks & baking.  
Sweeten plain yogurt with fruit  
Swap sugar for natural sweetener (not artificial)  
Choose tinned fruit in natural juices rather than in syrup



**Increase fibre**  
Swap white starchy foods such as pasta, rice, bread, flour) for wholemeal  
Use more lentils, beans in meals  
Keep skin on potatoes  
Add more fruit and vegetables to the diet.  
Keep frozen vegetables in the freezer so they are always available  
Choose high fibre cereals



**What might be asked in an exam?**  
**Grade 1-3** – categorise foods into the EWG, explain traffic light labelling  
**Grade 4-6** – explain the importance of the guidelines & the health implications.  
**Grade 7+** - analyse or evaluate a recipe, menu or diet with regards to government guidelines.



**Useful sites.** Type these links into your browser or scan the QR codes:

EWG videos: [tinyurl.com/kebn67u](https://tinyurl.com/kebn67u)  
Nutrition: [tinyurl.com/ydastevq](https://tinyurl.com/ydastevq)  
Health problems: [tinyurl.com/yan6wlz9](https://tinyurl.com/yan6wlz9)

