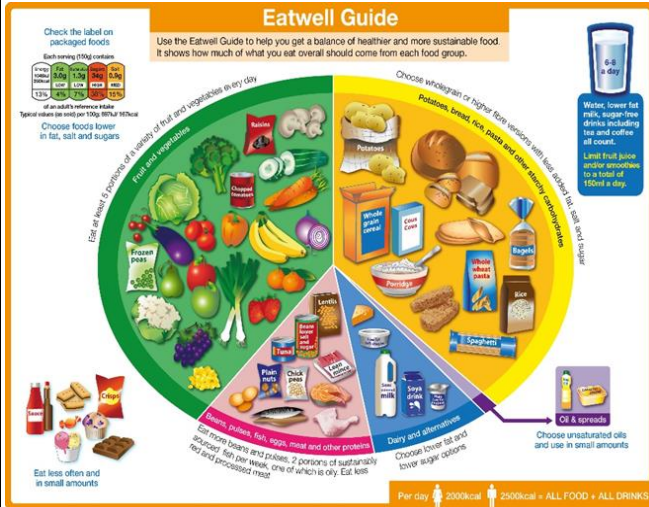


# Component 2 Energy Use, Diet, Nutrition and Hydration

## Diet and Energy Balance

**Balanced diet** - Eating the right foods in the right amounts. This will allow us to exercise and work properly

**Varied diet** - If we don't eat a variety of foods in the correct proportions, we won't get all the nutrients we need to make up a balanced diet



The Eatwell guide shows us what foods we should be eating and in what quantities. E.g. the largest parts of the diet should come from:

- Fruit & Vegetables
- Starchy carbohydrates

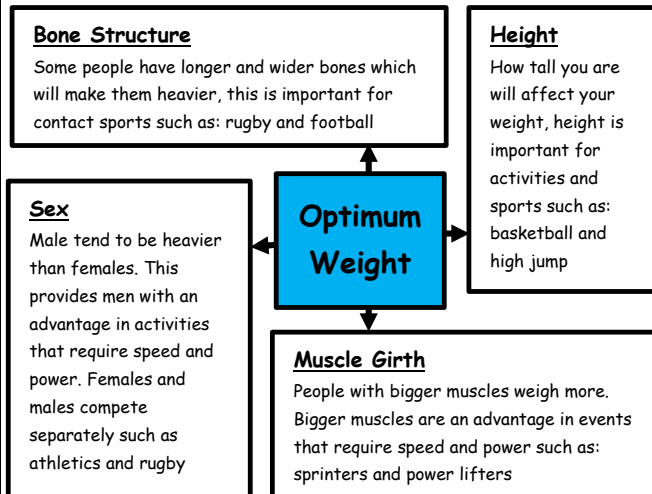
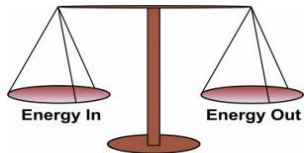
Variety is important to get all the necessary nutrients. There are seven nutrients.

- Carbohydrates
- Fats
- Proteins
- Vitamins
- Minerals
- Fibre
- Water

## Energy Balance

The energy balance makes sure the calories we take in is equal to the number of calories we expend.

- If we take in more calories, we will gain weight
- If we take in too little calories, we will lose weight
- We need to have a balance so we have the correct nutrients for energy



## Dietary Manipulation

**Protein intake:**  
Protein should be consumed as soon as possible after exercise; this increases protein synthesis and therefore muscle growth. This is used by performers such as sprinters, shot putters and power lifters

**Carbohydrate loading:**  
This strategy involves eating foods high in carbohydrates 1 to 4 days before an event. These increases glycogen stores in the muscle. This is used by endurance athletes such as marathon runners

**Hydration:**  
Water prevents dehydration, dehydration causes: dizziness, fatigue, heat stroke, muscle cramps, nausea and the thickening of blood. Water should be consumed before during and after exercise

## Macronutrients

### Carbohydrates

**Function:**

- Provide us with energy in both aerobic and anaerobic activities
- Eaten in large quantities compared to other macronutrients

**Found in:**

- Bread, rice, pasta, potatoes



### Fats

**Function:**

- Provide us with energy, is stored in the body and can lead to weight gain
- Should be the smallest percentage of macronutrients in the diet

**Found in:**

- Butter, oil, fatty meats, fried food



### Proteins

**Function:**

- Used for growth and repair, it can provide us with energy
- May be used by athlete for growth and repair of muscles

**Found in:**

- Cheese, milk, eggs, lean meat, fish



## Micronutrients

### Vitamins & Minerals

- Vitamins and minerals keep our body healthy and can improve your immune system,
- Vitamins are found in fresh fruit and vegetables
- Minerals are found in vegetables and meat

**Vitamin D:** Found in dairy products and helps the body absorb calcium

**Calcium:** Found in milk and other dairy products and helps keep our bones strong



### Water

- Water prevents dehydration and is found in most liquids and many foods



### Fibre

- Fibre aids the digestive system and is found in foods such as cereals, vegetables and nuts

