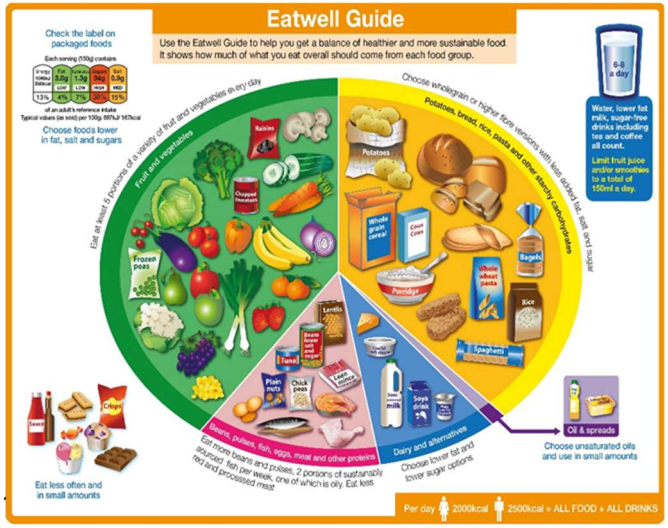
Component 2 Energy Use, Diet, Nutrition and Hydration

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



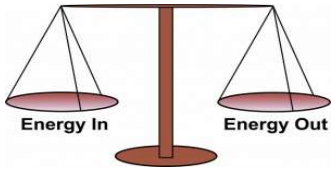
The Eatwell guide shows us what foods we should be eating and in what quantities. E.g. the largest parts of the diet should come from:

- 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

Optimum Weight

Bone Structure
Some people have longer and wider bones which will make them heavier, this is important for contact sports such as: rugby and football

Height
How tall you are will affect your weight, height is important for activities and sports such as: basketball and high jump

Sex
Male tend to be heavier than females. This provides men with an advantage in activities that require speed and power. Females and males compete separately such as athletics and rugby

Muscle Girth
People with bigger muscles weigh more. Bigger muscles are an advantage in events that require speed and power such as: sprinters and power lifters

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