Your body is like a wonderful machine

- First of all it builds itself in your mother's womb.
- It works hard on growing bigger and stronger.
- It repairs itself (like healing a cut or a broken arm).
- It changes itself from a child to an adult.
- It runs all the systems needed to keep the body working.
- It's more complicated than the most expensive computer and it's free!

To look after this amazing body machine you need to keep it supplied with the right kind of fuel.

Does your family have a car?

Do you go to the petrol station sometimes when mum or dad is filling the car with fuel?

Have you noticed that there are different kinds of fuel? Eg. petrol, diesel, LPG (liquid petroleum gas).

The kind of fuel you buy depends on the kind of fuel the engine runs on.

Your body runs on the fuel it gets from what you eat.

If it doesn't get the right kind of fuel then it doesn't work very well or, like your car, it could break down.

What fuel does your body need?

Protein, Carbohydrates, Fat (and vitamins, minerals and water)

Your body needs all of these, but what are they?

What is protein?

There are 20 chemicals called amino acids, which join together in different ways to make thousands of different proteins (say 'pro-teen').

Where do they come from?

11 of these amino acids are made by your body and are called 'non-essential' amino acids.

The other 9 'essential' amino acids you have to get by eating the right foods.

What does protein do?

It is a very important nutrient because it builds up your muscles, organs and glands. It helps repair and replace them too, so that your body can keep on working.

Some of the things it makes:

- haemoglobin (say 'heem-o-glow-bin') - which carries oxygen around the body in your blood.
- antibodies - to fight diseases
It helps cuts and grazes heal up.

Where do you get it?

> If you eat meat, chicken, fish, eggs, nuts, dairy products and legumes, then you've got it!
> Protein from animal foods has all the essential amino acids you need. Plant foods have each got some of them.

If you are a vegetarian [don't eat animal foods] then you have to make sure that you still get the right amount of amino acids.

How?

You need to eat a wide variety of plant foods.

You could mix cereal with milk, nuts and fruit or have a peanut paste sandwich and a piece of fruit.

**What are carbohydrates?**

There are two types of carbohydrates (say 'car-bo-hi-drays):

> **Sugars** - simple carbohydrates (because your body digests them quickly and easily)
> **Starches** - complex carbohydrates (it takes your body longer to digest them).

What do carbohydrates do?

> They give energy to all the cells in your body.
> They produce glucose (say 'gloo-cose').
> Glucose gives you quick energy, but your body cells can't use heaps of it all at once so it saves some in your liver and muscles, as glycogen (say 'gly-co-gen').

It's a bit like having two tanks of petrol, the one your car is using and a reserve tank in case you run out of fuel.

So, if your body runs out of glucose it switches to the reserve tank, glycogen.

Once there is enough glycogen stored in your liver and muscles the rest turns into fat.

**Some simple carbohydrates** come from 'sometimes' foods like fizzy drinks and lollies, which have lots of sugar and don't have important vitamins which your body needs.

**But** many come from foods such as apples, bananas, grapes, raisins, as well as low-fat ice cream and yummy frozen yoghurt. These give you extras such as vitamins and minerals.

**Complex carbohydrates** come from food like bread, cereals, pasta and vegies like corn, potatoes and carrots. They give you energy more slowly so it lasts longer and they have heaps of vitamins and minerals, which your body needs.

**What is fat?**

In your body, it is the way you store energy - for later.

There are three types of fat that we eat.

> **Saturated fatty acids** - from animal foods, dairy foods and some oils that come from plants.
Unsaturated fatty acids - from plants, fish and most plant oils.

Mono unsaturated fatty acids - from some plant products such as olive oil and canola oil.

What does fat do?

Some good things about fat.

FAT:
> acts as the body's reserve tank of energy
> protects our organs - like a cushion
> helps our bodies stay warm in cold weather
> helps hormones keep blood pressure steady
> helps keep skin and hair healthy
> gives some vitamins a place to stay and helps them get round in the blood to where the body wants them.

Where do you get it?

> There is fat in lots of good foods such as meat, eggs, cheese - but sometimes there is too much in fast foods, chips, biscuits and many of the 'sometimes' foods.

Remember you only need to eat a little of these to get all the good things from fat. If you eat too much fat you will find out the bad things about too much fat.

Fat can:
> lead to obesity (when a person weighs too much for his/her height and body type)
> lead to illnesses when you're older (heart disease)
> make you feel bad because you're not getting enough of the good foods to keep you healthy
> make you feel bad about what you feel you look like.

How to avoid too much fat:
> Choose low fat milk, yoghurt, cheese etc.
> Cut fat off meat before cooking/eating.
> Avoid fried food and pastries (make them 'sometimes foods').
> Avoid chicken skin.

When you use fat (margarine or cooking oil, for example) choose unsaturated fat products because they are healthier for your body.

Drink water!

Your body needs water to work well too. The water in blood carries food to all parts of your body. See our topic Water.

Putting the right kind of fuel into a car helps it to give its best performance.

Now you know what kind of fuel to put into your body if you want to get its best performance.
Of course cars need to be maintained (looked after) in other ways, as does your body, but neither of them can work without fuel.

Dr Kate says:

Aim for balance in your food. Keep your body in the mood. Lots of water and exercise will keep the sparkle in your eyes.

Chocolate, candy
Sweets and brandy
Make life so sweet.
But pimples leak.
Trucks and trolleys
Of sweets and lollies
Make candy makers rich
And rubbish bins full.
Rebecca

‘Go for 2 & 5 website’

Here you can find out about the benefits of fruit and vegies, nifty ways to get more fruit and vegies into your day, plus some super simple tasty recipes.