Non carious tooth surface loss

The enamel and dentine can be lost from a tooth by other factors other than decay. There are three different causes of tooth substance loss though often patients with considerable loss of tooth substance will have a combination of the following factors.

**Abrasion** is the non bacterial loss of tooth tissue due to frictional wear by external materials. Common causes are tooth brushing too vigorously, or using too hard a toothbrush or a toothpaste that is too abrasive such as smokers toothpaste. The tooth loss is usually on the buccal or labial surface of premolars canines and incisors. Abrasion can cause deep wedge shape defects on the side of a tooth. The patient will often be aware of increased sensitivity. The defect may be covered with resin or fluoride varnish to reduce sensitivity, or filled with Glass Ionomer or Composite.

**Attrition** is the non carious tooth wear caused by tooth to tooth contact. Attrition is usually slow to progress and secondary dentine is deposited on the inside of the tooth which means the patient does not usually have any symptoms or increased sensitivity except in very severe cases. Patients may be given a soft vinyl splint to reduce the grinding affect and prevent Temporal Mandibular Joint problems. Patients may also be referred for hypnosis to help stop the habit.

**Erosion** is the non bacterial loss of tooth substance due to chemical agents. Acids are the most common cause. The acids may come from the patient’s digestive system. The gastric fluids that help digest food are extremely acidic. Any patient who has “refluxing” that is when the gastric fluids come up the oesophagus to the mouth will have erosion of their teeth. This may be in patients with bulimia, hiatus hernia, stomach ulcers, and refluxing oesophagitis. The tooth loss is usually on the palatal and occlusal surface of teeth. The acid can also be from food and drinks. All drinks that have been made with bubbles will be acidic, fruit and fruit drinks and wines will all cause erosion of the teeth. After the tooth has been attacked by acid the tooth is softer and should not be brushed immediately. It is better to have sugar free chewing gum which stimulates saliva and will help to restore Calcium to the tooth.

In the beginning it is difficult to detect the damage caused by erosion though some time the enamel appears smooth and shiny and the natural fine ridges have gone. The incisal edges may become more translucent when you shine a light from behind the tooth. Sometimes the palatal enamel has gone to expose the softer dentine and only a small amount of enamel left at the edges. Patients must be given specific advice to help control the tooth substance loss and should be advised on the use of high concentration fluoride toothpaste and mouthwashes to help make the surfaces more resistant to wear. Good toothbrushing techniques and good diet are essential.