MAKING THE RIGHT FOOD CHOICES FOR HEALTHY TEETH Teachers Section

By the end of this lesson the children will be able to:

- Identify which foods contain high amounts of sugar.
- Make healthy choices in relation to how different foods affect their teeth.
- Identify key times during the day when their teeth are at risk from plaque acid.

Background information

It's a common belief amongst the general public that if a person brushes their teeth regularly they will not experience tooth decay. Unfortunately, this is not true! The section on tooth decay clearly emphasises the need to carry out effective toothbrushing in conjunction with reducing the frequency at which sugar is consumed if we are going to be in with a chance of reducing our risk of tooth decay. Although thorough regular plaque removal is vital to ensure a healthy mouth, it's actually the individual's dietary choices which can make all the difference.

This section on making healthy choices will demonstrate how sugar is present in many foods and drinks without us always being aware it's there!

Let's go back a step and refresh ourselves with the process of tooth decay. When fermentable carbohydrates such as sugar are consumed it reacts with the plaque to produce plaque acid. This is when demineralisation of enamel occurs and it can take up to an hour after the food has been consumed for the mouth to return to a neutral pH level.

A simple equation of tooth decay is:

Plaque+Sugar=Acid

We can make a further equation:

Acid+Enamel+Time=Decay

We know saliva is the mouth's natural defence against tooth decay due to its ability to neutralise plaque acid. Dentists frequently encourage their patients to consume sugary snacks and drinks at meal times for this very reason, but the trouble starts when these sugary items are consumed too frequently throughout the day. Many children snack on the way to and from school, at break time, whilst watching television, the list goes on. The key lies in the frequency, it's when and how often that matters.

Many foods and drinks contain "hidden sugars". Sugar is used in the manufacturing of food products for two reasons:

- As a flavour enhancer
- As a preservative

A prime example of sugar being used as a preservative is in tinned vegetables. The vegetables do not taste as if they had sugar added to them, but if you were to look on the label it would indicate sugar has been added. Sugar has lots of different names such as sucrose, dextrose and lactose. Anything ending with "ose" is a sugar. It's quite effective to tell children to "beware of the "ose" zone!" For some unknown reason they remember this!

Lists of ingredients in specific products are usually in order of quantity whereby the first item on the list has the highest proportion of all other ingredients in that product. Government regulations now insist products carry a clear statement of nutritional values on labels allowing consumers to make informed choices of which foods are best suited to them.

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It's very difficult to visualise how much sugar is in a particular item when we are informed it contains a specific number of grams per serving. As a general rule 1 teaspoon of sugar is equivalent to 4 grams in weight.(Children may find it easier to picture spoons of sugar rather than grams)

We also have to be mindful of the effects some other preservatives have on teeth. Many products are labelled as sugar-free, diet, low calorie, low sugar and no added sugar. Beware, these are not always as healthy as they may first appear. Manufacturers spend thousands of pounds paying for advertising, convincing us their product is vital to health, but what they don't advertise is the fact they can potentially damage teeth.

When the sugar has been removed from or reduced in these products it has to be replaced with an alternative to ensure a long shelf life. Citric acid and phosphoric acid are often used as the replacement preservative. Unfortunately, they have great potential to cause tooth erosion. Ultimately even these products should also only be consumed at mealtimes.

The following activities will help children to have an increased understanding of the role specific foods play on our general health and how they can also impact on our dental health.

In summary the main messages are:

- Keep sugar containing foods and drinks for meal times.
- Encourage children to choose safe snacks for teeth in between meals.
- Highlight the importance of regular plaque removal.
- Encourage children to read food labels.

Activity/Experiment

Food labelling

Aim

To increase the children's awareness of which foods and drinks contain sugar.

Objective

The children will be able to identify which foods contain high amounts of sugar using food labels.

Resources required

- A selection of different labels from everyday foods and drinks.
- Clear dishes/cups
- Sugar
- Teaspoon

Method

1) Split the class into 3-4 groups.
2) Give each group a selection of food labels.
3) Ask each group to put the labels into two piles, one for foods high in sugar and the other for foods low in sugar.
4) When they have completed that task explain to the class how sugar has many different names and what those names are. Next, ask the children to have a second look at the labels and see if they think they should swap some labels to the other pile.
5) Collect up the labels. Ask the children to guess how many teaspoons of sugar there are in a selection of the labels.
6) Using the basis that 4g =1 tsp, spoon out the correct amount of sugar in the clear dishes, encouraging the children to count out aloud as you put each spoonful in the dish so that the children can actually see and understand how much sugar there really is in each product.
7) Further discussions could now take place on which foods should be eaten at meal times, and which foods are safe to be eaten in between meals.

Activity/Experiment

Dietary Diary

Aim

To give the pupils a clear understanding of the role of sugar in the process of dental decay.

Objective

By keeping food diaries and calculating how much sugar they have eaten over a period of a few days, the children will be able to identify which foods they have eaten that could increase their risk of tooth decay.

Resources required:

- Photographs of healthy and decayed teeth.(these can be easily sourced from the internet).
- Food diary worksheet
- Sugar content information sheet.
- Drawing paper
- Drawing and colouring materials.

Method

1) Give each child a Food diary worksheet. Ask them to write down on the dietary sheets everything they eat and drink over a period of 3-4 days and return it to school on a specified date.
2) Using the sugar content information sheet, ask the children to calculate how much sugar they have eaten over the 3-4 day period.
3) You can now ask the children to present this information by way of graphs, charts etc.
4) Ask them to look again at their Food diary worksheets and calculate how many acid attacks they had in between meals.
5) Reinforce the key message of keeping sugary snacks/drinks to meal times.
6) Give out paper and pens etc.
7) Ask the children to design a poster about the dangers of eating sugary snacks in between meals. Perhaps you could ask a local Dentist to judge them for you!