

## Dietary advice

### **DIET AND DECAY**

The occurrence of decay is influenced by tooth composition, the type and quantity of oral bacteria, composition and flow rate of saliva, the presence of dietary sugars, the residence time of sugars in the mouth, and the presence or absence of fluoride.

Fluoride, through the water supply or from fluoride toothpaste, can reduce decay, but limiting sugar intake has a much greater significance in preventing it.

Frequency of sugar consumption and the amount of sugar consumed are both important.

### **STARCH AND FRUIT**

The consumption of starch-rich staple foods should be encouraged, such as bread, potatoes unsweetened breakfast cereals, and grains and vegetables that naturally contain starch. There is no evidence to show that these foods are harmful to teeth.

Milk, cheese and yoghurt (which contain intrinsic sugars) can be considered safe for teeth, but not if they have extra sugar added. Increasingly food products carry nutrition labels, and it is wise to check these for total sugar content.

### **A WHOLESOME DIET**

<b>Table 1 Foods and drinks that contain the dietary sugars that can cause tooth decay</b>	<b>Table 2 Foods which should be eaten sparingly</b>
Sugar and chocolate confectionery Cakes and biscuits Buns, pastries, fruit pies Sponge and other puddings Table sugar Sugared breakfast cereals Jams, preserves, honey Ice cream Fruit in syrup Fresh fruit juices Sugared soft drinks Sugared, milk-based beverages Sugar containing alcoholic beverages	Butter and margarine Oils and dressings Cream Confectionery Sugar Crisps Biscuits Cakes and pastries Puddings Ice creams Rich sauces and fatty gravies

If sugars containing foods and drinks are to be consumed, they should be restricted to mealtimes only, and never close to bedtime when salivary flow is low.

## **DENTAL EROSION**

Dental erosion is the loss of tooth substance by a process that does not involve bacteria. Causes of erosion include acid in drinks and foods, intrinsic acid (from vomiting or reflux) or environmental acids. Acids in the diet are the most commonly cited causes of erosion, and may include citric, malic, phosphoric, tartaric, acetic, oxalic and carbonic – so look out for these on nutrition labels. Carbonic acid, which is present in carbonated water, is the least erosive dietary acid.

Foods and drinks with the potential to cause dental erosion include soft drinks, fruit juices, wine, alcopops, cider, some herbal teas, citrus fruit and apples, vinegar, pickles, and acidic sweets.

Most surveys have shown soft drinks to be the biggest contributor to acidic food and drink consumption- so avoid that vending machine or follow a soft drink with a food to help neutralise the acid (see able3).The best drinks for children and adults are milk and water.

Your mouth is in a neutral state pH7 until food and drink containing sugar are introduced. The sugar reacts with the bacteria in the plaque and forms a toxin (acid) this will cause the pH to drop. When the pH drops below 5.5 tooth erosion will start. Drinks with a pH of 5.5 or below will also cause tooth erosion.

### **pH VALUES OF SOME DRINKS**

Mineral water still	pH 7.8
Milk (non fat)	pH 6.5
Mineral water (Highland Spring)	pH 5.0
Pure orange juice	pH 4.1
Ribena toothkind	pH 3.6
Pure apple juice	pH 3.5
Red bull	pH 3.3
Lucozade sport	pH 3.3
Diet cola	pH 3.2
Sunny delight	pH 3.1
Flavoured water (volvic)	pH 2.8
Red wine	pH 2.5
Cola	pH 2.2
Vinegar	pH 2.0

### pH VALUES OF SOME MOUTHWASHES

Aquafresh	pH 7.6
Sensodyne	pH 7.6
Corsodyl	pH 7.1
Retardex	pH 6.4
Junior reach	pH 6.4
Boots smile	pH 6.7
Colgate plax	pH 6.0
Fluoriguard alcohol free	pH 5.9
Dentyl	pH 5.7
Listerine	pH 4.5
Peroxyl	pH 3.5

### THE GOLDEN RULES

The main points to remember are:

- Reduce the amount and frequency of consumption of sugary food and drinks and limit their intake to mealtimes
- Eat more vegetables and fruit and starchy staple foods such as breads, potatoes, unsweetened breakfast cereals and grains
- Drink milk and water rather than sugary and/or acidic soft drinks.

<b>Table 3</b> <b>Foods and drinks with low risk of causing dental decay</b>	
<b>Low/no decay risk</b>	<b>Foods which neutralise the effects of dietary sugars</b>
Bread (sandwiches, toast, crumpets, pitta bread) Pasta, rice and starchy staple foods Unsweetened or artificially sweetened yoghurt Low-sugar breakfast cereals (e.g. shredded wheat) Sugar free confectionery Fresh fruit (whole and not juices) Water Sugar-free drinks	Milk Cheese Peanuts Sugar-free chewing gum Fibrous foods (e.g. raw vegetables) Xylitol, gum and mints Tea (unsweetened)