



Bacteria - What happens when you don't brush your teeth?

Updated v2

Fact

- Tiny bacteria live in your mouth and can stick to your teeth to make plaque. Plaque is colourless and sticky and if it hardens it becomes tartar.
- The bacteria use the sugar in the food that you eat.
- They release waste products, including acid, which destroys the enamel on your teeth.
- You get toothache when the enamel on your teeth has holes in it and the acid gets in to the tooth nerves inside your tooth.
- Brushing your teeth scrubs away the food and sugar so the bacteria has no sugar to make into acid.



Do you know

- The tough outer covering of your teeth is enamel.
- Most foods contain sugar – fizzy drink, muesli bars, breakfast cereals, even crackers and bread.
- Bad breath is a result of waste products from the bacteria using food left over on your teeth.

Experiments you can do

What happens when an acid reacts with another substance?

(Do this experiment over a sink bench or in a plastic bag as it can make a real mess.)

What you need:

1 teaspoon of baking soda

½ a cup of vinegar

What you do:

Add the baking soda to the vinegar and watch what happens.



Vinegar is an acid, which reacts with other substances to change them. The vinegar certainly changes the baking soda – it dissolves it and it releases the gas carbon dioxide!

Other Investigations

Dissolving Enamel

What you need:

1 egg
1 small plastic container with a lid
Vinegar

What you do:

Place the egg into the container and pour in enough vinegar to cover it. Put the lid on the container and leave it for three days.

Take out the egg and wash away the vinegar. What has happened to the shell?

The acid in the vinegar will dissolve the calcium carbonate in the eggshell the same way the acid made by the bacteria breaks down the enamel in your teeth.

Clean Your Egg Teeth.

What you need:

Three hardboiled eggs, as close in colour as possible.
Two strongly coloured liquids (fizzy drinks/orange juice/strong black tea)
Two plastic containers big enough for a boiled egg to be covered by one of the coloured liquids.
Paper towels.
Toothpaste
A clean toothbrush

What you do:

Have a look at the eggs. How are the eggs like our teeth? How do the shells protect the egg the way the enamel protects the soft delicate inside of our teeth?

Place one of the boiled eggs aside – this will be your control egg. The one that you'll compare the other two eggs to.

Place the other two other eggs in a plastic container, each, and cover them with one of the brightly coloured liquids. Put the containers somewhere out of the way, where they won't get knocked over and leave them for a day.

After a day take the eggs out of the liquid and pat them dry with a paper towel.

Compare the colour of these two eggs with the control egg. How has the colour of the shells changed?

Put a little bit of toothpaste on the toothbrush and gently brush the coloured eggs.

It takes at least two minutes of gentle brushing to remove plaque and food stains from your teeth. How long does it take to brush away the colour of the liquid from the eggs?

Jokes

What time is your dentist appointment? Two thirty (tooth hurty!)