

Calories:

Energy is measured in calories. These calories are obtained from the food and drink we consume.

Male = 2500 kcal/day Female = 2000 kcal/day

Maintaining Weight: Calories Taken in = Calories Used

Weight Gain: Calories taken in is > calories used

Weight Loss: Calories taken in is < calories used

What is a balanced diet?

Eating the right amount of calories to deal with the energy that will be needed. It is also eating different food types to provide the body with the right nutrients, vitamins and minerals to remain healthy. Ideal average intake of main nutrients –

Carbohydrates = 55 – 60%, Fat = 25 – 30%, Protein = 15 – 20%

Why should we strive to have a balanced diet?

- Unused energy is stored as fat which could lead to obesity.
- The human body needs nutrients for energy, growth and hydration.

Factors that effect calorie intake:

Age – younger people need more calories to help them grow. After 25 the calorie needs of individuals starts to fall.

Gender – Men need more calories than women.

Height – The taller an individual the more calories they require.

Energy Expenditure – The more exercise an individual does the more calories they need.

Basal Metabolic Rate – This is now fast energy is being used and varies from individual to individual.

Water:

Water is vital to maintain hydration levels (water balance) as it assists in how the body functions.

Key terms

- **Hydration** – having enough water (water balance) to enable normal functioning of the body.
- **Dehydration** – excessive loss of body water interrupting the function of the body.
- **Rehydration** – consuming water to restore hydration.

Hydration helps our reactions, lubrication of joints, blood flow and also plays a big part in maintaining correct body temperature.

The amount of water we need to drink depends on:

- The environment you are in – the hotter the environment the more water is required to keep you hydrated.
- The temperature in which you are in – due to you sweating more you require more water to keep you hydrated.
- The amount of exercise / activity you are doing – exercise means you need to replace the water lost in sweat.

Negative effects of dehydration:

- The blood thickens (increased viscosity), which slows blood flow down.
- The heart rate increases which means that the heart has to work harder.
- The body temperature is likely to increase, meaning that the body may overheat.
- Reaction time increases (it gets slower) which has a negative effect on decision making.
- An individual may suffer muscle fatigue and muscle cramps.

Vitamins:

Organic substances that are required for many essential processes in the body.

Examples:

- **Vitamin A** is found in dairy products and helps our skin function properly and helps us to grow.
- **Vitamin B** is found in whole grain products, nuts, eggs and fish. It helps the general functioning of the body.
- **Vitamin C** is found in citrus fruit, broccoli and liver. It aids the immune system, skin elasticity and the functioning of blood vessels.
- **Vitamin D** is found in oily fish, eggs and butter and is used to help bones.

Minerals:

Inorganic substances that assist the body with many of its functions (help the body function properly).

Examples:

- **Calcium** found in milk, cheese and other dairy products. This is needed for teeth and bone growth as well as helping with nerve and muscle functions.
- **Iron** is found in liver. It helps the immune system, helps red blood cell production and assists haemoglobin carry more oxygen.

Carbohydrates:

Bodies main energy source especially during exercise.

Simple Carbohydrates – stored as glucose and is broken down quickly for fast energy release (found in sugar food e.g. sweets).

Complex Carbohydrates – stored as starches in the body and are broken down more slowly but produce large amounts of energy (found in bread, pasta and potatoes).

Protein:

Food source which is used for growth and repair of body tissues.

Athletes would require power / strength / speed need protein to help their muscle development (growth) and repair of muscle tissue after training sessions (micro tears).

Protein can also be used as an energy source at the end of prolonged activities when all other energy sources have been used up.



Fats:

Food source that provides energy at low intensities. Fat can provide more energy than carbohydrates BUT only when the performer is working at a low intensity. Often used for energy when walking or jogging and is also used when a runner has used up all their carbohydrate stores (starches).

Unsaturated fats cause cholesterol which leads to the narrowing of arteries and can cause heart attacks.