**17. Teeth**

**TOPIC 1: FUNCTIONS OF THE TEETH**

Teeth come in four different types. Each type has a different function. Incisors and canine teeth are for cutting and are used for biting off pieces of food. The chewing of food is done by the premolar and molar teeth using their flat surfaces.

**DID YOU KNOW?**

Babies are born with both sets of teeth: the temporary, or deciduous, teeth; and the permanent teeth are also present in immature form within the mandible and maxilla.

**TOPIC 2: STRUCTURE OF A TOOTH**

All 32 permanent teeth are embedded in the alveoli or sockets of the alveolar ridges of the mandible and the maxilla. Although the shapes of the teeth types may differ, their essential structure consists of:

**THE CROWN**

The crown of the tooth is the part that you can see above your gum line. The part of the tooth that is covered by enamel is called the “anatomical crown.”

**THE ROOT**

The root is the part of the tooth that extends into the upper or lower jawbones. Different types of teeth have different root formations. Some, such as incisors and canine teeth, have a single root. Molars may have one, two or three roots depending on their type and location in the mouth. At the end of each root is a small opening called the apical foramen. Blood vessels and nerves pass through this opening to enter the tooth.

**THE NECK**

The Neck is the narrowed region where the crown meets the root

**All teeth are made from:**

**ENAMEL**

The crown of the tooth is covered in a hard outer shell of enamel. Although enamel is able to cope with the stress of chewing, biting and grinding, it is quite brittle and is prone to chipping and cracking. The care and protection of the teeth is important as once enamel is broken, it can not be healed as with broken bones.

**CEMENTUM**

Cementum covers the root of the tooth and is neither as white nor as hard as enamel is. Cementum helps to hold the tooth in place with tiny fibers in the jawbone.

**DENTIN**

Dentin makes up most of the tooth and is a bone-like substance that is found under the cementum of the root and the enamel of the crown.

**PULP AND PULP CAVITY**

The pulp cavity exists at the core of the tooth beneath the dentin. It is made up of nerves, blood vessels and connective tissue. The tooth is kept alive by the nutrients that are drawn through the blood supply in the ‘pulp’. The parts of the pulp that point up towards the points of the teeth (the cusp) are called the pulp horns. The pulp canal, or root canal, is located in the root of the tooth.

**PULP CANAL(S) OR ROOT CANAL(S)**

The open space inside the root is called the pulp or root canal. The pulp is made of nerves and blood vessels that pass through the root canal and into the tooth. If the pulp becomes infected or inflamed it will not be able to properly feed the tooth and root canal therapy may need to be used to protect the tooth from having to be removed.

**BLOOD SUPPLY**

Maxillary arteries branch through to the teeth and feed most of the arterial blood supply. Venous drainage occurs through a number of veins into the internal jugular veins.

**NERVE SUPPLY**

Maxillary nerves branch through to the upper teeth to the nerve supply where as the mandibular nerves supply the lower teeth. Both the Maxillary and the mandibular nerves are branches of the trigeminal nerve.

**APICAL FORAMEN**

There is a small opening at the tip of each root that allows the blood vessels and nerves to enter the tooth, which is called the apical foramen.

**DID YOU KNOW?**

There are 20 temporary deciduous teeth, 10 in each jaw. They begin to erupt when the child is about 6 months old.

**TOPIC 3: DISEASES AND DISORDERS**

**PLAQUE**

Plaque is a soft and clear substance that can collect as a coating on the surface of the teeth; it comes from the bacteria that live in the mouth. Raw and fibrous foods can be used to scrape off the majority of plaque from the teeth. However, daily diets of processed foods often mean that the plaque is not eliminated as it should be.

**CAVITIES**

Cavities can cause damage within the structure of the tooth. They are quite common amongst tooth disease and should be treated immediately to avoid a great deal of pain.

**GINGIVITIS**

Gingivitis can be used as a term to describe non-destructive periodontal disease. The most common form of gingivitis is in response to plaque (also called bacterial biofilms) being left on the tooth's surfaces. It is the most common form of periodontal disease and can also be known as plaque-induced gingivitis. If left untreated, gingivitis can progress into periodontitis. This is a destructive form of periodontal disease.

**GUM DISEASE**

Periodontal disease is more commonly known as gum disease and is a type of infection that attacks the bones and tissues supporting the teeth. Without treatment, teeth can become painful or even loose, which can result in the tooth being lost altogether.

**PERIODONTITIS**

Periodontitis is the overarching name for a set of inflammatory diseases that affect the periodontum (the collective name for the tissue that surrounds the teeth). Periodontitis involves progressive loss of the alveolar bone around the teeth. It can lead to loosening or loss of teeth if felt untreated.

**HALITOSIS**

Halitosis is caused by protein that is broken down by bacteria inside the mouth. When pieces of food get caught between the teeth or in the gums or on the tongue and are not cleaned away properly, as it degrades it can cause a bad smell (or bad breath). However, halitosis can occur as a result of other conditions such as respiratory infections, sinusitis, diabetes and gastrointestinal problems.

**DRY MOUTH**

Dry mouth (or xerostomia) occurs when the body does not produce enough saliva, leaving the mouth unusually dry. Extended periods of dry mouth can be an indicator of a larger medical condition, or in itself it can cause health problems.

**TEETH GRINDING**

The unconscious grinding and clenching of the teeth is also known as Bruxism. Teeth grinding usually occurs when an individual is asleep; however, there are a percentage of cases that occur while the person is awake.

**TEETH STAINING**

Medical experts suggest that human teeth are not supposed to be pure white, and instead their natural colour varies from light yellow to light yellow-red. All teeth become will become darker over time.

**DID YOU KNOW?**

The permanent teeth begin to replace the deciduous teeth at around the age of 6, however this process is not completed until around the age of 21.