
Information about the diet itself is of little value unless it is taken in context with the patient’s lifestyle. Only dietary recommendations tailored to the patient’s life are likely to be adopted. The diet record should include all the food and drinks consumed the amount and the time of eating or drinking. Every morsel eaten and every drop that has been drunk. The diet record should include all the foods and drinks consumed, the amount in readily estimated units and the time of eating or drinking.

Analysis of the diet itself may be performed in a variety of ways. The patient can be asked to recall all foods consumed over the previous 24 hours. This is not very effective, relying on a good memory and honesty, and is unlikely to give a representative account. Relying on memory for more than 24 hours is too inaccurate.

The most effective method is to keep a written record of their diet for four-five consecutive days, including two working days and two leisure days. The need for the patient to comply fully and assess their diet honestly must be stressed and, of course, the diet should not be changed because of it being recorded. Ideally the analysis should be performed before any dietary advice is given. Even the patient who does not keep an honest account has been made more aware of their diet. If they know what foods to omit from the sheet to make their dentist/oral health educator/dental nurse happy, at least the first step in an educative process has been made.

**How to analyse a diet sheet**

Highlight sugar rich foods and drinks

Note whether they are confined to meal times or whether they are eaten frequently and spaced through out the day as snacks.

The number of sugar attacks should be counted and discussed with the patient. Also the consistency of the food because dry and sticky foods take longer to be cleared from the mouth. Sugared drinks taken immediately before bed are highly significant because salivary flow is reduced during sleep and clearance time is greater. Identify foods with a high hidden sugar content because patients often do not realise that such foods are insignificant: ex: • Baked beans

- Breakfast cereals
- Tomato ketchup
- And plain biscuits

If the diet sheet shows the main problem for the patient is too much sugar contains drinks and frequent drinks and carbonated drinks. Most meals or snacks contain high sugar items and some more than one. The patient needs to be educated in safer diet. The patient should be educated in the relationship between caries and high frequency in consumption of sugar.

The dental profession has been aware for over half a century that the frequency of sugar intake is far more significant in the development of caries than the amount consumed at any given time.

**Advice based on Diet Diary**

- Particularly those containing sugar. It is important to give the same advice as other health professions such as dietitians and health visitors, who are concerned with other aspects of health, such as obesity. But it is rare that patient opt to have a healthy diet having concerns about their teeth rather than size.
- Dental profession has suggested that plain crisps, peanuts and nuts are tooth-friendly alternatives to sweet, biscuits and confectionery. When reading labels, it can be seen that some nut snacks contain hidden sugars, and this should be pointed out to the patients.
- Should always check and liase with the patients medical condition. Some must have been a told by their health professionals to avoid such foods for other health reasons. Advice always must be balanced and accurate.
- Particularly school children and adolescent require frequent intake of carbohydrates to sustain energy. In such cases it is essential to mention frequent snacks such as pastas, bread and toast, bread sticks fruit and raw vegetables.
- Public has raised awareness of hidden sugar and salt with the current trend towards healthy eating. It is important to be able identify hidden sugars (eg: Glucose, fructose, dextrose, maltose, lactose and molasses) to look for these on food labels.
- Also the relationship with such food can contribute to obesity and heart disease as well as caries and behavioural disorders.
- The use of artificial sweeteners is increasing as the public becomes more diet conscious, since their low caloric value means that they are virtually non-cariogenic and non fattening. Sweeteners can be of synthetic or natural origin.(eg. xylitol, a plant extract)

**Facts**

The advice below can elaborate on it more.

- Reduce the amount of sugar.
- Check manufacturers’ labels and avoid foods with sugar such as sucrose, glucose and fructose listed. Natural sugars (eg honey, brown sugar) are as cariogenic as purified or added sugars. When sweet foods are required, choose those containing sweetening agents such as saccharin, ace-ulose K and aspartame. Diet formulations contain less sugar than their standard counterparts. Reduce the sweetness of drinks and foods. Become accustomed to a less sweet diet overall.

- *Restrict frequency of sugar intakes to meal times as far as possible.*

Try to reduce snacking. When snacks are required select safe snacks such as cheese, crisps, fruit or sugar free sweets, such as mints or chewing gum (which not only no sugar but also stimulates salivary flow and increases pH). Use artificial sweeteners in drinks taken between meals.

- *Speed clearance of sugar from the mouth.*

Never finish meals with a sugary food or drink. Follow sugary foods with a sugar free drink, chewing gum or a protective food such as cheese.

The dietary advice is almost always provided using the health belief model of health education. How ever it is well known that education about the risks and consequences of lifestyle, habits and diet is often ineffective. It is important to judge the patients likely compliance and provide dietary advice which can be used to make small but significant changes rather than attempting to eradicate all the sugar from diet. As the diet improves, the advice can be adopted and extended. Advice must be acceptable, practical and affordable. In this case the patient has already suffered consequences from his poor diet and this may help change behaviour.

The patient must be made aware that damage to teeth continues up to 20mins to 2hrs of sugar intake. The statement should comprehend with Stephan curve without difficulty.

The Stephan Curve describes the change in dental plaque pH in response to a challenge. The type of challenge does not matter but it is usually some element of the diet.

Characteristically the Stephan Curve reveals a rapid drop in plaque pH, followed by a slower rise until the resting pH is attained. The time course varies between individuals and the nature of the challenge.

The initial drop is usually rapid within a few minutes and this is followed within a very few minutes. However, pH recovery can take anything between 15 and 40 minutes depending to a large extent on the acid-neutralising properties of the individual’s saliva.

The patient should be advised to use fluoride containing toothpaste. During the period of dietary change it would also be beneficial to use a weekly fluoride rinse as well. This could be continued for as long as the diet is felt to be unsafe.

Oral hygiene instruction is also important in view with elaborating importance of diet.

The Committee on Medical Aspects of Food Nutrition Policy established in 1986 in the U.K. It is the panel on Dietary sugars to look at the role of the sugars in the diet. Make sure all the patients are very welcome to do their own research. Amongst the panel recommendations:

- The frequency of sugary snacks and drink consumption should be minimised.
- Food and drinks that predispose caries should be limited to main meal times. This is specially important for older dentate people, children and adolescents.

**Conclusion**

According to the UK Department of Health *Eating a healthy, balanced diet which contains plenty of fruit and vegetables and is low in fat, salt and sugar and based on whole grain products, is important for promoting good health.*

Food is the fuel which provides energy for the cells of living organisms to grow, reproduce and eliminate waste; and if the cells of the body are to function efficiently, all the nutritional substances must be consumed in the correct proportions.

---

**About the author**

Dilhani Silva is a qualified and registered Dental Nurse who has passed the ODE exam and is getting ready to sit for the Dental Radiography exam in December 2010. She works as a Dental Nurse/Receptionist/ Email. She is currently an Adminstrator for Apex Dental Care, London.

---

**The effect of sugar intake on plaque pH**

<table>
<thead>
<tr>
<th>Sugar intake</th>
<th>Remineralization</th>
<th>Demineralization</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**4 day diet analysis sheet for…**

Dilhani Silva is a qualified and registered Dental Nurse who has passed the ODE exam and is getting ready to sit for the Dental Radiography exam in December 2010. She works as a Dental Nurse/Receptionist/Email. She is currently an Adminstrator for Apex Dental Care, London.