



## Caring for your Teeth

A guide to caring for your teeth, the hidden, natural and added sugars in foods and  
Diet suggestions





Our milk teeth start growing even before we are born, and most children have about 20 milk teeth by their third birthday. When a child is five or six, these teeth start to fall out and are replaced by adult teeth. By the time we reach our teens, we have 28 of the full 32 adult teeth in place, with the four wisdom teeth to follow at their own pace, often appearing by our mid-20s.

There are four different types of teeth in your mouth. The incisors – the four front teeth on the top jaw and the four on the bottom – are the cutting and chopping teeth. On each side of the incisors is a canine tooth (making four in total). These pointy teeth are used for tearing. Behind the incisors on each jaw are four premolars and six molars, which include the wisdom teeth. The premolars and molars are the wide, flat teeth that are used for grinding food to make it easier to swallow.



The enamel covering your teeth is the hardest element in the human body. When this hard, white surface is penetrated, tooth decay occurs. This can happen when food is left on the surface of the teeth. Bacteria consume the food, leaving a sticky deposit called plaque. This plaque contains acid which can erode the enamel, leaving the tooth vulnerable to decay and you suffering with toothache.

Saliva is a watery fluid that plays a crucial role in the mouth's natural resistance to tooth decay. Saliva helps to wash away and neutralise the acid. It also contains minerals that are deposited into the enamel to replace those lost in the acid attack process called remineralisation. The loss and replacement of minerals is repeated every time we consume sugar. It is an ongoing battle between the saliva and acid.



The two most common dental problems are tooth decay (also known as caries) and gum disease. Teeth can be eroded by food and drink.

### Tooth Decay

If sugary food or drink is consumed too often, the plaque acid overcomes natural defences, because saliva doesn't have enough opportunity to remineralise the teeth. The enamel is progressively weakened and eventually a hole (cavity) is created putting the whole tooth in jeopardy.

### Gum Disease

Also known as periodontal disease, gum disease is the most common cause of tooth loss in adults.

When plaque is allowed to remain on the teeth for too long it collects close to the gums and becomes a hard substance called tarter (or calculus). Bacteria get trapped beneath this hard layer and stagnate, causing the gums to become irritated, red and swollen. This condition is known as gingivitis. The gums then tend to pull away from the teeth creating a gap called a 'periodontal pocket' which traps even more plaque and tarter and may become infected.

Without treatment, gingivitis can develop into chronic periodontitis in which the jaw bone can become infected and damaged, causing the loss of healthy teeth.

Preventing gum disease involves controlling the amount of plaque and tarter that builds up on the teeth.

### Erosion

Erosion is caused by the acid in drinks such as fruit juice, fizzy soft drinks and squash. Because of the popularity of these drinks, about 50% of children in the UK now have dental erosion. Erosion wears away the enamel and causes pain and sensitivity.

Erosion can be prevented by consuming fewer acidic drinks.

Babies and toddlers should not be given fruit juice in their bottles as this can lead to severe erosion.

Older children and adults may be able to reduce the amount of contact acidic drinks have with their teeth by drinking through a straw, placed towards the back of the mouth.



### Looking after your teeth

Maintaining good oral hygiene is an important part of preventing tooth decay. This means brushing your teeth twice a day and regular visits to your dentist or hygienist. In addition you should use a fluoride toothpaste and a fluoride mouthwash and control how often you consume sugar.

### Toothbrushing

Brushing is the most effective way of removing plaque. Here are some tips for getting the most benefit out of toothbrushing:-

- Brush at least twice a day – after breakfast and before bedtime. Brushing straight after eating, however, is not advised as this is when enamel is most weakened by plaque acids.
- Use a fluoride toothpaste to provide protection against decay – a pea-sized amount is advised. Also it is advisable to use a fluoride mouthwash such as Colgate Fluorigard daily to help in the prevention of caries.
- Use a toothbrush with a small or medium sized head and medium bristles. A hard or worn-out toothbrush can wear away the enamel and damage the gums. A toothbrush needs replacing at least every two to three months.
- Use a gentle circular action and cover all the tooth surfaces thoroughly including the margins of the gums where the plaque collects. Hold the toothbrush as though it were a pen, to avoid applying too much pressure.

Children's teeth should be brushed by their parents, ideally from the time their teeth emerge until they are able to do it for themselves.

Some prefer an electric toothbrush. Research has shown that those with a 'rotation-oscillation' action such as the Braun Professional Care from Oral B, are much more efficient at removing plaque and reducing gingivitis when used with the correct technique than brushing by hand.

### Cleaning between the teeth

Toothbrushing cleans only 60% of the tooth surfaces. Dental floss or an interdental cleaning aid such as Tepe brushes are needed to remove plaque and particles of food from between the teeth and under the gum line. Correct technique is important so get advice from your dentist or hygienist.

### Mouthwashes

Some antiseptic mouthwashes help to control plaque and minor gum irritations, but most on the market do little more than taste nice and give you fresh breath. Those containing chlorhexidine, (eg. Corsodyl) are the most effective for gum conditions but are likely to stain the teeth and can affect the sense of taste long term. Fluoride mouthwashes such as Colgate Fluorigard are advised as part of your daily routine to aid in the prevention of caries.

### Plaque disclosing agents

These do not remove plaque but reveal areas where plaque is present. They can be used after brushing to highlight spots that have been missed. These can be obtained from your dentist and can be very helpful for children and adults in perfecting their brushing techniques.

### Chewing gum

Sugar-free chewing gum can help prevent decay because it stimulates the production of saliva which helps to neutralise plaque acid. Some chewing gums contain a sugar-free sweetener called Xylitol which suppresses certain types of plaque bacteria. Research is currently looking at whether this prevents decay.



### Controlling sugar consumption

Research shows a clear link between the amount of sugary foods consumed and the amount of tooth decay.

Some types of sugar are worse than others. The biggest offenders are those added to food during food manufacturing. It is how often these sugars are eaten rather than how much that determines the level of tooth decay.

Avoiding them between meals gives the teeth a chance to be remineralised by saliva.

Sugars that occur naturally in foods such as fruit, vegetables etc are not linked to decay in the same way as refined sugars such as sucrose. This makes them a good alternative to sweets and as snacks between meals.



### Alcohol and tobacco

Smoking stains the teeth and increases the risk of gum disease and tooth loss. Alcoholic drinks and the mixers used with them often contain high levels of sugar. There is also an incredibly increased risk of developing oral cancer through smoking and drinking alcohol.



## Visiting the dentist and hygienist

Dentists and hygienists play an important role in preventing problems such as caries and gum disease. Yearly visits are suitable for adults who have no obvious problems with their teeth, consume low levels of sugar and alcohol and do not smoke. Children and adults who are at higher risk may need to see a dentist more often.

### Scaling and polishing

Even thorough brushing and flossing cannot remove every trace of plaque. Most people have irregularities in their teeth where plaque can accumulate out of reach and harden into tartar. This can only be removed by a dentist or hygienist using a specialised scaling tool. Polishing using a high-speed rotating brush and abrasive paste removes stain from the teeth.

### Sealants

Some children have very deep pits and fissures in their molar teeth that are difficult to clean. The biting surfaces of these teeth can be sealed with a protective plastic film that stops plaque and acids reaching the enamel and prevents decay. Ideally this needs to be done as soon as possible after the first permanent molar teeth emerge, at about six years old.

### Diet Suggestions

It is impossible to watch what a child is eating all day, every day, but the following is a guide to help to lower the intake of sugar in a child's and an adult's diet.


1. Eat regular proper meals and try to eliminate snacking
2. If sweets must be eaten try to eat them after a meal when the acid levels are already high
3. Again, if sweets must be eaten, try to encourage consumption all in one go or limit them to one day per week
4. The best drinks are milk or water. Juice is very acidic and to be drunk safely would have to be diluted 1ml to 10 litres!! Dilute juice as much as possible
5. Diet drinks, eg. Diet coke, diet fanta, may be low in sugar but are still very acidic and cause erosion of the teeth
6. Discourage children from having a bottle and try to encourage them to start using a training cup as soon as possible
7. Encourage children drinking anything other than milk or water to drink it all at once and not keep coming back to it
8. If dummies must be used, do not dip them into sweet substances, E.g honey
9. Do not encourage a sweet tooth – give fresh fruit or vegetables instead
10. Finish a meal with cheese or peanuts for older children

## Sugars in Foods

All measurements mean a 'rounded' spoonful. i.e the same shape above or below the top of the spoon. One rounded teaspoonful of sugar weighs approximately 5 grams.

<u>Product</u>	<u>Amount</u>	<u>Sugar amount in teaspoons</u>
<u>Alcoholic Beverages</u> 		
Cider	100mls	½
Lager	100mls	¼
Port	100mls	2½
Red Wine	100mls	Trace
Rose Wine	100mls	½
White Wine	100mls	½
Sherry	100mls	½
Spirits	100mls	Trace

<u>Biscuits</u> 		
Bourbon Creams	1 biscuit	3
Chocolate Digestive	1 biscuit	1¾
Custard Cream	1 biscuit	½
Digestive	1 biscuit	½
Ginger nuts	1 biscuit	½
Jaffa cakes	1 biscuit	1½
Oreos	2 cookies	3
Rich Tea	1 biscuit	½
Shortcakes	1 biscuit	½

<u>Product</u>	<u>Amount</u>	<u>Sugar amount in teaspoons</u>
<u>Breakfast Cereals</u> 		
Allbran	1 small bowl	1
Branflakes	1 small bowl	¾
Cheerios	1 small bowl	4
Coco pops	1 small bowl	6
Cornflakes	1 small bowl	¼
Museli	1 small bowl	1½
Nutri-grain bar	1 bar	3
Puffed Wheat	1 small bowl	trace
Rice Krispies	1 small bowl	¼
Shredded Wheat	1 biscuit	trace
Shreddies	1 small bowl	½
Special K	1 small bowl	1
Sugar Puffs	1 small bowl	4

Weetabix	1 biscuit	trace
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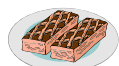
## Cakes

Chocolate Brownie	1 brownie	3
Chocolate Cake	1 med slice	5
Chocolate Eclair	1 eclair	7
Cup Cake (iced)	1 cake	6
Currant Bun	1 bun	1 1/4
Doughnuts (plain)	1 doughnut	4
Doughnuts (glazed)	1 doughnut	6
Iced Fruit Cake	1 slice	11
Macaroons	1	16
Mincemeat	2 teaspoons	3
Rich Fruit Cake	1 slice	9
Sponge cake	1 medium slice	1 1/2

Sugar  
amount in  
teaspoons

## Product

## Amount



## Cakes cont..


Scones	1 scone	1/2
Swiss Roll	1 slice	4


## Confectionery





Aero	1 bar	3 1/2
Boiled sweets	1 tube	24
Bounty	2 pieces	3 1/4
Chocolate Milk	1 small bar	3 1/2
Chocolate Plain	1 small bar	6
Chocolate Mints	1 Piece	23
Crunchie	1 bar	6
Dolly Mixtures	1 small box	20 1/2
Double Decker	1 bar	6
Drifter	1 packet	6 1/2
Fruit Gums	1 tube	3
Fruit Pastilles	1 tube	6
Fudge	1 oz sq	4 1/2
Galaxy	1 bar	3 1/4
Kit Kat	1 bar	3 1/4
Lion Bar	1 bar	5 1/2
Liquorice Allsorts	1 small box	17 3/4
Maltesers	1 packet	2 1/2
Mars	1 bar	9
Milky Way	1 bar	1 1/2
Nutri-grain	1 bar	3
Picnic	1 bar	4 3/4
Polo mints	1 tube	5
Rolos	1 tube	5 1/2
Skittles	1 packet	9 1/2
Smarties	1 tube	4 1/4




<u>Product</u>	<u>Amount</u>	<u>Sugar amount in teaspoons</u>
<u>Confectionery cont...</u> 		
Snickers	1 bar	3
Starburst	1 tube	7
Toffos	1 tube	8
Topic	1 bar	3 <sup>3</sup> / <sub>4</sub>
Turkish Delight	1 bar	7 <sup>3</sup> / <sub>4</sub>
Twix	2 biscuits	3 <sup>1</sup> / <sub>2</sub>
Yorkie	1 bar	5 <sup>3</sup> / <sub>4</sub>

<u>Crackers</u> 		
Cream Crackers	1 biscuit	trace
Ritz Crackers	1 biscuit	<sup>1</sup> / <sub>4</sub>

<u>Crisps</u> 		
Salt and Vinegar	1 packet	1
Cheese and Onion	1 packet	3
Prawn Cocktail	1 packet	1

<u>Desserts</u> 		
Angel Delight	1 packet	7 <sup>3</sup> / <sub>4</sub>
Apple Crumble	1 slice	4 <sup>3</sup> / <sub>4</sub>
Cheesecake	1 slice	2 <sup>1</sup> / <sub>4</sub>
Cherry pie	1 slice	10
Chocolate sundae	1	14
Christmas Pudding	100g	7 <sup>1</sup> / <sub>2</sub>
Dream Topping	1 sachet	1 <sup>3</sup> / <sub>4</sub>
Fruit Pie Filling	<sup>1</sup> / <sub>2</sub> tin	10
Ice Cream	1 bowl	9
Instant Custard	1 packet	6 <sup>3</sup> / <sub>4</sub>
Instant Whip	1 packet	10
Lemon Meringue Pie	1 slice	3 <sup>1</sup> / <sub>4</sub>

<u>Product</u>	<u>Amount</u>	<u>Sugar amount in teaspoons</u>
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<u>Desserts cont...</u> 		
Jelly	1 packet	46
Natural yoghurt	1 pot	0
Sponge pudding	100g	3 <sup>3</sup> / <sub>4</sub>
Strawberries in syrup	<sup>1</sup> / <sub>2</sub> can	10 <sup>1</sup> / <sub>2</sub>
Strawberries in juice	<sup>1</sup> / <sub>2</sub> can	0
Tinned rice pudding	<sup>1</sup> / <sub>2</sub> tin	2 <sup>1</sup> / <sub>2</sub>

Trifle mix	1 packet	3½
Yoghurt (fruit)	1 Pot	8



#### Dried Fruits

Dried Apricots	4-6 halves	4
Dried Prunes	4-6 medium	4
Dried Dates	3-4	4½
Dried Figs	1-2 small	4



#### Fruits

Apple	1 fruit	4½
Avocado	1 fruit	1½
Banana	1 fruit	5
Blackberries	1 cup	3½
Cantaloupe	½ fruit	2
Cherries	4 oz	2
Grapefruit	½ fruit	3
Grapes (red)	4 oz	3
Orange	1 fruit	4½
Papaya	8 oz	3
Peach	1 fruit	3
Pear	1 fruit	4½
Pineapple (fresh)	8 oz	3½

Sugar  
amount in  
teaspoons

#### Product

#### Amount



#### Fruits cont...

Raisins	½ cup	10
Strawberries	4oz	1½
Watermelon	1 slice	3



#### Hot Drinks

Drinking Chocolate	1 mug	5
Horlicks	1 mug	1
Ovaltine	1 mug	1
Starbucks Frappuccino	Medium	9

#### Nuts



Almonds	1 cup	1½
Peacans	1 cup	2
Peanuts	1 cup	trace
Roasted cashews	1 cup	7



#### Pasta, Bread etc

Brown Bread	2 slices	1
White bread	1 slice	2
Wholemeal bread	2 slices	1½
Hamburger bun	1 bun	3
Hot dog bun	1 bun	3
Macaroni	100g	Trace

Rice	100g	Trace
Spaghetti	100g	Trace
Yorkshire pudding	1 medium pudding	1

Sugar  
amount in  
teaspoons

Product

Amount



Sauces, Pickles Etc

Brown sauce	3 teaspoons	$\frac{3}{4}$
Cheese sauce	100mg	$\frac{3}{4}$
Honey barbeque sauce	2 tablespoons	$2\frac{1}{2}$
Mayonnaise	100mg	Trace
Salad cream	3 teaspoons	$\frac{1}{2}$
Pickle	3 teaspoons	$4\frac{1}{2}$
Salad cream	3 teaspoons	$3\frac{1}{2}$
Sweet piccalilli	3 teaspoons	$\frac{1}{2}$
Thousand Island	2 tablespoons	1
Tomato ketchup	1 tablespoons	5



Soft Drinks

Apple Juice	1 small glass	6
Blackcurrant cordial (diluted)	1 small glass	5
Capri Sun	1 packet	4
Cherryade	1 small glass	$3\frac{1}{2}$
Cola	1 can	8
Cream Soda	1 can	10
Diet Coke	1 can	0
Ginger Beer	1 can	7
Grapefruit Juice (sweetened)	1 small glass	2
Iced coffee	1 small glass	5
J20	275ml	6
Lemonade	1 small glass	$1\frac{1}{4}$
Lucozade	1 500ml bottle	$7\frac{1}{4}$
Milkshake	1 small glass	6
McDonalds Milkshake	1 Med glass	$22\frac{1}{2}$
Nesquick	1 small glass	6

Sugar  
amount in  
teaspoons

Product

Amount



Soft Drinks

Orange Juice (sweetened)	1 small glass	4
Orange Squash (diluted)	1 small glass	$2\frac{1}{2}$
Pineapple juice (unsweetened)	1 small glass	$2\frac{1}{2}$
Red Bull	1 can	7
Ribena (diluted)	1 small glass	5
Pineapple Juice	1 small glass	$2\frac{1}{2}$

Slush Puppie	1 small cup	6¼
Smoothies (dep on fruit)	1 small glass	7
Tizer	1 can	6
Tomato Juice	1 small glass	trace
Tonic Water	1 Small Bottle	4
Vimto	1 small glass	2¼



### Soups

Tinned chicken soup	½ tin	½
Tinned tomato soup	½ tin	4
Tinned vegetable soup	½ tin	1
Packet chicken soup	¼ packet	½
Packet minestrone soup	¼ packet	½
Packet oxtail soup	¼ packet	1 ½
Packet tomato soup	¼ packet	2



### Spreads

Chocolate Spread	1 tablespoon	2¼
Chutney	1 tablespoon	4
Honey	1 tablespoon	4
Jam	1 tablespoon	34
Lemon Curd	1 tablespoon	2

Sugar  
amount in  
teaspoons

### Product

### Amount

### Spreads cont...



Maple syrup	1 tablespoon	21
Marmalade	1 tablespoon	46
Nutella	1 tablespoon	3
Peanut Butter	1 tablespoon	¼
Strawberry jam	1 tablespoon	34
Syrup	1 tablespoon	25



### Tinned Fruits

Tinned fruit salad	1 tin	5
Tinned grapefruit	1 tin	3½
Tinned mandarins	1 tin	3
Tinned peaches	1 tin	4½
Tinned pineapple	1 tin	4
Tinned pears	1 tin	4
Tinned Raspberries	1 tin	4½



### Tinned Meat

Corned Beef	1 medium tin	¼
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### Tinned Vegetables



Baked beans	1 can (415g)	18
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Butter beans	1 small tin	Trace
Carrots	1 small tin	1
Kidney beans	1 small tin	1½
Peas	1 small tin	½
Spaghetti (in sauce)	1 can (400g)	3
Sweetcorn	½ tin	1

The following words can denote the presence of sugar in certain foods:-

Amazake	Maltose
Carob powder	Molasses
Dextrose	Sorbitol
Fructose	Sucrose
Glucose	Syrup
High fructose corn syrup	Turbinado
Honey	Xylitol
Lactose	

## Fun Toothy Facts

The first president, George Washington, had false teeth. His teeth kept deteriorating and dentists had to take them out. He had nine dentists who tried to make him dentures. Only one of the dentists was able to make a pair of dentures that George Washington found comfortable. His false teeth were made out of teeth from a cow, hippopotamus and walrus. His favourite dentist made him four sets of dentures and when he died he was buried with one of the sets in his mouth.

An elephant has two upper molars and two lower molars. Its molars are one foot across and weigh about 9 pounds. Elephants don't chew their food, they grind it. After about 10 years of grinding down at least a hundred pounds of vegetation daily, their teeth are worn down to the gum line and they fall out. New teeth then reappear. An elephant may go through six sets of teeth in its lifetime.

Adults are keeping their teeth into old age. In England in 1978, 72% of adults had some of their natural teeth, by 1998 this figure had risen to 88%.

If you are taught good habits at an early age, you are more likely to continue these practices into adulthood as early habits are easier to keep and often continue through life.

Toothpaste used to be very different than what we use today. Ashes, chalk, charcoal, honey and lemon juice have all been used as a cleaner for the teeth. People have even tried things that are dried and rough, such as crushed egg shells and parts of animal hooves to clean their teeth. A form of minty cream used

To clean the teeth was first invented at the beginning of the 20<sup>th</sup> century

The modern toothbrush that we use today was not invented until 1938. In order to get teeth clean twigs were used in ancient civilisations. People would chew on the top of a twig to make it spread out into several small strands. They would then use it in the same way that a toothbrush is used. These twigs were called chew sticks. These chew sticks were very effective in getting the teeth clean.

The first toothbrush with bristles was developed in China in 1498. The bristles were made with hair from hogs, horses and badgers.

At least 70 of the population are not cleaning their teeth effectively or changing their toothbrush often enough.

The average child has 20 milk (first) teeth which begin to fall out around age 6.

The first permanent teeth come through behind the last milk teeth, at the back of the mouth.

In the 18<sup>th</sup> century poor people used to sell their teeth to the rich so that they could be used to make false teeth.

A third of the population squeeze their toothpaste tube in the middle.

Some adults change their washing-up-brush more often than they change their toothbrush.



No.5 Dental Care, 5 Royal Parade, Tilford Road, Hindhead,  
Surrey, GU26 6TD

t 01428 605594 e [info@5dental.co.uk](mailto:info@5dental.co.uk)

[www.5dental.co.uk](http://www.5dental.co.uk) CEPJUNI I